IN THE MATTER OF	*	BEFORE THE
Application of Encompass Health Rehabilitation Hospital for Inpatient Rehabilitation Hospital	*	MARYLAND HEALTH
Docket No. 18-16-2423	*	CARE COMMISSION

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RESPONSE OF ENCOMPASS HEALTH REHABILITATION HOSPITAL OF SOUTHERN MARYLAND TO COMMENTS OF MEDSTAR NATIONAL REHABILITATION HOSPITAL

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TABLE OF CONTENTS

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Encompass Health Rehabilitation Hospital of Southern Maryland ("EHR"), by its undersigned counsel and pursuant to COMAR § 10.24.01.08F, submits this response to the Comments of MedStar National Rehabilitation Hospital ("MNRH"). For the reasons set forth below, the Commission should approve the CON application ("CON Appl.").

Response to MNRH's Request for Interested Party Status

As described in a separate Motion to Strike the Comments of MNRH, MNRH lacks standing as an "interested party" within the meaning of COMAR § 10.24.01.01B(20) because it failed to demonstrate that it is "adversely affected" within the meaning of that regulation. EHR incorporates the arguments of the motion as though set forth herein.

Introduction

EHR proposes to establish a 60-bed acute inpatient rehabilitation hospital in Bowie, Maryland, in the Southern Region, bringing access to rehabilitation services for a population of nearly 1.4 million Marylanders. This region currently is served by just ten licensed rehabilitation beds, operated as a unit on the third floor of University of Maryland Prince George's Hospital Center, and no specialty rehabilitation hospital. Despite being the second most populous of the State's Health Planning Regions for this service, the Southern Region has the fewest beds in in the State. With the temporary de-licensure of 18 beds from UM Laurel Regional Hospital, the ratio of beds to people in the region is ten times worse than the State average.

EHR seeks to add only 42 new beds to the region, and with the cooperation and support of the University of Maryland Medical System ("UMMS"), it plans to use 18 currently temporarily delicensed acute inpatient rehabilitation beds that were located at the UM Laurel Regional Hospital. The 42 beds EHR seeks to establish are well within the Commission's

projected need for the Southern Region at the time of the application, -9 to +66 beds, and Encompass has demonstrated barriers to access in the region.

MNRH, an out-of-state provider not itself subject to Maryland's CON laws, criticizes the plan to bring high-quality inpatient rehabilitation care to an underserved service area, arguing that no more than ten beds should exist in the highly-populated and geographically large Southern Region and Marylanders in the region should continue to travel out of State to receive their care.

I. INCREASING THE AVAILABILITY OF SPECIALTY SERVICES AND REDUCING OUT-MIGRATION FROM THE REGION IS AN IMPORTANT COMPONENT IN THE TRANSFORMATION OF HEALTH CARE DELIVERY SERVICES IN PRINCE GEORGE'S COUNTY

Improving access to inpatient rehabiliation services in Prince George's County and the Southern Region will advance the important ongoing efforts to revitalize and transform the health care delivery system in Prince George's County. Prince George's County is the second most populous county in Maryland, and is Maryland's most diverse county.[1] Minority groups account for 86.5 percent of the County's population of 912,756. Id.

Prince George's County residents have worse health care access and health outcomes in comparison to residents in neighboring counties.[2] Prince George's County residents suffer from higher rates of chronic diseases, including diabetes, heart disease, hypertension, asthma and

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[1] 2019 County Health Rankings, University of Wisconsin Public Health Institute, 2019 Maryland data set, available at http://www.countyhealthrankings.org (last accessed Mar. 24, 2019).

[2] See generally, Prince George's County Health Department, Prince George's County 2018 County Health Rankings, March 2018 (the "2018 Prince George's County Health Rankings"), attached as **Exhibit 1**; University of Maryland School of Public Health, Transforming Health in Prince George's County, Maryland, A Public Health Impact Study, July 2012 (the "Public Health Impact Study"), available at https://sph.umd.edu/news-item/transforming-health-prince-georges-county-umd-study-inform-health-care-system-redesign (last accessed Mar. 27, 2019), Part I attached as **Exhibit 2**, full report provided on CD; Maryland Nonprofits, 2011 Research Report, Prince George's County Ranks Low on Health Measures, (the "Maryland Nonprofits Report") attached as **Exhibit 3**.

cancer, than those residing in neighboring counties. Public Health Impact Study, **Exhibit 2**, p. iv. The 2018 Prince George's County Health Rankings report finds that Prince George's County ranks 22 out of Maryland's 24 jurisdictions in clinical care factors, and has been in the bottom three Maryland counties on this measure for the last five years. 2018 Prince George's County Health Rankings, **Exhibit 1**. By contrast, neighboring Howard and Montgomery Counties had the State's lowest mortality rates. Id.

The health of Prince George's County residents is exacerbated by the lack of a well-functioning ambulatory care safety net, and the lack of sufficient access to acute and specialty care within the county. See, e.g., Public Health Impact Study, **Exhibit 2**, pp. ii, 25, 31, 37, 52, 54; Maryland Nonprofits report, **Exhibit 3**, pp. 2, 7. Prince George's County has a substantially lower ratio of primary care providers to the population compared to surrounding counties and the State – just 53.9 medical, dental, and mental health providers per 100,000 population, compared to a statewide average of 84.5. Public Health Impact Study, **Exhibit 2**, at p. vii; see also Prince George's County Health Department, 2016 Community Health Needs Assessment, included on **Exhibit 4** (CD), p. 16 (finding significant disparities between the County and State ratios five year later).[3] The lack of services available in Prince George's County has led to high rates of patient out-migration to other counties and jurisdictions to seek care. Public Health Impact Study, **Exhibit 2**, throughout; Maryland Nonprofits report, **Exhibit 3**, pp. 2, 7. In applying for a CON in 2013, MedStar itself recognized the health disparities in Prince George's County as well as the problem of out-migration from the County. MedStar Southern Maryland Hospital Center CON Application, **Exhibit 5**, at pp. 9-10, 47.

The Commission's need projections for the Southern Region are consistent with the overall picture of limited access to health care services faced by Prince George's County residents. The Southern Region represents a population of nearly 1.4 million people. CON

[3] Also available at https://www.princegeorgescountymd.gov/ArchiveCenter/ViewFile/Item/3043 (last accessed Mar. 27, 2019).

Appl., p. 32. Yet the region has only a ten bed unit located in an acute care hospital and the fewest rehabilitation beds in the State, less than 4% of the inpatient rehabilitation bed capacity in the Central Region. With the temporary de-licensure of 18 beds from UM Laurel Regional Hospital, the ratio of beds to people in the region is 98,011:1, compared to a State average of 10,106:1, with all regions other than Southern ranging from 3,353:1 to 12,060:1. Id. (figures discussed herein from CON Appl. to reflect the temporary de-licensure of 18 beds).

Stakeholders have invested significant resources in addressing the health outcomes and access disparities for residents of the county. On July 21, 2011, Dimensions Health Corporation ("Dimensions"), UMMS, Prince George's County, the University System of Maryland, and the State of Maryland signed a Memorandum of Understanding (the "MOU"), attached as **Exhibit 6**, which committed the signatories to developing a comprehensive plan to strengthen health care in Prince George's County, increase access to primary care, and enhance the county's overall health infrastructure. In furtherance of that commitment, the MOU parties commissioned the University of Maryland School of Public Health to perform a study of the health care needs of Prince George's County. That study, the Public Health Impact Study, **Exhibit 2**, makes a number of recommendations for improving the health care delivery system in the county. Among the study's key findings and recommendations were the establishment of a new, academically affiliated regional medical center, recruitment and retention of primary care and specialty physicians, and the improvement of location and accessibility across all levels of care. Public Health Impact Study, **Exhibit 2**, pp. i-xxvii.

The 2015 approval of the CON application for a new regional medical center in Prince George's County, now under construction as the University of Maryland Capital Region Medical Center in Largo, and the affiliation of Dimensions and UMMS, are important steps forward in the transformation of care in Prince George's County. Also, the continued development of an ambulatory care network and acute inpatient rehabilitation services, such as those proposed by EHR, are just as crucial to achieving the goals identified in the Public Health Impact Study.

II. EHR DEMONSTRATED THAT BARRIERS TO ACCESS EXIST, AND THAT THE PROPOSED PROJECT WILL ADDRESS THOSE BARRIERS, COMAR § 10.24.09.04.B(1).

The access standard applicable to this review requires that "a new . . . acute rehabilitation hospital shall be located to optimize accessibility for its likely service area population." COMAR § 10.24.09.04.B(1). In addition, should an applicant "seek[] to justify the need for a project on the basis of barriers to access," the applicant must demonstrate that access barriers exist and that it has developed a credible plan to address those barriers. Id.

MNRH does not dispute that EHR has met the portion of this standard applicable to all candidates—that its proposed hospital is located to optimize accessibility. See MNRH March 18, 2019 Comments ("MNRH Comments"), pp. 5-8. Indeed, for residents in all five counties included in EHR's proposed service area, EHR's proposed facility will require a shorter travel than the travel time to any existing facility. CON Appl., pp. 43, 121.[4]

While MNRH claims that EHR has not demonstrated a credible plan to address barriers to access, it has not substantively criticized any part of EHR's plan other than to suggest that MNRH's out-of-state facility, which requires a longer drive time than EHR's proposed facility, is somehow more convenient for patients in EHR's proposed service area. Thus, the only real dispute is whether barriers to access do in fact exist. As explained below, it cannot reasonably be disputed that there are significant barriers to access for acute rehabilitation services in the proposed service area.

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[4] MNRH complains, in part, that EHR has not supported its access discussion with research studies or empirical evidence. EHR did so via its drive time analysis, but did not include the sources for those tables. Information about the methodology and sourcing for the travel time analysis is attached as **Exhibit 7** to this Response. As MNRH notes in its comments, EHR did not include the inpatient rehabilitation beds at Adventist HealthCare Rehabilitation Takoma Park in its travel time study. This omission is not material to the analysis supporting EHR's CON application. EHR defines its proposed services area as the Southern Region, and proposes only minimal volume shift from providers other than MNRH, George Washington University Hospital, and Laurel Regional Hospital. CON Appl., pp. 19, 53, 63.

A. EHR demonstrated that barriers to access exist.

EHR demonstrated access barriers by showing the lack of inpatient rehabilitation providers in the Southern Region, and the relative travel time to the closest providers. CON Appl., pp. 32, 43, 121. As noted in Section I, supra, the Southern Region is the second most populous of the Health Planning Regions for rehabilitation services, yet it has the fewest inpatient rehabilitation beds in the State. CON Appl., p. 32 (figures discussed here updated for de-licensure 18 beds in Southern Region). EHR further demonstrated that the Commission itself has projected need for more beds in the Southern Region, and the Southern Region has the lowest use rate in the State. CON Appl., pp. 25, 32.

Limited geographic access is a significant barrier to care for inpatient rehabilitation services. The Commission recognizes that "that the distance to providers, relative to a patient's residence may be a more powerful predictor of the use of acute inpatient rehabilitation services than the clinical characteristics of patients." COMAR §10.24.09.03, *Access to Care*. According to the study cited in the State Health Plan, this is because distance to acute inpatient care is a significant determinant of whether a patient seeks that care. Buntin, M.B., Garten, A.D., Paddock, S., Saliba, D., Totten, M., and Escarce, J.J. "How Much Is Postacute Care Use Affected by Its Availability?" Health Services Research 40(2): 413-34, attached as **Exhibit 8**. In fact, "the farther away the nearest IRF [inpatient rehabilitation facility] is, the less likely a patient is to go to an IRF." Id.[5] Thus, the low utilization rate in the Southern Region compared to the state average is evidence of a barrier to access, not, as MNRH suggests with circular logic, an indication residents of the Southern Region need inpatient rehabilitation services with less frequency than the Maryland average. (In fact, as shown elsewhere, the service area population includes high potential rehabilitation patient discharges. See, e.g., CON Appl. p. 30.)

[5] This may be particularly accurate for residents of the Southern Region who currently face travelling the Washington beltway and facing city congestion in order to access providers in Washington, D.C.

In addition to quantitative evidence of access barriers, EHR submitted letters of support providing direct anecdotal evidence of the barriers lack of geographic access have on patient care. CON Appl. Exhibit 11. For example, Nneka Ezunagu, CRNP, SCRN, CNRN, the Stroke Program Coordinator for UM Prince George's Hospital Center states "One of the biggest barriers that we face is access to post hospital care and rehabilitation after the patient is discharged….many times these patients are forced to choose less intensive arenas…. To have a reputable intensive rehabilitation facility for the patients we serve in a central location to their home would be welcoming [stet] and considered an extreme blessing." Such sentiment is repeated throughout the letters compiled in Exhibit 11.

B. MNRH does not credibly dispute the evidence of access barriers in the Southern Region.

MNRH's position that access in the Southern Region is currently sufficient is not only contradicted by the need, use rate, and travel time results identified above and in the CON application, but also is not logical or credible.

MNRH first suggests that EHR fails to demonstrate inequitable distribution of rehabilitation services because it did not include some portion of MNRH's beds, located outside of *any* applicable health planning region, in its analysis of beds in the Southern Region. See COMAR.24.09.05. MNRH also overstates and selectively quotes the State Health Plan chapter's guidance that, "[f]or specialized services, the public is best served if a limited number of hospitals provide specialized services to a substantial regional population base." COMAR § 10.24.09.03, *Specialized Hospital Services*; MNRH Comments, p. 11. This language does not mean that beds located outside of the Southern Region should be included in the count of beds actually located in the Southern Region. MNRH's comments reflect a deep misunderstanding of the policy and definitions of the State Health Plan Chapter.

The Commission articulated policy goals for rehabilitation services by, in part, defining health planning regions, including the Southern Region, COMAR § 10.24.09.05C, and the planning is premised on a regional bed need methodology. COMAR § 10.24.09.05. MNRH's

suggestion that these definitions should be disregarded and access should be evaluated on a statewide and even a multi-state basis strains such policy beyond any reasonable meaning. Accounting for a portion of MNRH's beds (MNRH suggests EHR should have included 37 of MNHR beds in its need projections for the Southern Region) not only is unsupported by the applicable State Health Plan, such a projection would contradict the State Health Plan chapter's express definitions, which do not include Washington, D.C. in the Southern Region. Id.[6] Similarly, the recognition that these services are best provided on a regional basis does not support MNRH's contention that the Commission should disregard the very regions it defines for these services.

MNRH also complains that the travel time analysis included in the application is misleading, but it fails to point to any supposedly misleading statement. MNRH is correct that the application states that drive time for some residents of the proposed service area to MNRH is between 60-100 minutes. MNRH Comments, p. 8; CON Appl., pp. 43, 121. MNRH's complaint is that the application shows that travel time to MNRH is only 38 minutes from Prince George's County. That is accurate, but does not contradict the statement that the drive time is greater for some residents of the service area—which includes five counties, not just Prince George's County. CON Appl., pp. 43, 121. In any event, the travel time for even Prince Georgians is significantly less, on average, to the proposed facility, at 27 minutes, than to MNRH, at 38 minutes. Id.

Next, MNRH complains that poor family engagement for residents of the proposed service area "is just as likely" to exist if a new facility is added to the service area. It is axiomatic and self-evident that access barriers such as travel time impact both the patient and the patient's family. The travel time study showing that the majority of patients needing

[6] The inclusion of Washington, D.C. was expressly considered and rejected from the definition for the Southern Region, as notes from the MHCC Acute Rehabilitation Work Group June 12, 2012 meeting demonstrate. See **Exhibit 9**, pp. 2, 7.

rehabilitation services must leave the region for care is equally applicable to family members residing with or near the patients.

C. MNRH provides no credible evidence of overutilization on the Eastern Shore.

MNRH admits that there is a low use rate of rehabilitation services by residents of the Southern Region, but it maintains that the underutilization/low use rates experienced by Southern Maryland residents is not a result of barriers to access, but of overutilization outside of the Southern Region. Specifically, MNRH suggests that Maryland's statewide average use rates are inflated because they "include the very high use rates on the lower Eastern Shore, where the other Encompass facility, HealthSouth Chesapeake is located." Moreover, MNRH states that such data "could suggest Eastern Shore use rates are evidence of OVER utilization." MNRH Comments, p. 104.

First and foremost, there is absolutely no evidence that there is overutilization at Encompass Health Rehabilitation Hospital of Salisbury (formerly known as HealthSouth Chesapeake). In fact, Encompass Health, both as a national organization and on an individual facility level, has compliance activities and checks and balances to assure that patients are appropriately coded from admission through discharge.[7]

Furthermore, it defies common sense for MNRH to state that "the Southern Maryland use rate of 4.4 discharges per thousand population for the 65 plus age group appears consistent with the state average of 6.7." MNRH Comments, p. 10. It fact, the Southern Region use rate is only two thirds of the statewide use rate. Furthermore, there is no basis to analyze the statewide use rate without including the six counties of the lower Eastern Shore as suggested by MNRH.[8]

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[7] See, e.g., Encompass Health Corporation's ethics & compliance Health 360 cite at https://360.encompasshealth.com/Corporate/Compliance/Pages/Home.aspx; Encompass Health Rehabilitation Hospital of Salisbury site regarding vendor compliance, http://encompasshealth.com/vendorcompliance.

[8] Even applying MNRH's logic, which is flawed and should be rejected, the statewide average use rate for all regions *excluding* the Eastern Shore is 5.8. MedStar Comments, p. 10. This is still significantly greater than the use rate for the Southern Region.

D. MNRH's concerns of disruption in continuity of care are unsupported and disingenuous.

MNRH suggests that continuity of care can be achieved only when patients receive care within the same healthcare system, e.g. the MedStar system. MNRH Comments, p. 11. MNRH seems to suggest patients should be referred to and receive care only at facilities within the same system, and not based on the best choice for the patient and family using criteria such as patient choice, quality of care, and/or location. This argument is misplaced for multiple reasons.

First, MNRH ignores or disregards the basic right granted to all patients, including Medicare beneficiaries, of patient choice. See, e.g., 42 U.S.C. § 1395a (with respect to Medicare beneficiaries). Patients should not be expected or required to receive care only within one health care system, regardless of MedStar's preference. Patients and their families have the right of choice.[9]

Next, MNRH's states that "Quality of care suffers, however, when patients must navigate between disparate providers, who are unfamiliar with one another, use different documentation systems and do not properly communicate." MNRH Comments, p. 12. However, there is no health care providers are now able to communicate with one another effectively as a result of medical information technology advances, including CRISP—the Chesapeake Regional Information System for our Patients. MNRH, as a CRISP member (as are the other MedStar hospitals), is aware that all CRISP providers may access the medical records and obtain relevant information from other providers of care—regardless of the healthcare system. See, e.g., https://crisphealth.org (last accessed March 26, 2019) ("Health information exchange allows clinical information to move electronically among disparate health information systems.") As

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[9] See, e.g., 42 U.S.C. § 1395a with respect to Medicare beneficiaries:
(A) BASIC FREEDOM OF CHOICE

> Any individual entitled to insurance benefits under this subchapter may obtain health services from any institution, agency, or person qualified to participate under this subchapter if such institution, agency, or person undertakes to provide him such services.

stated by EHR, "Encompass Health expects to integrate with CRISP in Maryland to enable real-time reporting systems, support care coordination, and leverage all of the tools that have been built in Maryland." CON Appl., p. 99.

In any event, on a national basis, Encompass Health welcomes and treats patients from all healthcare systems, without preference for any affiliation. Encompass staff and systems successfully interact with all referring providers without disruption. Moreover, with respect to a coordinated system of care for rehabilitation patients in the Southern Region, EHR will be able to coordinate patient care with UM Capital Region Medical Center. See CON Appl., Exhibit 11, Letter of Support from Bruce M. Neckritz, D.O., F.A.A.P.M.R. ("This is an opportunity for Prince George's county to work collaboratively with a high quality rehab center.").

III. MNRH FAILS TO RAISE A CREDIBLE ISSUE REGARDING EHR'S QUALITY OF CARE, COMAR § 10.24.09.04A(2).

A. EHR's Quality Data is Reliable.

MNRH claims that that EHR failed to demonstrate the ability to meet the requirement to provide "high quality health care compared to other Maryland providers that provide similar services." See MNRH Comments, p. 2. MNRH ignores the evidence provided by EHR showing that Encompass Health provides quality care both nationally and at its Encompass Health Rehabilitation Hospital of Salisbury. EHR's CON application provides extensive evidence of the high quality care, which MNRH disregarded. In sum, the quality evidence and data includes:

> Performance indicators attest to the fact that Encompass Health is a low cost and high-quality performer. As indicated above, Encompass Health utilizes Uniform Data System for Medical Rehabilitation (UDSMR®), the rehabilitation industry's most widely recognized outcomes measurement tool, to monitor overall patient outcomes. Key indicators include the following (see pages following for detail):
>
> IRF quality indicators: Relative to national providers reporting through UDSMR®, Encompass Health reports
>
> - Consistently higher rates of discharge to the community

- Lower discharge rate to the acute care setting
- Lower rate of discharge to skilled nursing facilities
- Lower than average cost per discharge, relative to hospital-based units and freestanding facilities
- Higher than expected functional improvement gains

CON Appl., pp. 83-84; see also pp. 83-110.

MNRH claims that because the Medicare Payment Advisory Commission ("MedPAC") identifies certain freestanding for-profit facilities as "high-margin" IRFs, somehow Encompass facilities do not provide quality care. MNRH presents no evidence to establish a connection between "high margin" and lower quality of care. MNRH's assertions about the quality of care provided at Encompass facilities are without merit and without support.

EHR's application is replete with descriptions of the unparalleled quality of care offered at Encompass hospitals throughout the country. MNRH's attempts to detract from Encompass's solid track record of high quality inpatient rehabilitation services through contortion of unsubstantiated observations are unsuccessful. The overwhelming evidence contained in EHR's application along with other documentation and information submitted with the Commission shows the quality of care patients will receive at this proposed hospital is of the highest level and is greatly needed. See CON Appl., pp. 83-110.

B. EHR is a low cost provider.

As shown in the CON application, EHR is a low cost provider. CON Appl., pp. 65-70. MNRH claims that EHR may not be a low-cost provider because "it is not possible to know whether the mix of patients that Encompass Health treats is truly comparable to those treated by other providers." MNRH Comments, p. 4. MNRH thus suggests that Encompass, in Maryland and nationally, "cherry picks" its admissions. There is no evidence to support that assertion.

MNRH also implies that EHR's strategic decision to locate its facilities in cost efficient locations, such as convenient places where land is cheaper, and build cost-effective, one-level

construction somehow should be discounted or ignored. On the contrary, decisions to develop care in cost-effective settings should be applauded as responsible health planning strategy.

IV. EHR MET THE NEED PROJECT REVIEW STANDARD, COMAR § 10.24.09.04B(2), AND REVIEW CRITERION, COMAR 10.24.01.08G(3)(b).

A. EHR provided credible evidence that it will recapture patients currently seeking care outside of the service area.

MNRH incorrectly argues that EHR's volume projections supporting the proposed facility are based primarily on redirecting volume from existing acute rehabilitation providers in Washington, D.C. In fact, EHR assumes that only 341 of 1,500 projected discharges will derive from capturing outmigration from MNRH and George Washington University in the District of Columbia.[10] CON Appl., p. 51.

Suggesting patients from the Southern Region prefer to seek inpatient rehabilitation care in Washington, D.C. in the same way they choose to visit D.C. for work, dining, and recreation, MNRH erroneously asserts there is no basis for EHR's assumption that some of these patients would prefer to obtain care closer to home at the proposed new facility. However, quite simply, and not surprisingly, patients prefer to be treated close to home. As discussed in Section II, supra, research supports that the distance between a rehabilitation patient and the location of the provider is a powerful predictor of the use of rehabilitation services. EHR conservatively assumes that it will capture only 40% of the patient volume that currently migrates from the

[10] At cross-purposes to its primary argument that EHR included too many outmigration cases in its volume projections, MNRH also argues that EHR failed to project more outmigration volume that might be captured from Adventist Rehabilitation Hospital in Montgomery County and from various providers in the Central Maryland Region who treat patients from Southern Anne Arundel County. MNRH Comments, pp. 15-16. While MNRH is correct that EHR did not include this volume in its conservative projections, including the volume would only further support the need for the proposed facility. However, including these discharges would not make a significant change in the expected volume. Applying the same 40% capture assumption to Southern Region discharges treated at Adventist Rehabilitation Hospital in Montgomery County in CY 2016 would produce an additional 148 projected discharges, and adding the Southern Anne Arundel County discharges treated in the Central Maryland region would produce an additional 11 projected discharges.

Southern Region to Washington, D.C. for treatment. CON Appl., p. 51. This low target accounts for those patients who may continue to seek care at MNRH despite the existence of a more convenient option, including those patients who have been treated within the MedStar system and prefer to receive rehabilitation care at MNRH.

Also, EHR's assumption of capturing 341 outmigration discharges is based on the expected performance of the UM Capital Region Medical Center now under construction in nearby Largo, Maryland. The CON application for the approval of that new facility was based upon assumptions that the academically affiliated hospital would recapture substantial acute care service volume from hospitals in D.C. In particular, the applicant, Dimensions (now known as UM Capital Region Health), projected that it will recapture substantial acute care discharges in a number of service lines, including (among others): cardiac surgery, cardiology, interventional cardiology, orthopedics, spine and neck procedures, surgery, and trauma. Dimensions Modified CON Appl. (January 15, 2015), p. 80. Thus, as the new hospital commences operation in 2021, there will be more locally discharged patients in need of acute inpatient rehabilitation services in the Southern Region.

B. MNRH's suggestion that care provided in a skilled nursing facility and an inpatient rehabilitation facility is similar is plainly incorrect.

MNRH criticizes EHR's projected volume shift of 418 cases from skilled nursing facilities ("SNFs") to its proposed IRF, claiming there is no evidence that certain SNF patients would be better served in an IRF. This position is both inaccurate and surprising from a provider of inpatient rehabilitation services. The State Health Plan itself recognizes that acute inpatient rehabilitation facilities provide a significantly more complex degree of services than SNFs, as evidenced, in part, by the fact that there are two entirely different State Health Plan chapters that regulate and separately project need for each type of facility. Acute inpatient rehabilitation services is defined by regulation, in part, as follows:

> Acute inpatient rehabilitation . . . means an intensive rehabilitation therapy program as described in 42 CFR Part 412. It generally consists of at least three

> hours of therapy per day in multiple therapy disciplines (physical therapy, occupational therapy, speech-language pathology, or prosthetics/orthotics therapy) at least five days per week. One of the therapy disciplines provided must be physical or occupational therapy. In addition, it is a program that requires physician supervision by a licensed rehabilitation physician. . . .

COMAR § 10.24.09.06B(2). This is simply a different kind of care than is offered by SNFs, or "comprehensive care facilities," which are defined as a "facility which admits patients suffering from disease or disabilities or advanced age requiring medical service and nursing service rendered by or under the supervision of a registered nurse." COMAR § 10.24.08.03A (referencing COMAR section 10.07.01.01B(6)). Moreover, as discussed in Section IV(D), infra, and in the CON application, IRF patients have a shorter average length of stay, better functional outcomes, and lower rates of readmission as compared to SNF patients. CON Appl., pp. 66-67.

MNRH's suggestion that SNFs and IRFs are comparable is also disingenuous, as MNRH itself took the opposite position in its 2013 comments on what was then the draft State Health Plan chapter for acute inpatient rehabilitation. In those comments, MedStar criticized the proposed regulations for containing "inadequate analysis of the skilled nursing facility (SNF) alternative to acute inpatient rehabilitation settings in terms of cost and quality," noting that "[m]any patients cannot be managed by SNFs because many SNFs lack 24-hour nursing availability with rehabilitation nurses, regular physician visits, more intensive, individualized daily therapy, and the capability to manage patients medically on site." Mar. 27, 2013 MedStar Comments on Draft State Health Plan, attached as **Exhibit 10**, p. 7.

While MNRH attempts to criticize EHR's citation to a 2014 study by Dobson & DaVanzo Associates, it notably does not attack the underlying assertions for which the study was cited; namely, certain improved functional outcomes and reduced morbidity rates among IRF as compared to SNF patients. See CON Appl., p. 68. MNRH does not attack these assertions, of course, because they are well-accepted. In fact, the current State Health Plan chapter for acute rehabilitation services itself recognizes that certain rehabilitative patients have better health outcomes at IRFs as compared to SNFs, including patients with a nervous system disorder. See COMAR § 10.24.09.03, *Quality of Care*.

C. EHR provided credible evidence that it will capture patient admissions directly from the community, emergency department, and after organ transplant.

MNRH's criticism of EHR's projection that it will admit a small volume of patients directly from the community, from emergency departments, or after organ transplant surgery overlooks the fact that the totality of these projected patients, from all three sources, is only 85, or only 5.5% of EHR's projected patient volume. This is less than the approximately 7% of total Encompass Health system national admissions that currently come from community admissions alone. CON Appl., pp. 37, 45. Moreover, the letters of support from community-based clinicians included with the CON application demonstrate that EHR's modest volume assumption for direct admissions is entirely reasonable. CON Appl., Exhibit 11.

D. MNRH's suggestion that volume will not increase with population growth is unsupported and not credible.

MNRH's position that "ERH's claim that rehabilitation admissions will increase as population increases . . . is unfounded, as no evidence of such a potential change is presented" defies common sense. MNRH Comments, p. 17. Even if rehabilitation utilization rates were to remain constant, the actual number of patients using inpatient rehabilitation still would grow as the population increases. Furthermore, the regulatory methodology projecting adult acute rehabilitation bed need that governs this review explicitly relies on future year population projections. See COMAR §10.24.09.05, p. 16.

In addition, MNRH's argument is inconsistent with the Commission's very recent decision in Adventist Rehabilitation Hospital of Maryland, Docket No. 19-15-2428, March 21, 2019 (the "ARH Decision") in which Adventist Rehabilitation Hospital ("ARH") maintained, and the Commission accepted, that the basis for need for the ARH project was that "projected growth is primarily a function of population growth in its service area (primarily Montgomery and Prince George's Counties) and an aging population." ARH Decision, p. 24. ARH goes on to state that Prince George's County's population is projected to grow by 5% between 2015 and 2025. ARH Decision, p. 24. Consistent with the ARH Decision, EHR also states that the

population in its service area is projected to increase by more than 5% annually. CON Appl., pp. 5, 24. Furthermore, "more than 12% of the service area population is over the age of 65." CON Appl., p. 34. Therefore, based on the ARH Decision and the data presented by EHR, EHR's conclusion that "even at stable use rates, the population growth in the service area region will support the need for additional beds…," CON Appl., p. 34, is accurate and fully supported by the Commission's March 2019 ARH Decision.

E. EHR's assumptions regarding demand are reasonable in light of applicable payment policies.

MNRH claims that EHR failed to consider how changing state and federal payment policies will impact projected volumes. On the contrary, EHR considered and accounted for the payment policies that will apply to the proposed hospital. The benefits of care in a freestanding inpatient rehabilitation facility align very well with existing and emerging payment policies. In particular, the EHR will serve as an excellent and highly cost-effective acute inpatient care partner for hospitals in and around the Southern Region.

First, MNRH argues that "shifting 418 SNF-appropriate cases annually to higher cost IRFs will certainly increase the cost per case." This is incorrect. As set forth in the CON application, the experience at Encompass Health Rehabilitation Hospital of Salisbury demonstrates that for certain types of discharges, inpatient rehabilitation facilities provide more cost effective and higher quality care. CON Appl., pp. 65-69, 108-109. Based on CY 2016 data, EHR compared discharges with high potential rehabilitation diagnoses treated in skilled nursing facilities versus those treated at HealthSouth Chesapeake.[11] CON Appl., pp. 66-67. While the comparison shows the cost per diem was greater in the IRF setting, the average length of stay was much lower than the experience in SNFs, producing a comparable total cost per case with

[11] High potential rehabilitation diagnoses include patient cohorts with the following diagnoses: stroke, brain injury, amputation, spinal cord injury, fracture of the femur, neurological disorder, multiple trauma, congenital deformity, burns, osteoarthritis (after less intensive setting), rheumatoid arthritis (after less intensive setting), joint replacement (if bilateral, age ≥ 85 or body mass index > 50), and systemic vasculitides (after less intense setting). CON Appl., p. 5.

shorter stays, better functional outcomes, and lower rates of readmission. Thus, it is likely that patients and care providers will choose EHR over a SNF for these types of diagnoses.[12]

Next, MNRH questions the reasonableness of projected volumes based on "new cases" because MNRH asserts this will increase the total cost of care. As discussed in the CON application, the use rates in the Southern Region are quite low compared to the statewide averages. With a new cost effective quality inpatient rehabilitation provider in the region, more patients will seek care in the IRF, and the use rates should grow to be comparable to the state averages. EHR does not assume that the use rates will increase *above* the state averages. Much of the new IRF volume is projected to shift from SNFs, where the cost of care is comparable to the cost for care in an IRF. Thus, there will not be a significant increase in the total cost of care, and any cost increase will be offset by the savings realized from reduced hospital readmissions.

Finally, MNRH claims that changes in federal and state payment policies will "soften" the demand for IRF care. On the state level, as explained in the CON application, the proposed project will be an attractive care partner for Maryland hospitals seeking cost-effective, high quality inpatient rehabilitation care with low rates of readmission. CON Appl., pp. 48, 68, 84, 107-110. As for possible changes in federal payment policies identified by MNRH, EHR considered the impact of these changes. In fact, a number of Encompass Health facilities are already actively involved in bundled payment initiatives, risk-sharing, and Encompass Health participates in Medicare Advantage plans in every state where it operates. CON Appl., pp. 45-46, 105-107, 122.

F. The 2013 Harford Memorial Hospital recommended decision is not a final decision of the Commission and is distinguishable.

MNRH relies on a prior CON review before the Commission, Harford Memorial Hospital ("HMH"), Docket No. 12-12-2335, claiming that the matter constitutes precedent of the

[12] The applicant's projected shift of volume from SNFs is conservative: 30 percent of stroke volume; 5-10 percent of traumatic brain injury and spinal cord injury volume; and 2-3 percent of other high potential rehabilitation diagnoses. CON Appl., p. 51.

Commission that is favorable to MNRH's positions. In fact, there was no decision rendered in that matter. The recommendation of the reviewer was never considered by the full Commission because the applicant withdrew its application prior to the hearing. See Notice of Voluntary Withdrawal and the Commission's Acknowledgement, attached collectively as **Exhibit 11**. Moreover, even if the reviewer's recommended decision had been adopted, it would not provide any support for MNRH's arguments. There are several important distinctions between the HMH review and the present matter.

First, the HMH review was conducted under an earlier version of the State Health Plan. Among other significant differences between the two versions, the prior version did not include a need methodology nor did it require the Commission to prepare regional bed need projections. If the HMH project had been evaluated under the current version, the project might have been approved. Indeed, the reviewer in the HMH review wrote:

> I want to point out that, if the replacement Acute Rehabilitation Chapter of the State Health Plan, which was adopted by the Commission as proposed permanent regulations in July 2013, is later adopted as final regulations, HMH will be able to propose introduction of acute rehabilitation services at a replacement hospital.

HMH Recommended Decision, pp. 2-3.

Second, the existing rehabilitation bed capacities of the subject health planning regions are vastly different in the two cases. HMH proposed to relocate 18 beds in the Central Maryland Region, which included seven facilities with *267 beds*. EHR proposes to establish a new hospital with 60 beds, including the use of 18 temporarily de-licensed beds, in a highly populated region that currently includes only a single facility with *ten rehabilitation beds* in operation. The reviewer in the HMH review evaluated the need for capacity within the region as well as the relative travel time for patients to access other facilities within the region. HMH Recommended Decision, pp. 35-44. In the present matter, MNRH disregards that the relevant region has only ten rehabilitation beds and urges the Commission to assess need based on the capacity in neighboring regions and in other states.

Third, the reviewer in the HMH case determined that the proposed project would not sufficiently reduce travel time for patients and families because other inpatient rehabilitation providers in the Central Region were located within a reasonable travel time of the relevant service area population (e.g., 75% were located within 45 minutes of one of the existing providers in the region). HMH Recommended Decision, pp. 41-42. Here, by contrast, MNRH asserts that residents of the Southern Region should be made to travel to other regions, and to other states, rather than receive inpatient rehabilitation care within their home region.

Finally, the reviewer in the HMH matter found that the proposed project would not be cost effective, in part, because HMH intended to establish the facility in a hospital building that it intended to replace within five years. Thus, the reviewer questioned the wisdom of spending $7.5 million on improving space that would be replaced within a matter of a few years. The reviewer noted that HMH could apply again at that time and the provisions of the new State Health Plan chapter for Acute Rehabilitation would not preclude the development of acute rehabilitation in the new hospital. HMH Recommended Decision, p. 47.

V. MNRH FAILS TO SUPPORT ITS ALLEGATION THAT THE PROPOSED PROJECT WILL HAVE AN UNWARRANTED ADVERSE IMPACT, COMAR § 10.24.09.04A(3).

EHR maintains that its proposed project will not adversely impact the ability of other providers to maintain the necessary specialized staff to support their facilities. CON Appl., p. 128. MNRH argues, without any factual basis, that EHR has failed to support this standard.

First, with respect to MNRH'S argument that "the proposed project will negatively impact MedStar/MNRH's ability to maintain staff," MNRH Comments, p. 21, MNRH offers no evidence that MNRH has problems recruiting or maintaining the specialized staff necessary to operate, thereby failing to meet its basic burden under COMAR § 10.24.01.08F. Instead, offering no evidence of staff shortages, MNRH offers only broad unsubstantiated generalizations that MNRH and EHR will be competing for "very scarce clinical staff."

Furthermore, as stated in its application, EHR will be operating in a large health planning region, and therefore, it anticipates its employees will, for the most part, be residents of the Southern Region. CON Appl., p. 128. EHR expects a different workforce population than would be expected to work in a facility located within D.C. for the obvious travel reasons. See, e.g., travel time analysis, CON Appl. p. 43, 121.

MNRH maintains that because there are national staffing vacancies for Encompass Health, "how then can ERH expect to staff a new facility without poaching staff members of existing facilities." MNRH Comments, p. 21. Again, MNRH's argument is without merit. There is no relationship between national vacancies and what is expected in the Southern Maryland market. Moreover, and as set forth in the application, investments by the State in the University of Maryland Capital Region Health (which will be working closely with EHR) likely will result in an expanded and upgraded health care work force in the Southern Region.

Lastly, with respect to MNRH's concern that EHR will be "poaching," of course employees have the right to choose to work in a facility which offers the best setting, location, salary, and benefits and sign-on bonuses (if applicable). MNRH offers no evidence that the staffing loss it could face as a result is anything more than usual staffing changes when competing providers exist—thus, if its argument were given credence, no new competitor could ever open within 20 miles of another. Had the Commission intended that result, and it most certainly did not, it would have written such a restriction into the State Health Plan.

VI. EHR DEMONSTRATED THAT ITS PROPOSED PROJECT IS FINANCIALLY FEASIBLE AND VIABLE COMAR § 10.24.09.04B(6), COMAR 10.24.01.08G(3)(D).

MNRH challenges the financial feasibility of the proposed project, claiming that EHR's volume projections are overstated. As discussed in Section IV, supra, EHR's volume projections are reasonable, if not conservative. Moreover, based on the modified revenue and expense tables and according to Jared Price, Director of Business Analytics for Encompass Health Corporation, the proposed project would be financially feasible if its volume projections turn out to be

substantially lower. In year one of operation, the project would "break even" in terms of net revenue with only 993 discharges, assuming the same average length stay and revenue per patient day as included in the modified financial projections. There is significant room for the project to break even at later years as well. See Modified Table J (Jan. 4, 2019); Affirmation of J. Price, included with this response.

VII. MNRH FAILS TO RAISE A CREDIBLE ISSUE REGARDING THE AVAILABILITY OF COST-EFFECTIVE ALTERNATIVES, COMAR § 10.24.08G(3)(c).

MNRH argues that the proposed project is not the most cost effective alternative, and that Encompass instead should have proposed to add space for a new inpatient rehabilitation unit within the UM Capital Region Medical Center, the replacement facility for UM Prince George's Hospital Center, currently under construction in Largo, Maryland. MNRH notes the Commission recently granted a CON for Adventist Rehabilitation Hospital of Maryland to relocate to additional space in the relocated Washington Adventist Hospital in White Oak, Maryland. It argues similar approval could have been obtained here.[13] However, MNRH overlooks that EHR does not have the ability to control the development of the new regional medical center, and it cannot cause UM Capital Region Health to seek approval to add space in the hospital for a rehabilitation unit.

Moreover, as described in the CON application, even if UM Capital Region Health obtained approval for more space in the new hospital and used it for inpatient rehabilitation services, this would not be the most cost effective approach to adding inpatient rehabilitation

[13] It is not at all clear the Commission would approve a request to expand the UM Capital Region Medical Center at this time. Commissioner Robert Moffitt, the reviewer in that case, was sharply critical of the original proposed size and cost of the facility. See September 30, 2016 Memorandum of Commissioner Robert E. Moffit regarding Recommended Decision in Dimensions Health Corporation, Docket No. 13-16-2351, attached as **Exhibit 12**. He noted that Maryland taxpayers would subsidize much of the cost of the facility, and he strongly urged the applicant to reduce the size and cost substantially. Following this guidance, the applicant modified the CON application to make substantial reductions in size and cost. Id.

capacity in the Southern Region. CON Appl., pp. 59-60. Relative to hospital-based units, single level freestanding rehabilitation facilities provide more convenient and accessible locations to patients and families. Also, freestanding facilities have lower costs, lower payments, and are more efficient than hospital-based facilities. Id. Indeed, in its March 2019 Report to Congress, MedPAC examined for the first time the financial performance of relatively efficient inpatient rehabilitation facilities. MedPAC concluded:

> Although all types of facilities were represented in the relatively efficient group of IRFs, they were much more likely to be freestanding and/or for profit. In fact, over half of Encompass Health facilities (formerly HealthSouth) were in the relatively efficient IRF group. Hospital-based nonprofit IRFs were less likely to be in the relatively efficient group, although they accounted for over a third (37.2 percent) of this group.

MedPAC March 2019 Report to the Congress, p. 272 (March 15, 2019), excerpt attached as **Exhibit 13.**

MNRH also asserts that existing capacity is sufficient to treat inpatient rehabilitation volume originating from the Southern Region. As discussed in Sections I and II, supra, EHR has demonstrated that significant barriers to access exist in the Southern Region and that the establishment of the proposed freestanding 60-bed inpatient rehabilitation hospital will address those barriers. Patients and their families in the Southern Region should not be forced to leave the region to obtain inpatient rehabilitation services.

Conclusion

For the reasons set forth above, EHR respectfully asks that the Commission approve EHR Application proposing to establish an inpatient rehabilitation hospital in Bowie, Maryland.

Respectfully submitted,

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April 2, 2019

TABLE OF EXHIBITS

1. Prince George's County Health Department, Prince George's County 2018 County Health Rankings, March 2018

2. University of Maryland School of Public Health, Transforming Health in Prince George's County, Maryland, A Public Health Impact Study, July 2012 (+ CD)

3. Maryland Nonprofits, 2011 Research Report, Prince George's County Ranks Low on Health Measures

4. Prince George's County Health Department, 2016 Community Health Needs Assessment (CD)

5. MedStar Southern Maryland Hospital Center CON Application

6. Memorandum of Understanding among UMMS, Prince George's County, the University System of Maryland, and the State of Maryland

7. Methodology and sourcing for travel time analysis

8. Health Services Research 40(2): 413-34

9. June 12, 2012 MHCC Acute Rehabilitation Work Group meeting notes

10. Mar. 27, 2013 MedStar Comments on Draft State Health Plan

11. Notice of Voluntary Withdrawal and the Commission's Acknowledgement

12. September 30, 2016 Memorandum of Commissioner Robert E. Moffit re Recommended Decision in Dimensions Health Corporation, Docket No. 13-16-2351

13. March 2019 MedPAC Report to the Congress excerpt

CERTIFICATE OF SERVICE

I hereby certify that on the 2nd day of April 2019, a copy of the Response of Encompass Health Rehabilitation Hospital of Southern Maryland on the Comments of MedStar National Rehabilitation Hospital on the CON Application proposing the establishment of an inpatient rehabilitation hospital in Bowie, Maryland, was sent via email and first-class mail to:

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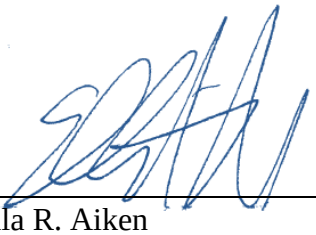

Ella R. Aiken

I hereby declare and affirm under the penalties of perjury that the facts stated in this Response of Encompass Health Rehabilitation Hospital of Southern Maryland on the Comments of MedStar National Rehabilitation Hospital and its attachments are true and correct to the best of my knowledge, information, and belief.

4/2/19
Date

Jared Price
Director of Business Analytics
Encompass Health Corporation

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013996-0001

I hereby declare and affirm under the penalties of perjury that the facts stated in this Response of Encompass Health Rehabilitation Hospital of Southern Maryland on the Comments of MedStar National Rehabilitation Hospital and its attachments are true and correct to the best of my knowledge, information, and belief.

April 2, 2019
Date

Walter Smith
Walter Smith, Director, State Regulatory Affairs
Encompass Health Corporation

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EXHIBIT 1

HEALTH DEPARTMENT
Prince George's County

Prince George's County
2018 County Health Rankings

The annual Robert Wood Johnson Foundation *County Health Rankings*[i] measures both **health factors** and **health outcomes**. Health factors focus on behaviors, access to health care, the environment, and socioeconomic factors which affect the health of the population and contribute to their health outcomes, such as length and quality of life. Both health factors and health outcomes are used to "rank" the counties within each state. This document provides an overview of Prince George's County's rank compared to the other jurisdictions in Maryland, and also provides information about the indicators used to create the rankings.

It is important to keep in mind that while the current health ranking is dated 2018, the data used to create the ranking is usually older and will not reflect recent changes in the county. Also, the rankings are only based on a comparison to other Maryland counties and do not consider trends over time within the county. So while we may have improved within the county over the years, we could still have a lower ranking in comparison to the other jurisdictions.

Rank	Jurisdiction
1	Montgomery
2	Howard
3	Carroll
4	Calvert
5	Frederick
6	St. Mary's
7	Anne Arundel
8	Harford
9	Queen Anne's
10	Talbot
11	Charles
12	Worcester
13	Baltimore
14	**Prince George's**
15	Garrett
16	Kent
17	Cecil
18	Washington
19	Wicomico
20	Allegany
21	Dorchester
22	Caroline
23	Somerset
24	Baltimore City

Prince George's County Health Rankings (out of 24 jurisdictions)

Multiple indicators are included in these key summary measures

	2014	2015	2016	2017	2018
Overall Ranking	**17**	**16**	**16**	**14**	**14**
Health Outcomes	**17**	**16**	**16**	**14**	**14**
Length of Life	18	19	15	15	12
Quality of Life	14	13	18	17	14
Health Factors	**14**	**15**	**16**	**16**	**16**
Health Behaviors	8	9	11	11	10
Clinical Care	21	23	23	23	22
Social & Economic Factors	15	16	17	16	16
Physical Environment	12	13	8	6	7

2018 Rankings: Prince George's County Successes

Indicator	Rank (out of 24)	PGC Value	MD Value
Residents with Access to Exercise Opportunities	3	99%	93%
Injury Death Rate	3	47 per 100,000	64 per 100,000
Adults who Smoke	3	12%	14%
Adult Excessive Drinking	3	15%	17%
Adult Average Poor Mental Health Days per Month	4	3.3 Days	3.5 Days
Income Inequality Ratio	4	3.8	4.6

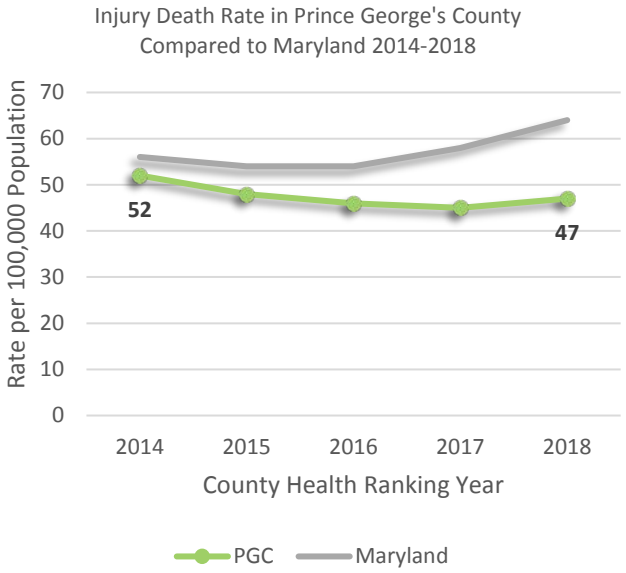
Produced by the Office of Assessment and Planning
March 2018

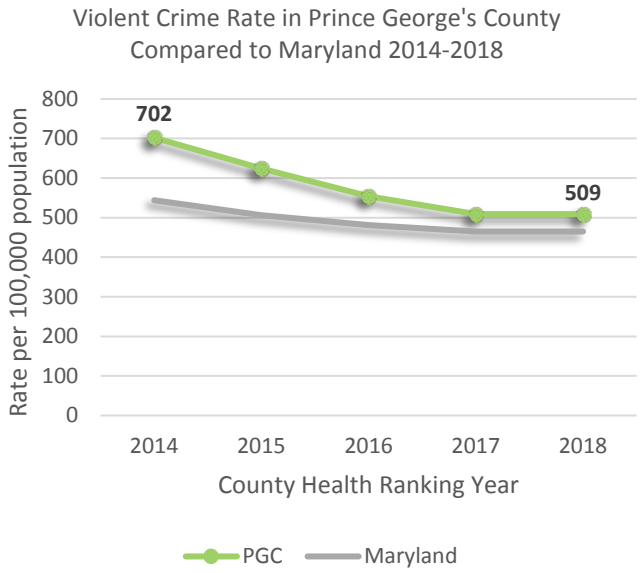
HEALTH DEPARTMENT
Prince George's County

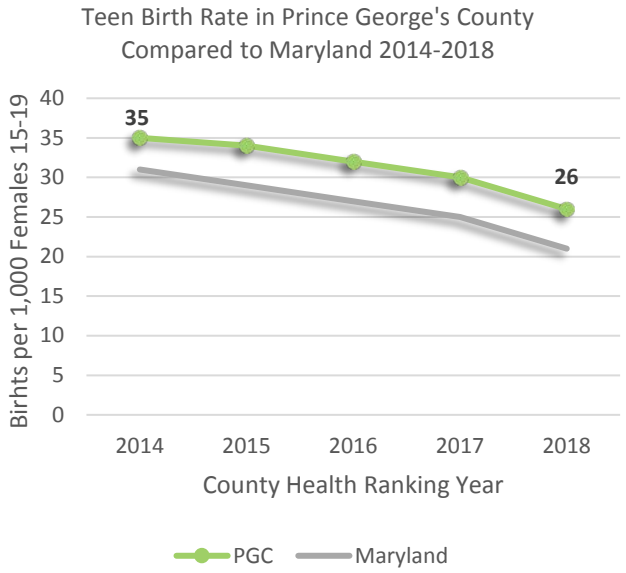
Prince George's County
2018 County Health Rankings

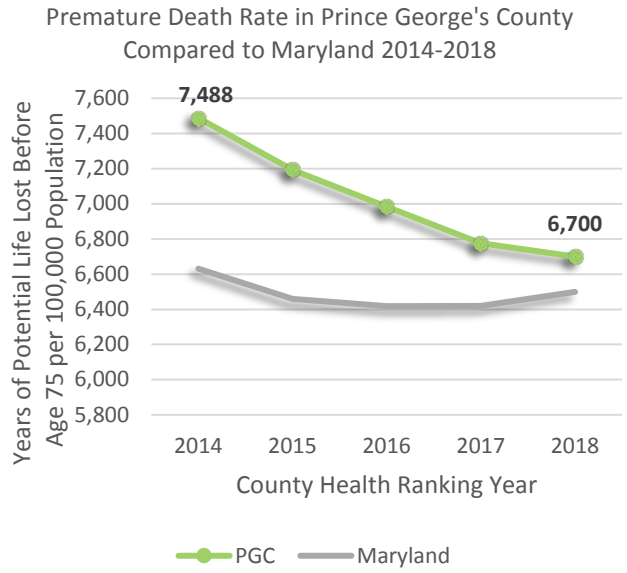
Positive Trends

Prince George's County has improved for many of the indicators included in the Rankings. For example, the premature death rate has dropped by 11%, and the teen birth rate dropped by 26% since the 2014 Rankings. While Prince George's County currently ranks 23 out of 24 in the state for the rate of violent crime, the rate has dropped by 27% since the 2014 Rankings, showing a marked improvement. The Injury Death Rate in the state has climbed substantially since 2016, but Prince George's County has remained consistently low.









HEALTH DEPARTMENT
Prince George's County

Prince George's County
2018 County Health Rankings

Opportunities for Improvement

The county is ranked lower for the following indicators. While many have improved over time they continue to trail behind the other jurisdictions in the state. For the summary areas considered in the Rankings, the county continues to have a low ranking with **Clinical Care**. It is important to note that the low ranking of the rate of primary care physicians (PCPs), dentists, and mental health providers in the County has limitations: the measures only consider the providers located within the county and not any nearby access to providers in adjacent jurisdictions. Also, the primary care physician (PCP) rate does not include nurse practitioners, physician assistants or other practitioners who also provide primary care services.

Clinical Care Measures	2014	2015	2016	2017	2018	2018 Rank (out of 24)
Overall Ranking	**21**	**23**	**23**	**23**		**23**
Percent Uninsured	16%	16%	17%	14%	11%	**24**
Primary Care Provider Rate	1,804:1	1,780:1	1,860:1	1,910:1	1,910:1	**16**
Dentist Rate	1,762:1	1,712:1	1,680:1	1,680:1	1,650:1	**13**
Mental Health Provider Rate	1,483:1	1,151:1	1,060:1	970:1	890:1	**21**
Preventable Hospital Stays	52 per 1,000	48 per 1,000	46 per 1,000	43 per 1,000	46 per 1,000	**6**
Diabetes Monitoring	80%	81%	82%	82%	82%	**22**
Mammography Screening	60.7%	61.7%	61%	61%	61%	**22**

Even though Prince George's County ranks low in graduation rate, violent crime rate, and low birth weight, those measures have improved over time, as shown below.

Low Ranked Measures	2014	2015	2016	2017	2018	2018 Rank (out of 24)
Graduation Rate	73%	74%	77%	79%	79%	**23**
Violent Crime Rate*	702	624	554	509	509	**23**
STI (chlamydia) Rate*	699	685	699	689	680	**22**
Low Birth Weight	10.4%	10.3%	10%	10%	10%	**21**

* Rate is per 100,000 population

Conclusions

Prince George's County continues to improve in many of the County Health Rankings measures. While the rankings themselves may not change much, it is more important to consider if there is **change over time that demonstrates positive progress in the county**. The County Health Rankings is a helpful tool to start important conversations about the factors that contribute to the health of county residents. When using the Rankings, it is helpful to consider that the age of the data used may not fully take into account recent changes in the county, such as the implementation of the Affordable Care Act and Primary Healthcare Strategic Plan[ii].

[i] http://www.countyhealthrankings.org/
[ii] http://www.pgplanning.org/Projects/PHCSP.htm

Produced by the Office of Assessment and Planning
March 2018

EXHIBIT 2

TRANSFORMING HEALTH IN PRINCE GEORGE'S COUNTY, MARYLAND: **A PUBLIC HEALTH IMPACT STUDY**

UNIVERSITY OF MARYLAND SCHOOL OF PUBLIC HEALTH

JULY 2012

SCHOOL OF
PUBLIC HEALTH

TABLE OF CONTENTS

This document is available at *sph.umd.edu/princegeorgeshealth.*

ACKNOWLEDGEMENTS

The Study Team benefited from sound advice and input from a variety of individuals. We extend our appreciation to and acknowledge the support of individuals from the following organizations:

PRINCE GEORGE'S COUNTY HEALTH DEPARTMENT AND OTHER GOVERNMENT ENTITIES
PRINCE GEORGE'S COUNTY OFFICE OF THE COUNTY EXECUTIVE
PRINCE GEORGE'S COUNTY DEPARTMENT OF PARKS AND RECREATION
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE
UNIVERSITY OF MARYLAND EXTENSION
MARYLAND HEALTH CARE COMMISSION
UNIVERSITY OF MARYLAND MEDICAL SYSTEM CORPORATION

Prince George's County, Maryland is poised for changes that will lead to improved health and quality of life for its citizens. Plans for a transformed new regional health care system that focuses on population health are under way through a unique partnership among the County, the state and academic and health care institutions. These plans come at a time of great momentum at the national, state and County levels to advance health care reform and eliminate health disparities.

On June 28, 2012, the Supreme Court upheld the constitutionality of the Patient Protection and Affordable Care Act (ACA). Under the leadership of the O'Malley-Brown administration, the state of Maryland has created a Health Benefit Exchange, designed to expand health care coverage and fulfill the provisions of the ACA. The state also is proactively pursuing strategies to promote health equity, as demonstrated by the passage of legislation creating "health enterprise zones" to expand and improve access to care in underserved areas. Prince George's County Executive Rushern L. Baker, III has placed health as one of his administration's top priorities, and together with the County Council has taken deliberate steps to enhance the County's safety net system and to address social and environmental determinants of health.

To inform the design of this new system to improve health and health care in Prince George's County, the University of Maryland School of Public Health was commissioned to assess the proposed system's potential public health impact and to answer key questions. The study sponsors are Prince George's County, the Maryland Department of Health and Mental Hygiene (DHMH), the University of Maryland Medical System and Dimensions Healthcare System. These parties, plus the University System of Maryland, signed a Memorandum of Understanding in July 2011 to address long-standing challenges and gaps in the health care delivery system and achieve improved health for the County.

The Public Health Impact Study of Prince George's County comes at an early stage in the development of a "strategy to transform the system into an efficient, effective and financially viable health care delivery system with a regional medical center," a system that is "supported by a comprehensive ambulatory care network, which will improve the health of residents of the County and Southern Maryland region by providing community-based access to high quality, cost-effective medical care" (from the July 2011 Memorandum of Understanding).

An interdisciplinary team of senior School of Public Health researchers produced the Public Health Impact Study of Prince George's County by building upon existing relevant reports and studies, such as the 2009 Rand report, "Assessing Health and Health Care in Prince George's County," and collecting and analyzing a wealth of new data. Representatives of the study sponsors served on the advisory committee that helped guide the study.

The study team learned from resident experiences; listened to policymakers, County and state leaders and health care providers; and explored and documented best practices from comparable health care systems. The study highlights policy-relevant opportunities, focuses on improving health outcomes, provides regional and sub-county mapping of all categories of primary care providers and assesses County

PRINCE GEORGE'S COUNTY AT A GLANCE

- The nation's most affluent County with an African American majority
- Maryland's most diverse County: "minority" groups account for more than 80 percent of the population (blacks, whites and Hispanics made up 65 percent, 15 percent and 15 percent of the population in 2010, respectively)
- The second most populous County in the state of Maryland (after Montgomery County)
- Home to the University of Maryland, College Park; NASA's Goddard Space Flight Center; Joint Base Andrews (previously Andrews Air Force Base) and USDA's Beltsville Agricultural Research Center
- Bordered by Washington, D.C., and Montgomery, Howard, Anne Arundel, Calvert and Charles counties in Maryland

resident-specific recent hospital discharge and readmission data.

This study adds new information related to:

- how residents use and perceive health care and health issues in the County,
- what works in other model health care systems that can be applied in Prince George's County,
- how state and County leaders and stakeholders perceive what is needed for a new health care system to succeed,
- where there is an inadequate supply of primary care providers and resources,
- what exists in the public health and public sectors to complement the new system, and
- how residents with key chronic health conditions use hospitals in the County and region.

A SNAPSHOT OF FINDINGS FROM THE PUBLIC HEALTH IMPACT STUDY COMPONENTS

The study team used multiple novel and integrated approaches to answer the study's key framing questions and to inform the design of the new system.

The Public Health Impact Study was guided by the need to:

- promote health, prevent disease and support wellness, health equity, health literacy and quality of life in the County,
- address population health broadly, not focus just on those seeking health care, and
- improve the capacity to deliver high-quality primary prevention and health and hospital care.

In the snapshot of our results from each study component we highlight findings that provide new information about health care in the County.

SURVEY OF COUNTY RESIDENTS

We learned from the Random Household Survey of 1,001 County residents (referred to throughout as "the survey") about current use of and attitudes toward health care services and gained an understanding of the factors that drive residents' health care decisions. Key findings include:

- While 75 percent of residents have a "personal doctor," 10 percent of these residents go outside the County to see this provider.
- Of those who use a doctor outside the County, more than 7 percent indicated that their insurance required them to see a physician outside the County, and more than 7 percent reported being unable to get an appointment with a specialist inside the County.

The frequency with which residents use hospitals outside the County remains an even greater issue, and is driven by insurance carriers, provider referrals, availability of specialty care and perceptions of the quality of care at local hospitals. Almost 31 percent of residents who reported using a hospital outside of the County did so because their physician referred them to do so, and 13 percent reported that their insurance coverage dictated their hospital selection. Addressing these issues will require a multi-pronged effort aimed at County residents, health care providers and insurers.

INTERVIEWS WITH STATE, COUNTY AND LOCAL STAKEHOLDERS

The study team conducted 40 personal interviews with key stakeholders. They provided input regarding the current status of the County's health care and recommendations for the design of a new health care system.

The lack of primary care resources and concerns about both the perceptions of quality and the actual quality of the current health care and hospital system emerged as themes. As one stakeholder put it, "Perception becomes reality unless otherwise challenged and the perception is that we don't have a good hospital system, and for some parts, they're right, but there are other parts of the hospital system that ought to be duplicated." Recommendations for the new system included the need for an academic university framework, culturally appropriate health education and prevention, effective branding and centers of excellence among others.

STUDY COMPONENTS

Random survey of 1,001 County residents	Interviews with 40 stakeholders	Analysis and mapping of health care workforce in the County	Analysis of hospital discharge and readmission data	Brief overview of public and private sector resources	Interviews with leaders from 13 health care systems around the U.S.

CATEGORIES OF KEY STAKEHOLDERS

- Policymakers, elected officials and administrators
- Health practitioners
- Academic administrators
- Health system, insurance company and hospital administrators
- Community leaders

HEALTH CARE WORKFORCE ASSESSMENT

The study team cast a wide net to capture existing information and document the capacity of the full range of primary health care workers, including primary care physicians, nurse practitioners, physician assistants, dentists, dental hygienists, social workers, psychologists, therapists/counselors and psychiatrists. We found that there are far fewer primary care providers for the population in Prince George's County compared to that in surrounding jurisdictions. Within the County, there is a need for additional providers within the Beltway and in the southern portion.

OVERVIEW OF PUBLIC HEALTH AND PUBLIC SECTOR HEALTH RESOURCES

We compiled an overview of public health and related facilities and programs that provide health and wellness services for County residents. This overview highlights existing capacity and identifies opportunities to fill gaps and strengthen the health system for County residents, particularly for the underserved.

EXAMINATION OF HOSPITAL DISCHARGES AND READMISSIONS OF COUNTY RESIDENTS

The study team analyzed hospital discharges of County residents for conditions like diabetes, asthma and other chronic diseases to understand the County's overall system of care and resident experiences. We reviewed hospitalizations for conditions that can ideally be managed more effectively outside of a hospital setting. Using County data, we developed an econometric model and found an association between fewer hospitalizations and specific health care providers (those typically focused on care management).

LESSONS FROM OTHER HEALTH CARE SYSTEMS

We conducted interviews with leaders from 13 health care systems around the U.S. From these interviews, we identified the following best practices aimed at achieving integrated, coordinated high-quality care that improves population health and reduces costs. These practices include:

- creating patient-centered, user-friendly and population-focused system goals and values,
- establishing clear and tested metrics for measuring progress and quality of care,
- using information technology systems that reinforce quality assurance and improvement, patient care coordination and use of evidence-based protocols of care,
- focusing on (and creating a culture of) health promotion, disease prevention and care management interventions that are culturally appropriate, enhance health literacy and build upon community-based partnerships with established community programs that educate about and reinforce healthy lifestyles,
- creating and supporting culturally sensitive, innovative, team-based and interprofessional care delivery, including embedding primary care providers in aftercare settings to prevent readmissions,
- investing in building care capacity of primary care physicians, such as strengthening their ability to address co-existing mental health conditions by adding behavioral health providers to the primary care physician teams,
- incorporating a mixture of entities to cover primary and tertiary care, such as community health centers, as well as hospitals, private and non-profit entities and mobile clinics (mix of public and private health systems),
- planning for care strategies to meet the needs of the uninsured and other vulnerable populations, such as the homeless and recent immigrants,
- providing incentives for health care teams to reduce disease rates, and
- developing their own and/or negotiating insurance plan coverage for populations they serve.

These snapshots summarize select findings from our research. It is imperative to go beyond the statistics about gaps in the health care workforce and to understand the complex factors that affect health and health care in the County. For further detail on each study component, please see the extensive technical reports (in Section II), available at *sph.umd.edu/princegeorgeshealth*.

FRAMING QUESTIONS TO INFORM THE PRINCE GEORGE'S COUNTY HEALTH CARE SYSTEM TRANSFORMATION

- What are the key health outcomes in the County most amenable to improvement by a new health care system?
- What is the geographic distribution of health care resources and where are the areas of greatest need for primary care?
- What resources can be mobilized in the public health sector to complement the impact of the health care system?
- What are the key issues to maximize uptake and achieve the potential of a health care system for public health?
- What elements of a health care system can affect the key health outcomes and by how much?

1. WHAT ARE THE KEY HEALTH OUTCOMES IN THE COUNTY MOST AMENABLE TO IMPROVEMENT BY A NEW HEALTH CARE SYSTEM?

ANSWER Chronic diseases—specifically diabetes, heart disease, hypertension, asthma and cancer—are the health conditions most amenable to improvement by a new health care system in Prince George's County. County residents experience a higher rate of these chronic diseases than those in most of the neighboring counties and in several cases, at a rate higher than the state average. Racial and ethnic differences reveal even greater disparities.

These five chronic conditions are prevalent in the County. Evidence-based interventions are available to prevent these conditions, and to manage them once they are diagnosed. Initiatives using these interventions are under way in the County and state, with a focus on promoting healthy lifestyles. In addition, primary care networks, a component of the new system plans, are designed to coordinate care and manage such conditions.

RATIONALE

Both the State Health Improvement Process (SHIP) and the County's Health Improvement Plan (CHIP) highlight these conditions as ones to be monitored closely. Table 1 provides health outcome rates for the selected chronic conditions. The rate of emergency department visits is used for

TABLE 1 RATE OF EMERGENCY DEPARTMENT (ED) VISITS AND DEATH RATES PER 100,000 PEOPLE FOR SELECTED CHRONIC CONDITIONS IN MARYLAND COUNTIES AND FOR THE STATE (REFERENCE: BASELINE DATA FROM MARYLAND SHIP)

Rate per 100,000	Prince George's County	Montgomery County	Howard County	Anne Arundel County	Maryland
Asthma ED visits*	717.0	406.0	505.4	786.0	850.0
Diabetes ED visits*	308.4	168.8	142.1	315.3	347.4
Hypertension ED visits*	257.7	123.3	117.4	183.8	237.9
Heart disease deaths	224.2	130.2	169.6	198.8	194.0
Cancer deaths	173.8	130.1	161.2	195.2	177.7

*The data for ED visits are limited to Maryland hospitals. Full baseline data should include ED visits of Prince George's County residents to EDs in Washington D.C.

TABLE 2 IMPACT OF LEADING CHRONIC DISEASES ON EMERGENCY DEPARTMENT (ED) VISITS AND DEATH RATES BY RACIAL AND ETHNIC POPULATIONS IN PRINCE GEORGE'S COUNTY

Health Outcome	Measure (per 100,000 population)	Entire County Baseline Rate per 100,000	Rate per 100,000 by Racial/Ethnic Group in County			
			White Rate	Black Rate	Hispanic Rate	Asian Rate
Asthma	Rate of ED visits for asthma*	717.0	258.0	909.0	305.0	177.0
Diabetes	Rate of ED visits for diabetes*	308.4	179.5	388.2	101.6	N/A
Hypertension	Rate of ED visits for hypertension*	257.7	101.8	341.7	54.3	67.6
Heart disease	Rate of heart disease deaths	224.2	187.5	271.5	66.4	96.0
Cancer	Rate of cancer deaths	173.8	157.0	194.5	70.9	87.0

*The data for ED visits are limited to Maryland hospitals. Full baseline data should include ED visits of Prince George's County residents to EDs in Washington D.C.

these conditions because the evidence suggests that these visits could have been prevented with well-coordinated primary care in the County. Additionally, we examine death rates for two conditions, heart disease and cancer, which are leading causes of death in the County and state.

While the overall health measures for several of these conditions appear to be better than that for the state as a whole, the rates for racial and ethnic County populations (see Table 2) provide the imperative for the new system. Rates for blacks exceed rates for whites for all conditions. Emergency department visits by blacks are more than three times higher for asthma and hypertension and nearly twice as high for diabetes than for whites. Addressing the underlying causes for these and other differences is needed to improve the County's health outcomes.

County residents identified the five key chronic conditions among those they viewed as the most critical ones to address. However, almost 16 percent of residents did not know which health conditions were urgent, indicating a need to inform residents of prevalent conditions and of how to prevent and manage them.

The survey gathered more specific information about residents' experiences with chronic diseases. More than a third (37 percent) of the residents responded that their doctor or a health care professional had told them that they have a medical condition or chronic disease. When asked which conditions they were diagnosed with, residents noted the five key health conditions among their top listed diagnoses (see Table 3).

We were further interested in diagnoses of two key conditions that can contribute to significant morbidity and mortality of these key health conditions if they are not addressed. When asked if they ever had been told by a doctor or other health care professional that they have pre-diabetes or borderline diabetes, 17 percent reported being diagnosed with pre-diabetes. Similarly,

TABLE 3 DIAGNOSED MEDICAL CONDITIONS FOR RESIDENTS WHO HAVE BEEN TOLD BY THEIR DOCTOR THEY HAVE A MEDICAL CONDITION OR CHRONIC DISEASE

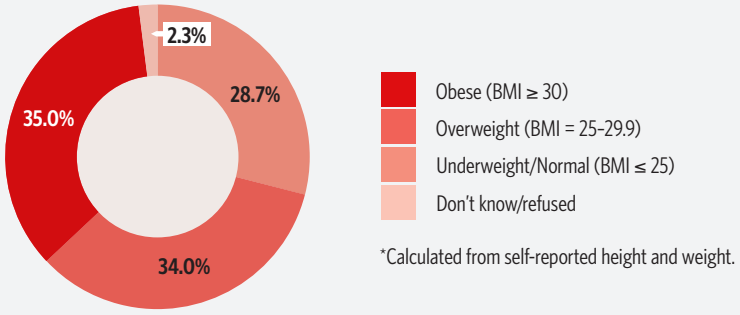
Condition	Percent
High blood pressure/hypertension	5.5
Diabetes	3.7
Asthma	3.3
Heart disease	2.6
High cholesterol	2.6
Cancer	2.3
Chronic arthritis	2.0
Thyroid problem/Hypothyroidism	1.7
Mental illness	1.4
Chronic bronchitis	1.0

Note: To estimate the most appropriate prevalence for the County, we adjusted the results from that sub-sample of 423 to the entire sample.

when asked if a doctor or other health care professional had told them that they have pre-hypertension or borderline high blood pressure, 33 percent reported pre-hypertension.

County residents are at greater risk for these chronic disease conditions due to contributing factors such as tobacco use and obesity. More than 11 percent reported daily use of cigarettes while 6 percent reported smoking cigarettes between one and 29 days a month. Body Mass Index, a calculation using a person's height and weight, is also an important indicator of chronic disease risk. We found that 34 percent of County residents are overweight and 35 percent are obese by using this measure (see Figure 1).

FIGURE 1 BODY MASS INDEX OF SURVEYED COUNTY RESIDENTS*



*Calculated from self-reported height and weight.

A new health care system that incorporates efforts aimed at addressing and preventing these and other risk factors will further contribute to improvements in these chronic conditions.

2. WHAT IS THE GEOGRAPHIC DISTRIBUTION OF HEALTH CARE RESOURCES AND WHERE ARE THE AREAS OF GREATEST NEED FOR PRIMARY CARE?

ANSWER The County has a substantially lower ratio of primary care providers to the population compared to surrounding counties and the state. The areas of highest primary care need are within the Beltway and in the southern region of the County. An additional 61 primary care physicians (13 percent increase) and 31 dentists (7 percent increase) are needed to meet the minimum recommended ratios in these areas.

We reviewed the geographic distribution of primary health care resources at the County and two sub-county levels. There are fewer providers for the population for each medical, dental and mental health primary care category compared to surrounding counties. In addition, there are sub-county areas where this ratio appears worse than the ratio used by the federal government to designate Health Professional Shortage Areas. For primary care physicians, four of the County's seven Public Use Microdata Areas (PUMAs) have provider-to-population ratios that meet the federal criteria for primary care physician shortages. For dentists, two PUMAs have ratios that meet the criteria for dentist shortages. We identified geographic primary care need by ZIP code using several measures. We looked at the ratio of primary care physicians to the population and found that nearly half of County residents live in areas that have a sufficient number of primary care physicians, while a third live in areas where there is a high need for these providers. For a more specific look at geographic need for primary care, we included population characteristics and hospital use patterns in addition to physician count. Using this approach, we found seven ZIP codes have high primary care need, representing 16 percent of County residents.

RATIONALE

We used a variety of approaches to review County and sub-county geographic areas of need for primary care. One approach uses the ratio of health care providers to the population.

Another approach adds population and hospital event characteristics to that of provider information.

ANALYSIS BY PRIMARY CARE PROVIDER CATEGORIES

We closely examined physician availability and capacity, and also reviewed the full array of primary care providers, including nine groups that represent three major categories of primary care providers: medical (primary care physicians, nurse practitioners, physician assistants); dental (dentists, dental hygienists); and mental (clinical social workers, psychologists, therapists/counselors, psychiatrists).

Databases for active licensed providers were obtained from the respective DHMH licensing boards. For all provider groups, except for physicians, counts were based on their practice location and no adjustments were made for specialty focus. We only counted licensed, board-certified primary care physicians who report providing patient care for 20 hours or more per week in a practice in the County. The County has 465 primary care physicians, which results in 54 primary care physicians per 100,000 people (1:1,851). When pediatricians alone are reviewed, the ratio is 39 per 100,000 children up to age 18 (1:2,564). More of the County's primary care physicians (42 percent) are involved only in patient care, compared with primary care physicians (37 percent) in the state as a whole. Fewer County primary care physicians reported being involved in teaching (21 percent vs. 30 percent) and research (6 percent vs. 10 percent) compared with those in the state.

A review of provider-to-population ratios for each category of primary care provider is shown on Table 4. The supply of health care providers for Prince George's County is far below that of other jurisdictions, and for the state as a whole, for every provider group.

PRIMARY CARE WORKFORCE NEED BY SUB-COUNTY GEOGRAPHIC AREA

To gain a better understanding of which areas of the County are served adequately, we looked at provider-to-population ratios for each category of providers, and compared them to the Health Resources and Services Administration's (HRSA) criteria used to designate Health Professionals Shortage Areas (HPSAs) for those categories.

PRIMARY CARE PHYSICIAN-TO-POPULATION RATIOS BY ZIP CODE

One condition used by HRSA to designate an area as a medical HPSA is a primary care physician-to-population ratio of 1:3,500 or worse, while a ratio of 1:2,000 is deemed sufficient. Map A highlights for each County ZIP code in which three categories of ratios are met: those that meet the recommended ratios for primary care physicians per 100,000 population

TABLE 4 THE RATIO OF MEDICAL, DENTAL AND MENTAL HEALTH PROVIDERS PER 100,000 POPULATION IN MARYLAND COUNTIES AND FOR THE STATE

	Medical Care			Dental Care		Mental Health Care			
Jurisdiction	Primary Care Physician*	Physician Assistant	Nurse Practitioner	Dentist	Dental Hygienist	Social Worker	Counselor	Psychologist	Psychiatrist
Prince George's	53.9	39.0	24.2	54.4	17.1	45.9	42.2	13.2	3.6
Anne Arundel	65.7	70.3	64.5	63.1	57.8	78.5	56.4	27.5	3.9
Baltimore County	112.9	115.3	77.3	78.8	48.3	137.8	94.5	47.3	22.4
Howard	77.0	70.7	96.5	123.7	75.9	173.8	78.7	99.6	17.1
Montgomery	94.6	73.0	47.0	123	38.6	146.4	51.7	85.7	18.0
Maryland	84.5	79.0	51.5	71.4	43.8	99.23	68.76	40.37	11.8

*Primary care physicians include specialists in pediatrics, family medicine, internal medicine and obstetrics and gynecology.

(green), those that reflect a shortage (red) and those that fall in between (yellow). Almost half (46 percent) of County residents live in areas that have a sufficient number of primary care physicians, while a third (34 percent) of the residents live in areas where there is a high need for these providers.

PRIMARY CARE PROVIDER-TO-POPULATION RATIOS BY PUMA

We used the County's PUMAs to designate sub-county geographic areas. The County has seven PUMAs, each reflecting populations about 100,000. Based on the provider counts in each of the three primary care categories, and the ratio of these providers to the population, we identified PUMAs with sufficient providers and those that do not meet HRSA ratios for sufficient providers. These ratios include 1:2000 for physicians, 1:3,000 for dentists and 1:10,000 for core mental health providers. Table 5 provides current counts and additional estimated counts needed for each category by PUMA.

Using this approach, we found that several PUMAs need additional primary care physicians and dentists to reach a sufficient provider-to-population ratio. We estimate that the County needs to increase the number of primary care physicians by 61 (about 13 percent) to meet the sufficient provider-to-population ratio. Most of the PUMAs within the Beltway and one PUMA outside the Beltway would benefit from additional physicians. Two PUMAs within the Beltway would also benefit from additional dentists, which translates to 31 dentists (about a 7 percent needed increase). While the ratio of core mental health providers to population for each PUMA appears sufficient, the count of providers per PUMA is substantially lower in the PUMAs inside the Beltway than outside. If psychiatrists alone are used to estimate capacity for mental health care, we estimate the County would need to double the number of psychiatrists. A more detailed review of the County's mental health providers would allow for a better assessment of the capacity of this workforce category.

TABLE 5 CURRENT COUNTS AND ESTIMATED ADDITIONAL NEEDED PRIMARY CARE MEDICAL, DENTAL AND CORE MENTAL HEALTH PROVIDERS BY PUMA BASED ON PROPOSED SUFFICIENT PROVIDER-TO-POPULATION RATIOS

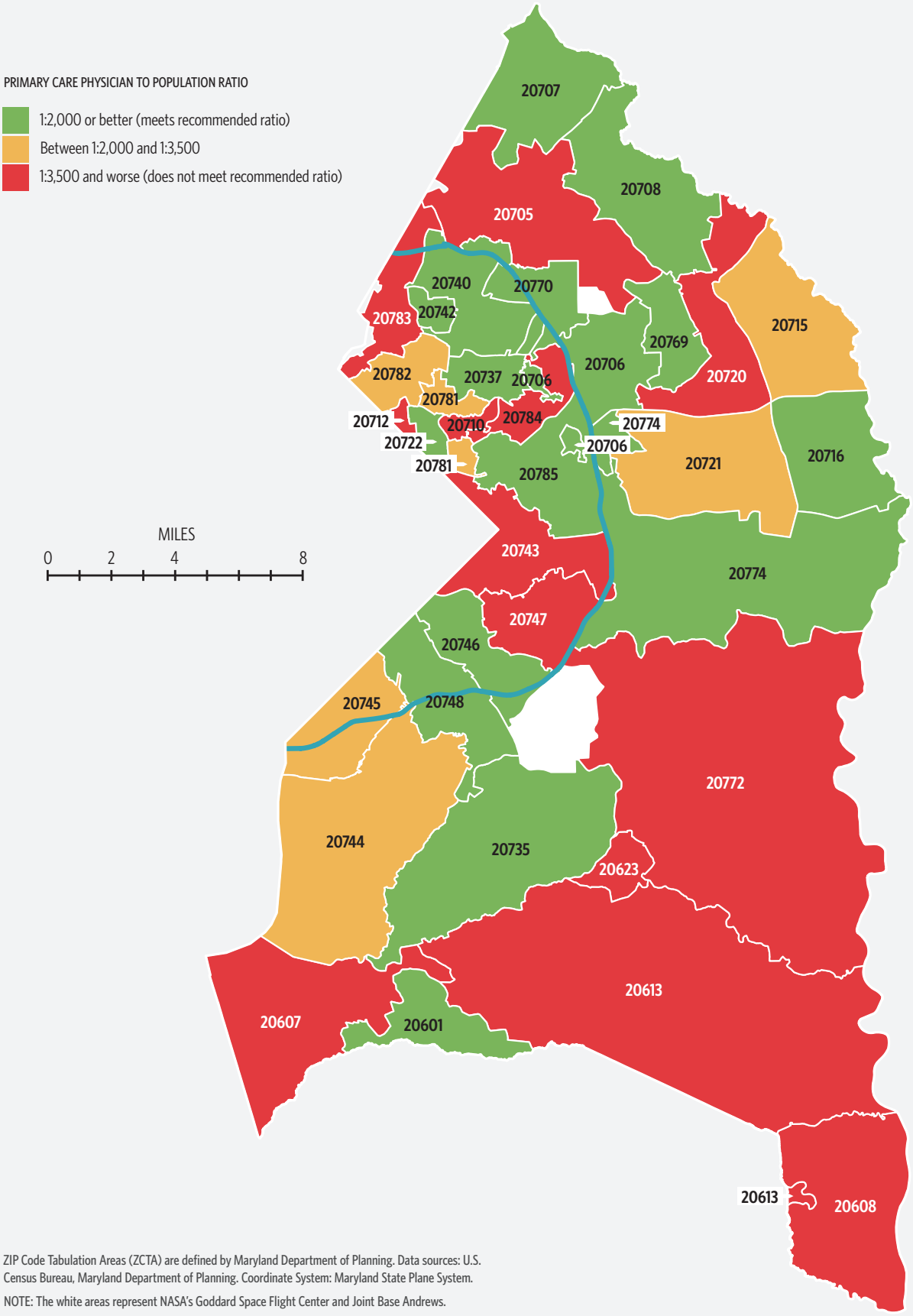
	Physicians		Dentists		Core Mental Health*	
Region	Count	Additional Needed	Count	Additional Needed	Count	Additional Needed
Inside Beltway						
PUMA 1	37	15	57	—	85	—
PUMA 3	34	13	21	10	56	—
PUMA 4	35	22	17	21	75	—
PUMA 7	62	—	43	—	36	—
Outside Beltway						
PUMA 2	102	—	85	—	184	—
PUMA 5	128	—	151	—	274	—
PUMA 6	67	11	96	—	195	—
Total	456	+61	470	+31	905	—

*Includes Clinical Social Workers, Psychologists, Counselors and Psychiatrists

ZIP CODE-LEVEL ANALYSIS OF HIGH PRIMARY CARE NEED

This assessment complements the ZIP code area assessment of the primary care physician to population ratios (Map A). We developed an algorithm to identify ZIP codes where residents may be at higher need for primary care services, using provider, population and hospitalization data. We reviewed population income and education data since poor health status is associated with low income and low education status. We examined the pattern of hospital events by ZIP code, using the ratio of hospital discharges for preventable conditions and 30-day readmissions. Hospital readmissions within a 30-day period after discharge are viewed as a reflection of insufficient treatment to resolve the health condition in the prior hospitalization or the lack of appropriate primary care and home care. For hospital discharges, we looked specifically at conditions associated with the chronic diseases and conditions identified as being most

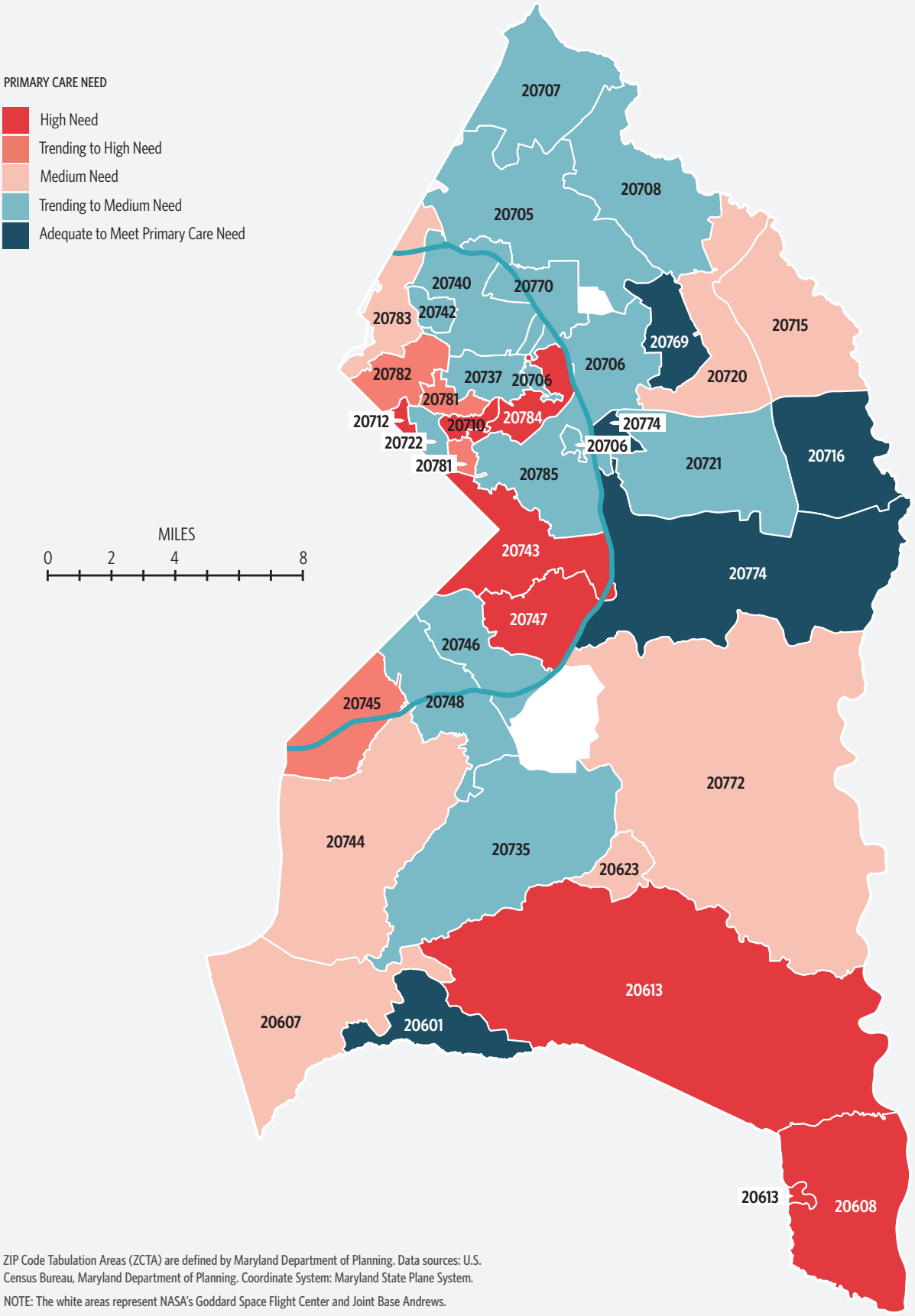
MAP A **PRIMARY CARE PHYSICIAN-TO-POPULATION RATIO BY ZIP CODE IN PRINCE GEORGE'S COUNTY**



ZIP Code Tabulation Areas (ZCTA) are defined by Maryland Department of Planning. Data sources: U.S. Census Bureau, Maryland Department of Planning. Coordinate System: Maryland State Plane System.

NOTE: The white areas represent NASA's Goddard Space Flight Center and Joint Base Andrews.

MAP B **ZIP CODE-LEVEL ANALYSIS OF PRIMARY CARE NEED IN PRINCE GEORGE'S COUNTY**



ZIP Code Tabulation Areas (ZCTA) are defined by Maryland Department of Planning. Data sources: U.S. Census Bureau, Maryland Department of Planning. Coordinate System: Maryland State Plane System.

NOTE: The white areas represent NASA's Goddard Space Flight Center and Joint Base Andrews.

amenable for improvement with a new health care system.

We defined areas of high-primary care need as those that meet *each* of three criteria:

- primary care physician-to-population ratio at or worse than 1:3,500,
- a population with a median income and/or education level lower than the County average, and
- a population whose 30-day readmission ratio and/or hospital discharge ratio is higher than the County average (2007–2009 data).

Map B provides a visual of several levels of primary care need, ranging from high need for primary care (red) to adequate primary care (blue) with levels in between. Using this approach, the County has seven ZIP code areas with high need for primary care. These areas represent about 16 percent of the County's population. Several of these ZIP codes include an existing federally designated medically underserved population. We also identified additional levels of risk by identifying ZIP codes that meet the same population and hospital event criteria, but with a marginal provider-to-population ratio (worse than the recommended 1:2,000, but better than 1:3,500). These are designated "trending to high need." ZIP code areas with the latter provider-to-population ratio, but that have either the population or hospital event characteristics are designated as areas with medium need. The light blue areas reflect some need for primary care. This assessment adds an additional dimension of primary care need to that of the provider-to-population ratios in the County.

3. WHAT RESOURCES CAN BE MOBILIZED IN THE PUBLIC HEALTH SECTOR TO COMPLEMENT THE IMPACT OF THE HEALTH CARE SYSTEM?

ANSWER Integrating primary care and public health can link programs and activities to "promote overall efficiency and effectiveness and achieve gains in population health" (IOM, 2012). We used secondary data to identify the presence and range of services provided by programs serving County residents, with a focus on vulnerable populations throughout the life span.

The County's resources include:

- public health and social services;
- behavioral/mental and dental health programs;
- community-based primary care clinics;
- long-term care facilities;
- health programs in public schools; and
- other partners such as Parks and Recreation, the University of Maryland Extension and hospital-sponsored programs.

County-led efforts to improve the public's health and expand access to primary care will complement the impact of a new health care system. Achievement of the County's 2020 goal of an accredited health department will ensure that the basic public health functions of assessment, assurance and policy development are in place. These functions can contribute to effective integration of programs within the County's public health sector, collaborative efforts among hospitals to address community benefit programs and the integration of public health programs with primary care. Also the County is in a position to take advantage of the ACA provisions to enhance its safety net clinic capacity and extend facilities such the School-based Wellness Centers. The County's public sector and academic programs are additional assets that support health and wellness of residents. The County's Health Care Coalition formed during the Baker administration provides an important foundation on which to build strong partnerships among public health, primary care and medical center programs and to create a more integrated system of care.

RATIONALE

Improving health outcomes requires building upon the existing assets within the County. We describe selected resources and the opportunities and challenges inherent in integrating them into a broader health system.

PRINCE GEORGE'S COUNTY HEALTH DEPARTMENT

The Health Department provides general screening and referral programs, health education and counseling services, and about a third of the locations provide clinical care. Realizing the County Health Improvement Plan's goal of achieving an accredited health department in 2020 will be a major asset for the County. With the capacity to provide the essential public health services of assessment, assurance and policy development, the County Health Department will be in a position to facilitate effective partnerships and tailor public health resources to meet population needs.

Our study of health care systems reveals that public health departments and Federally Qualified Health Centers were mentioned most often as potential public health resources that can be mobilized to complement the health care system's impact on health outcomes. Despite lack of adequate funding for health departments, creative ideas for mobilizing public health resources should be considered when designing the new health system. One example includes creating a state health department-sponsored chronic care initiative where insurers are required to participate in an integrated, collaborative system or community coalition with community health centers.

COMMUNITY-BASED PRIMARY CARE CLINICS

The County's capacity of community-based primary care, including the safety net clinics, remains severely limited. These programs serve a critical role in the health care delivery system, and provide primary care health services to vulnerable and uninsured or underinsured populations. Federal designation of Medically Underserved Areas (MUA) and Medically Underserved Populations (MUP) and designation of Health Professional Shortage Areas (HPSAs) identify areas of high need. These designations allow communities to request providers through the National Health Service Corps and establish of certification of facilities such as Federally Qualified Health Centers (FQHCs) or FQHC "look-alike" centers. The County has eight MUAs or MUPs, and is the only County in the state with multiple MUPs. The County has only one well-established FQHC—Greater Baden Medical Services—that has multiple locations. In addition, two other FQHCs, Mary's Center and Community Clinic Inc. have recently established clinical sites within the County. The health care systems we interviewed highlighted the importance of FQHCs in providing primary care to underserved populations. The ACA contains provisions to expand FQHCs. Given the magnitude of the uninsured population in the County, it is clear that resources must be invested into expanding community health centers.

HOSPITAL COMMUNITY BENEFIT PROGRAMS

The County hospitals are in a position to enhance community-based activities in partnership with the public health sector. Community Benefit Reports are collected from state hospitals by the Health Services Cost Review Commission (HSCRC) to determine the hospital's tax-exempt status. Community benefit is defined by the Maryland law as "an activity that is intended to address community needs and priorities primarily through disease prevention and improvement of health status, including: health services provided to vulnerable or underserved populations; financial or in-kind support of public health programs; donations of funds, property, or other resources that contribute to a community priority; health care cost containment activities; and health education screening and prevention services (HSCRC, 2011)." Currently, the ACA requires every hospital to conduct a community health needs assessment at least once every three years to maintain its tax-exempt status and avoid an annual penalty. The County would benefit from coordinated efforts among the hospitals to conduct needs assessments and to develop subsequent targeted community-based programs.

BEHAVIORAL AND MENTAL HEALTH SERVICES

The County Health Improvement Plan (CHIP) highlights the need for additional behavioral and mental health services, which are an essential part of primary care. The County's Department of Family Services, Mental Health and Disabilities Division provides leadership for an array of high-quality public mental health services, oversees all public mental health services and monitors the mental health programs and professionals in this system. In addition, the County's Department of Health and safety net facilities

provide behavioral and/or mental health services, as do several non-governmental entities. Behavioral and mental health programs are available in all hospitals and services are provided by private sector practitioners. A targeted review of the integration and capacity of the County's mental health services would be beneficial.

PRINCE GEORGE'S COUNTY DENTAL HEALTH SERVICES AND PROGRAMS

Dental care is another essential primary care service that requires a more targeted review. The County Health Department, professional organizations and practicing dental professionals provide select programs. There has been significant activity since the death of 12-year-old Deamonte Driver, a County boy who died in 2007 due to complications from untreated tooth decay. However, there is still a major need for resources to provide evidence-based preventive and health promotion services and programs to the dentally uninsured and underinsured in the County.

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS

Public schools traditionally have contributed to the health education of children and youth and provided or contracted for basic health care services as needed for children while they are in school. Schools provide a natural link between families and teachers, communities and the public education system. Many County schools have access to a registered school nurse, and several have additional providers such as psychologists, speech pathologists and occupational therapists. All schools are part of the Alliance for a Healthier Generation sponsored by the American Heart Association, the Michael and Susan Dell Foundation and the Clinton Foundation. There are four School-based Wellness Centers managed by the County Health Department located in high schools. Opportunities to extend these and initiate other school-based health centers would provide additional support for the County's residents.

NURSING HOMES AND HOME HEALTH CENTERS

Nursing homes and home health centers provide institutional and home-based services for the elderly and for special needs populations. There are 20 nursing home facilities in the County, which include respite and rehabilitative services and outpatient rehabilitative services. Home health centers provide nursing services, home health aides and one or more other services such as physical therapy, occupational therapy and social services. There are opportunities for the County to look at federal options to support innovative programs for special need populations.

PROGRAMS THAT SUPPORT HEALTH PROMOTION

Prince George's County Parks and Recreation offers residents vast parkland and community centers. These centers provide a health improvement programs, such as fitness centers and nutrition and cooking classes, and offer a significant opportunity for the provision of clinical services. Many of these centers are located at or near schools and could be linked with School-based Wellness Centers or community health centers. The University of Maryland Extension (UME)-Prince George's County implements programs that address obesity; food insecurity; low levels of fitness; unhealthy diets for youth, families and senior citizens; sustainable agriculture; school and community gardens; and outdoor education. UME collaborates with many organizations throughout the County, including the school and library systems, municipal and County government and County Health Department, and programs such as Head Start and Judith P. Hoyer Early Child Care and Family Education Centers.

HIGHER EDUCATION HEALTH-RELATED ACADEMIC RESOURCES IN THE COUNTY

The County has a number of higher education academic resources that contribute to health and wellness capacity through their continuing education, research, community outreach and student training programs. Health workforce training opportunities include Bowie State University's nursing program, Prince George's Community College's Academy of Health Sciences and the University of Maryland's School of Public Health and other academic programs that train public health providers, couple and family therapists, experts in physical activity, clinical psychologists and others. In addition, health professions students from University of Maryland, Baltimore rotate through sites in the County as part of their training. The health care systems we interviewed had two innovative programs that could serve as models. One involved a partnership between the academic health care system and

a community-based clinic to establish a "medical home" with case managers for the under- and uninsured, achieving cost savings and improvements in quality of care. Another system formed a communitywide "Nurse Advice Line" in collaboration with the public health department, managed care organizations and the university. This Nurse Advice Line helped the state health department identify illnesses statewide and resulted in decreased emergency department visits, increased use of medical homes and better coordination of patient care.

4. WHAT ARE THE KEY ISSUES TO MAXIMIZE UPTAKE AND ACHIEVE THE POTENTIAL OF A HEALTH CARE SYSTEM FOR PUBLIC HEALTH?

ANSWER Decisions about where to seek care are generally driven by individuals, but the extent to which insurance and provider referral practices influence these choices is critically important. County residents and key stakeholders alike identified key issues that would influence the use and success of a health care system for public health. They highlighted the importance of affiliation with academic institutions, the role of insurance policies and practices, perceptions of health care quality, provision of health and wellness services, addressing health literacy and cultural competence, availability of primary care (both facilities and a sufficient workforce), effective design and use of technologies such as health information systems and system branding. The leaders we interviewed from the comparable models assessment also mentioned these issues.

Maximizing uptake will require system improvements that include needed services and those valued by residents, changes in insurer policies and provider referral practices, careful consideration of location, and a major focus on quality of care. The potential to significantly improve how County residents perceive the health care system would be enhanced by the affiliation with an academic institution. As these improvements are implemented, ongoing communication with the public, health care providers and policymakers will be essential.

RATIONALE

We found the following to be key factors influencing consumer choice and the potential success of a new health care system.

AFFILIATION WITH AN ACADEMIC MEDICAL CENTER

Stakeholder interviews focused on a new system that would be affiliated with an academic institution, including a medical school and teaching hospital. A teaching hospital would increase the status of the health care services, improve quality of care provided by physicians and compete with the university-based health care available in Washington, D.C. Leaders from model health care organizations also identified the university affiliation as one strategy for enhancing perceived and actual quality.

INSURANCE AND PROVIDER REFERRAL PRACTICES

Physician referral practices and health insurance options and policies are other critical issues that impact

residents' choice of hospital. In the household survey, 85 percent indicated they were very likely to use a new hospital if their insurance company allowed its use. With regard to their most recent hospitalization, 31 percent of residents reported that their providers referred them to a hospital outside the County, and 13 percent reported that their insurer required use of a hospital outside the County. In the stakeholder interviews, this issue arose as well, including reference to Prince George's County employees whose health insurance carrier requires them to leave the County for hospitalization.

REPUTATION AND QUALITY OF CARE

Reputation and perceived excellence of a health care system are two key factors that contribute to maximizing the uptake of the system's services. Key stakeholder interview data showed that it is the reputation of the current health care in the County, and not always the actual care, that turns residents away or encourages physicians to make out-of-County referrals. In the random household survey, the reputation and perceived quality of hospitals were factors associated with the choice to leave the County for hospitalization. Additionally, when asked their choice of hospital, residents selected those outside the County. This again reflects general stakeholder opinion, which is that there is a perception problem that has impacted use.

When residents were asked what would make them more likely to use a new hospital in the County, they identified high-quality care, the availability of specialist care and referrals from their family and peer network, with 90 percent of residents considering quality of care the most important factor. Stakeholders emphasized the concept of building a "world-class facility," along with centers of excellence that specialize in certain chronic diseases, as very important. Survey results demonstrated that residents do and will seek care at a hospital, often despite location, if it is associated with excellent care. The new system would be successful in a competitive market if it could build excellence in areas critically important to the County and provide distinctive programs.

Attention to quality of care can draw residents back to the County for health care and influence physicians to keep referrals in the County for specialized services. While several stakeholders believed that the poor reputation is in perception only, all acknowledged that perception is reality when it comes to health care decisions.

PERCEPTIONS OF AREA HOSPITALS

Despite perception challenges, over 40 percent of residents believe that quality of service at the hospital closest to them was excellent or very good and 24 percent rated the care as good. We asked residents about which hospitals they would chose for different conditions and found perceptions varied. Interestingly, while Doctors Community Hospital was ranked highest among area hospitals for overall best quality (16 percent), it was not the first choice for general hospitalization. Conversely, Washington Hospital Center was the first choice for general hospitalization with 15 percent and 11 percent of residents identifying it for overall best quality.

For the two hospitals associated with Dimensions Healthcare System, opinions varied significantly. More than 47 percent had favorable opinions about Prince George's Hospital Center, while 40 percent of residents reported unfavorable opinions. With Laurel Regional Hospital, however, the issue was less that it was viewed unfavorably than it was not well known. Fifty percent viewed it favorably, but 13 percent had never heard of it and more than 20 percent had no opinion. In each case, more than 30 percent of residents indicated that increasing the quality of staff and physicians would improve their perceptions of each hospital.

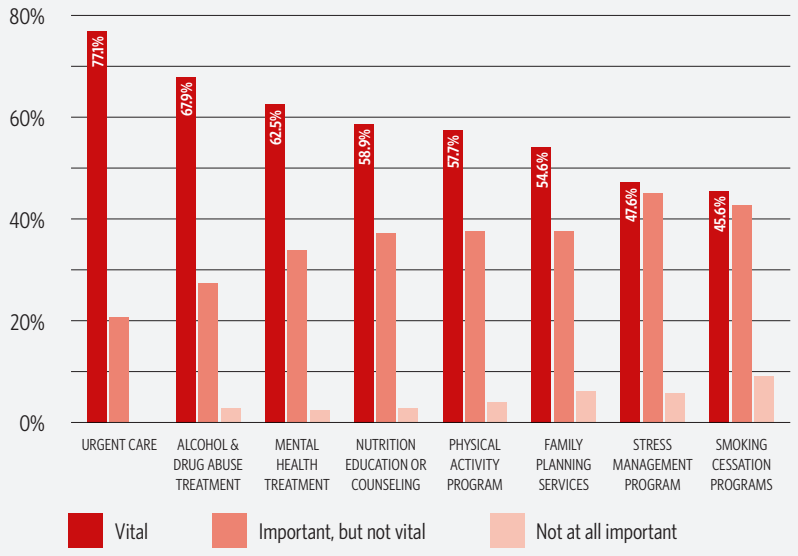
INTEGRATION OF WELLNESS AND DISEASE PREVENTION EFFORTS

The integration of health promotion and disease prevention services into the new system could enhance the likelihood of making an impact on health status at the County level and attract residents. The survey showed strong interest in several of these services (see Figure 2). Stakeholder interviews support these findings. Given the focus on prevention in the ACA, along with the County's Health Improvement Plan, these services could prove integral to the public health impact of the new health care system.

CULTURAL COMPETENCY AND HEALTH LITERACY

In a County as diverse as Prince George's, the new system has the unique potential to become known as a culturally competent health care system that addresses the health literacy needs of the communities it serves. More than a quarter of the residents surveyed needed some level of help reading medical materials, and 23 percent had some problems learning about their medical conditions due to difficulty understanding written information. Similarly, only 48 percent of residents whose primary language

FIGURE 2 COUNTY RESIDENTS' PERCEPTIONS OF SERVICES FOR A NEW HEALTH CARE SYSTEM IN PLANNING A NEW HEALTH CARE SYSTEM FOR THE COUNTY, DECISIONS HAVE TO BE MADE ABOUT WHAT SERVICES ARE VITAL TO THE COMMUNITY. BASED ON YOUR EXPERIENCES AND THE EXPERIENCES OF YOUR FAMILY, PLEASE TELL ME IF THE AVAILABILITY OF (INSERT SERVICE) IS VITAL, IMPORTANT BUT NOT VITAL, OR NOT AT ALL IMPORTANT TO HAVE IN PRINCE GEORGE'S COUNTY? (N=1,001)



was not English reported having access to a provider who spoke their language, and only 21 percent reported having an interpreter. One mark of distinction for the new health care system could be a large and mobile translator/interpreter program, and health education materials that are culturally sensitive and language appropriate. Stakeholders and other interviewees also suggested developing patient navigator and community outreach worker programs.

RECRUITMENT AND RETENTION OF HEALTH CARE PROVIDERS

Recruitment and retention of qualified primary care and specialty physicians are needed to fill the current gaps in quantity, type and prestige of physician working in the County. The new health care system can begin to fill these gaps by considering part-time appointments for well-known providers from surrounding jurisdictions. Providing incentives to medical school and other health professions graduates through existing federal loan repayment plans, coupled with potential economic incentives, such as low-interest mortgages, could assist in attracting providers to practice in the County. Enhancing the quality of other staff in the system can also impact perceptions of care.

LOCATION AND ACCESSIBILITY OF CARE

Location of care is a factor that contributes to use of services. When asked to identify their top three priorities for deciding where to seek care, more than 51 percent of residents surveyed indicated that a priority was whether the facility or doctor was close to home. The usage of the new system will be similarly affected by accessibility of care: hours of operation, ease of getting appointments and availability of specialist care.

In the survey, we asked about different health care services and how vital they are for residents. More than 77 percent reported that urgent care services were a vital need for Prince George's County. This type of service reflects care that is readily and routinely available at the time of need.

CAPACITY OF HEALTH INFORMATION TECHNOLOGY

The capacity and appropriate use of health information technology supports the success of a system for public health. The County's physicians and facilities are moving to adopt such technology, which ultimately would integrate care across systems, deliver decision support systems for providers to implement evidence-based protocols and contribute to population health. In our interviews with model systems, some said they use automated reminders that prompt providers about care needs and milestones, contributing to better health outcomes.

BRAND MARKETING

Effective marketing and positive branding of a health care system also contribute to increased uptake. Individuals need to be informed of the availability and unique types of services in a targeted way that is sensitive to cultural and language differences. From interviews with individuals in other model systems, it is clear that a communication campaign must "sell" excellent services and quality and the image that the system serves more than uninsured or the poor. Involvement of residents in deciding a campaign strategy and messages would enhance its credibility and effectiveness. This is an ongoing process, similar to the communication

campaigns used by Holy Cross, Adventist and Doctors Community hospitals, which include mailings to Prince George's County households. Additionally, the careful use of community benefit funds can enhance health and also raise visibility of the system while providing necessary services, such as health fairs and health promotion programs. Marketing and communication to providers are also critical, particularly as they will need to understand and appreciate the breadth and quality of the new system in order to refer their patients to the system.

5. WHAT ELEMENTS OF A HEALTH CARE SYSTEM (HOSPITAL AND COMMUNITY) CAN AFFECT THE KEY HEALTH OUTCOMES AND BY HOW MUCH?

ANSWER Prince George's County can make significant strides in improving the health of residents with a new health care system committed to population health and prevention that includes a high-quality regional hospital center affiliated with a university, a strong primary care network and integrated public health services. The establishment of such a transformative system would enhance the health of a County with major health needs and create a model for the nation.

In addition, we forecast achievable 2020 health outcome targets for the County of a system with these elements. We estimate the resulting improvements in asthma, diabetes, hypertension, heart disease and cancer through effective prevention and management would be reflected in reductions in ED visits and deaths in 2020 and for each subsequent year. We forecast for 2020 a 16 percent reduction in cumulative emergency department visits for asthma, diabetes and hypertension and 340 lives saved that would have been lost due to heart disease or cancer.

RATIONALE

Lessons learned by model health systems, input from key stakeholders and residents, and findings from the scientific literature reveal system elements and practices that contribute to health improvements and health care efficiencies.

A university-affiliated regional teaching hospital center involved in interprofessional education, care and research would provide an anchor for a revitalized high-quality health care system in Prince George's County. As the anchor, the hospital center would:

- apply the latest technologies and knowledge to improve health and restore function,
- use interprofessional, team-based approaches to provide sustainable gains in health, and
- partner with primary care for effective care management of chronic diseases.

These attributes would:

- attract and retain high-quality health care providers,
- earn the trust of residents who now seek care outside the County, and
- earn the trust of providers and insurance companies that now refer residents elsewhere.

Strong primary care networks are associated with higher quality of care, lower health care spending and reduced health disparities. The creation of a strong primary care network in the County would require:

- increasing the number of primary care practitioners to address the identified shortages,
- increasing the number of ambulatory care centers in targeted areas of the County,
- empowering primary care through the adoption of the "medical home" model and access on nights and weekends,
- integrating primary care with dental health and behavioral/mental health,
- assuring connectivity through health information technology,
- measuring the quality of care through regular reporting, and
- collaborating closely with the public health system.

TABLE 6 ESTIMATED 2020 ACHIEVABLE COUNTY TARGETS AND IMPLICATIONS FOR KEY HEALTH CONDITIONS

Health Condition and Measure (per 100,000 population)	County Baseline Total	County Target Total Achievable by 2020 (estimated percent decrease from baseline)	Implications (as ED visits averted or lives saved annually)
Asthma—Rate of ED visits for asthma*	717.0	573.6 (20%)	1,233 ED visits averted
Diabetes—Rate of ED visits for diabetes*	308.4	277.6 (10%)	265 ED visits averted
Hypertension—Rate of ED visits for hypertension*	257.7	231.9 (10%)	222 ED visits averted
Heart disease—Rate of heart disease deathsn	224.2	201.8 (10%)	193 lives saved
Cancer—Rate of cancer deaths	173.8	156.4 (10%)	150 lives saved

*The data for ED visits are limited to Maryland hospitals. Full baseline data should include ED visits of Prince George's County residents to EDs in Washington D.C.

The interface of the primary care network and the hospital with the public health sector contributes to improved health outcomes and population health. Key aspects of an integrated public health system include:

- primary disease prevention—such as health promotion activities like health education, support for healthy lifestyles and the incorporation of health literacy principles,
- appropriate integration among public health sector community-based programs, and
- integration and coordination of services that cross sectors, such as health and social services playing a key role in affecting health outcomes.

To estimate how much the new system as described would affect key health outcomes, we used our study findings and reviewed the relevant literature, ongoing and planned County and state activities and the County's baseline data. We realize that several of the key elements of the new system will not be in place until 2014 or thereafter. Table 6 presents the County target that should be achievable by 2020 with a new system in place for each of the key health outcomes, holding population constant.

Even with this conservative approach, we estimate these improvements would result in a collective reduction of emergency department (ED) visits for asthma, diabetes and hypertension by about 16 percent each year. With a strong primary care network and the use of evidence-based interventions, even greater benefits should be achievable. A review of studies of care management approaches for chronic conditions revealed a range of interventions that decrease health care utilization and increase cost savings. For example, some studies have shown a significant reduction in asthma-related ED visits with in-person care management. Both in-person and telephone-based care management studies found similar results for patients with diabetes, including a telephone care management study that found more than 30 percent reductions in ED visits and inpatient admissions (AHRQ, 2012).

For heart disease and cancer deaths, we estimate that a 10 percent reduction is achievable by 2020. This would equate to more than 340 lives saved each year, with potential for an even greater number of lives saved in each subsequent year. The collective and coordinated efforts of the primary care network and public health sector in reducing risk factors for all five of these health outcomes, and attention to the relevant social determinants of health, could add to the rates of improvement.

The ACA has specified innovations and initiatives that are already contributing to each of the elements of the new health care system. Maryland is taking actions that will further support improvements in the County, such as the formation of the Maryland Health Benefit Exchange that will extend insurance coverage and the creation of Health Enterprise Zone to reduce disparities, improve health outcomes and reduce health care costs by reducing hospital admissions and re-admissions. Coordinated efforts will extend the impact of the ACA and benefit the County.

CONCLUSION

The overall assessment of the Public Health Impact Study of Prince George's County is that the proposed new regional medical center, supported by a comprehensive ambulatory care network, comes at the right time: the right time in leadership, the right time for health care reform and the right time for County residents. With its vision of transforming the County's health care system, this initiative can catalyze partnerships and health care innovation, and most importantly, improve the health status of residents and the region.

The study provides a detailed and expanded assessment of the public health capacity and potential impact on health outcomes of a new health care delivery system in the County. We designed our study to address gaps in data identified by previous assessments of the County's health care workforce, hospital use patterns and health status and to learn from County residents, other key stakeholders and comparable health care delivery models. As part of the study process, we developed a number of new products that provide the basis for future and ongoing work: instruments used for the resident survey, stakeholder interviews and health system assessment; a novel approach to assessing population variables and presenting those data by geographic maps, and an econometric model that can be applied and modified for further planning purposes. The answers to the five framing questions provide insights from the range of study components and serve as the major findings of this study. The technical reports in Section II, available at *sph.umd.edu/princegeorgeshealth*, provide additional detail for each of the components.

RECOMMENDATIONS

The following recommendations are meant to support the success of the new health care system with its high-quality medical center and strong primary care network. To achieve this transformational change, it will be necessary to:

ESTABLISH A HIGH-QUALITY, ACADEMICALLY AFFILIATED REGIONAL MEDICAL CENTER WITH A STRONG AND COLLABORATIVE PREVENTION-FOCUSED AMBULATORY CARE NETWORK.

The medical center and network will serve as the anchor to the transformation of the health care system. It will need to establish strong relationships with the community and demonstrate its commitment to population health. The planning phase should include meetings with insurance providers and with physician groups to understand and address patient referral patterns.

DEVELOP A COUNTY-LED PROCESS TO IMPROVE PUBLIC HEALTH, EXPAND ACCESS TO HIGH-QUALITY PRIMARY CARE AND SUPPORT SYSTEMS INTEGRATION.

DELINEATE LEAD ROLES AND CREATE AN INCLUSIVE CENTRAL PLANNING PROCESS Achieving large-scale transformational change requires the clear contributions and coordination among many sectors. The County is in the unique position to lead the innovation and transformation of the public health and primary care network. Engaging residents in the planning and monitoring of the new system will ensure the services meet needs and support appropriate use. A "master health planning process" should be implemented to facilitate and guide partnerships and new health care entities that have an interest in serving the County, along with coordinating their efforts with the overall County Health Improvement Plan (CHIP). This process can address social determinants of health, reflect the concept of "health in all policies" and target priority areas identified by the County. Also as part of the "master health planning process," County hospitals, the Health Department and academic institutions should collaborate to fulfill mandates such as the hospital community benefit efforts.

COORDINATE EFFORTS TO MAXIMIZE THE IMPACT OF THE ACA IN PRINCE GEORGE'S COUNTY BY EMPHASIZING IMPROVED ACCESS, HEALTH EQUITY, HEALTH LITERACY, PREVENTION, POPULATION HEALTH AND DELIVERY INNOVATION. This emphasis is necessary to take advantage of health care reform. Residents will need tailored and frequent support to benefit from reform initiatives and new health care system components. A prevention program that produces clear, understandable, culturally sensitive, actionable education materials will improve health literacy and strengthen the capacity of all residents to enhance their health. This program will need to use appropriate channels to reach the diverse segments of the County, and offer ways to help residents understand and act upon prevention messages.

ADDRESS AREAS OF HIGH PRIMARY CARE NEED WITHIN THE COUNTY WITH A PARTICULAR FOCUS ON WORKFORCE DEVELOPMENT, COMMUNITY-BASED HEALTH FACILITIES AND OUTREACH PROGRAMS. Multiple approaches are needed to meet the primary care needs in select areas of the County. Strategies to recruit and retain primary care providers will

require securing necessary government funding and use of loan repayment and other mechanisms. Innovative workforce development programs are needed to extend prevention and care throughout the population and integrate all needed disciplines into the primary care network. These programs could include strategies to train and grow the workforce capacity of County residents, as well as address the County's health needs. These programs will include the traditional health professions programs with innovative education strategies that support team learning and care. They also should include the development of innovative health care extenders, such as community health workers and navigators. Strategies for establishing new primary care centers would benefit from exploring additional federal designation of medically underserved areas/populations and health workforce shortage areas.

SUPPORT INNOVATION IN HEALTH CARE, PREVENTION AND PUBLIC HEALTH DELIVERY. The time is right to seize opportunities to enhance programs such as the School-based Wellness Centers, incorporate promising practices such as the patient-centered medical home and accountable care organizations, and integrate behavioral/mental and dental health into the new system. A new health care system could create a novel and model network, one that integrates primary care, public health and the active partnerships necessary for primary, secondary and tertiary prevention to improve health outcomes and curb disease progression. A critical review of existing public health functions and programs is needed in order to prepare to achieve the goal of an accredited health department. Given the emphasis on primary care and on reducing preventable hospitalizations and emergency department use, a detailed review also is needed of each of the identified priority health outcomes to implement appropriate health promotion, disease prevention and health care workforce initiatives. Support is needed for health information technology to facilitate and reinforce these linkages among public health, other public sector programs and clinical health care (outpatient and hospital) and provide real-time surveillance and evaluation. Lessons learned from comparable models provide a wide range of options from which to choose and adapt as needed.

DEVELOP A CLEAR BRAND THAT PROMOTES A HIGH-QUALITY HEALTH CARE SYSTEM, ENCOURAGES RESIDENTS TO RETURN TO THE COUNTY FOR CARE AND CONTRIBUTES TO A SUCCESSFUL AND THRIVING SYSTEM.

Thinking about the branding and marketing at this early stage will contribute to the system design. The County is rich in history and has a long legacy of commitment to community. A strategic marketing campaign's goals for the new health care system would include: creating a positive brand for the County's system, increasing the perceived stature of the quality of care that will be available, focusing on centers of excellence and unique facets of the system and increasing utilization of the new health care services.

VISION FOR THE FUTURE

Today, Prince George's County is primed for change with its new leadership and a renewed commitment to improving the health and quality of life of its citizens. Partnering with the state of Maryland, the University of Maryland Medical System, Dimensions Healthcare System and the public health system, the County has an exciting opportunity to re-imagine a health care system that enhances individual patient care, improves population health and reduces per capita costs of care. By integrating public health, primary care and a world-class regional medical center to serve the County and Southern Maryland, this new system would be known for its key characteristics:

- Guided by a master health plan that integrates the public and private sectors, along with philanthropy, in a broader vision to improve the social determinants of health and actual health care in the County,
- Committed to improving both health care and the health status of the County,
- Affiliated with the University of Maryland and positioned to offer innovative inter-professional care,
- Comprised of a robust network of strategically placed primary care providers,
- Distinguished by a state-of-the-art medical center with centers of excellence that draw insured patients from the region,
- Focused on the integration of health promotion and disease prevention services and programs that address common risk factors, such as obesity, physical inactivity and tobacco use, the leading causes of morbidity and mortality
- Characterized by health literacy principles infused into health care, health facilities and health education for the public and providers and by culturally, competent health professionals
- Built on a sophisticated electronic and personal health care records system and other health information technology that facilitates coordinated care and enhances population health.

To be successful, this new health care system, including its regional medical center, must grapple with the complex racial, ethnic, income and educational diversity of Prince George's County. There are significant pockets of lower-income populations inside the Beltway, many without health insurance, while there are also higher income and education communities that are well-insured. As we move outside the Beltway, income and educational levels generally rise along with the proportion of individuals with insurance coverage. Yet, in 2014, as the health benefit exchange component of the ACA is realized, the County will have significantly more of its population insured, providing additional opportunities for residents to benefit from comprehensive preventive and primary care services.

While increased insurance coverage will benefit the new system and contribute to better health outcomes, the new system must grapple with the demands of partnering with others to assure that safety net facilities, such as FQHCs, are in place. This must be done early on while the new system also positions itself to meet market demands for high-quality care that will prove compelling to insured County residents and insurers themselves. The larger integrated system, working in partnership with other County agencies, can facilitate progress toward the realization of health equity in the County.

Building this innovative health system can stimulate complex changes in the County and state. Improving the health of the County is essential to improving the health rankings for the state. As the health of the County's population improves, so does its attractiveness as location with a vital workforce, which will potentially stimulate new economic investments. Therefore, the health system itself can reap the benefits of new economic investment in the County by the private and public sectors and drive its new economic vitality.

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GLOSSARY OF KEY TERMS

ACCOUNTABLE CARE ORGANIZATIONS (ACOS) Groups of doctors, hospitals and other health-care providers, who come together to give coordinated high-quality care to their Medicare patients and ensure that patients get the right care at the right time.

AMBULATORY CARE Health-care services offered on an outpatient basis

AMBULATORY CARE SENSITIVE CONDITIONS Conditions that are preventable and treatable in a primary care setting and, when addressed, should prevent/avoid hospitalization

BASELINE DATA Data collected to establish and understand the existing conditions before any kind of intervention or experimental manipulation begins

BODY MASS INDEX (BMI) A measure calculated from a person's height and weight used to screen for body fatness. This measure is used to identify weight conditions that may lead to health problems.

DEAMONTE DRIVER A boy from Prince George's County Maryland who died at age 12 from a brain infection caused by bacteria from tooth decay in February 2007. His infection, which could have been prevented, and his tragic death have galvanized a national critical review of the capacity to provide oral health care and have stimulated legislative and programmatic actions.

EVIDENCE-BASED PROTOCOLS (OR EVIDENCE-BASED HEALTH CARE) The conscientious use of current best evidence in making decisions about the care of individual patients or the delivery of health services to a population. Current best evidence is up-to-date information from relevant, valid research about the effects of different forms of health care and health promotion efforts.

FEDERALLY QUALIFIED HEALTH CENTER (FQHC) A health organization that offers primary care and preventive health services to all patients regardless of their ability to pay for care. A FQHC is a public or private nonprofit organization that has been reviewed by the federal government and meets specific criteria to receive government funding. It must serve a medically underserved area or population.

HEALTH DISPARITIES Differences in the presence of disease, health outcomes, or access to health care that are closely linked with social, economic and/or environmental disadvantage based on race and ethnicity; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation, or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.

HEALTH EQUITY The state of achieving the highest level of health for all people. This requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and eliminate health and health-care disparities.

HEALTH LITERACY The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions. Health literacy is enhanced when providers give patients accurate, actionable health information in plain language and health facilities include design and system changes that improve health information, communication, informed decision-making and access to health services.

HEALTH OUTCOME A measure of a health condition such as disease status or death.

HEALTH PROMOTION The process of enabling people to increase control over and to improve their health. Health promotion not only strengthens the skills and capabilities of individuals, but also involves changing social, environmental and economic conditions that impede public and individual health.

HOSPITAL EVENTS Several terms are used in this report to define hospital events:

A **hospital discharge** is the process by which a patient is released from the hospital at the time inpatient care is no longer needed. Discharges or hospital admissions can be defined by the specific conditions that stimulate them. If these conditions are related to ambulatory care-sensitive conditions (see above), then these can reflect adequacy of the primary care network.

Hospital readmissions are used to describe hospitalizations that result seven to 30 days after a patient

has been released from a hospital. Hospital readmissions reflect on the quality of the hospital discharge process and on the capacity of the primary care network.

PATIENT-CENTERED MEDICAL HOME A team-based health care delivery model led by a physician that integrates patients as active participants and provides comprehensive and continuous preventive, acute and chronic care to patients with the goal of obtaining the best health outcomes.

PATIENT PROTECTION AND AFFORDABLE CARE ACT The health care reform law passed by the U.S. Congress in 2010

POPULATION HEALTH The health outcomes of a group of individuals, including the distribution of such outcomes within the group. The goal of population health is to reduce inequities and improve the health of the entire population.

PRIMARY CARE General health care services provided by clinicians who are accountable for addressing a large majority of personal health care needs. These clinicians often are the first point of contact for patients, will develop sustained partnership with patients, and practice in the context of family and community.

PRIMARY CARE PHYSICIANS A category of physicians that includes specialists in the general practice of family medicine, internal medicine, pediatrics and obstetrics and gynecology.

PRIMARY PREVENTION Efforts to keep diseases from occurring among susceptible people by reducing exposures or eliminating risk factors. These generally include health promotion and health education activities provided through public health, primary care and community programs.

PROVIDER-TO-POPULATION RATIO A measure used to determine the capacity of the number of providers available in a geographic region to serve the population size.

PUBLIC HEALTH The art and science of protecting and improving the health of communities.

PUBLIC USE MICRODATA AREA (PUMA) Areas defined by Census records in which each contains approximately 100,000 people. PUMAs are redefined every ten years in conjunction with the decennial census.

RANDOM (OR RANDOMIZED) SURVEY A survey of a sample population in which every person in the population has an equal chance of being selected.

SECONDARY PREVENTION Efforts focused on detecting disease early and stopping its progression. These include screening, periodic health examinations and reduction of risk factors through primary care and public health sectors.

TERTIARY PREVENTION Efforts focused on reducing further complications, disability and death once disease has been identified. These include rehabilitation, chronic disease treatment, specialty care and acute care through hospital services.

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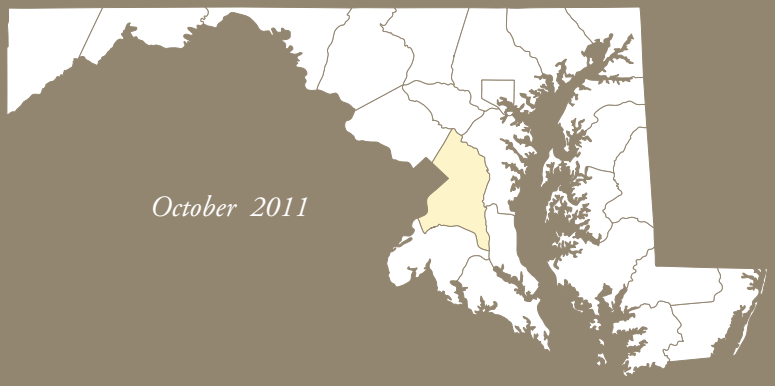
INDEX OF TABLES AND FIGURES

EXHIBIT 3

MARYLAND NONPROFITS

2011 RESEARCH REPORT

Prince George's County Ranks Low on Health Measures



October 2011

a collaboration with

Simplicity Metrics

Maryland Nonprofits' mission is to strengthen, educate, and engage nonprofit organizations so they can successfully achieve their missions.

Prince George's County Ranks Low on Health Measures

Introduction

Prince George's County, Maryland, has poor results on several key health indicators compared with its neighboring jurisdictions, and state and national averages. Prince George's ranks low on social determinants of health status, like education and employment levels. The county's ranking is poor for a number of important health risks, such as adult obesity, sexually transmitted diseases, and teen births. At the same time, Prince George's has less access to care than its neighbors, with low numbers of physicians and high numbers of uninsured residents. Prince George's outcomes are close to the state average in adult smoking and drinking; however, the county has below-average health outcomes, with high rates of premature death and low birth-weight infants, for example.

Prince George's County benefits from a higher-than average median household income and a low percentage of children in poverty. Population estimates from 2009 rank Prince George's County as the second-largest county, with a high percentage of African Americans (66%) and Hispanics (14%). While these indicators suggest a relatively positive economic situation and reflect a diverse population, recent results from the 2011 County Health Rankings provide a mixed assessment of the health profile for Prince George's County.

The 2011 County Health Rankings are a collaborative effort between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute to report on the overall health of all counties in the United States. For the purposes of the rankings, the term "health outcomes" is used to describe the current health status of a county and is based on measures of mortality (length of life) and morbidity (health-related quality of life). These health outcomes are influenced by a combination of behavioral, clinical, socioeconomic, and environmental factors — collectively termed "health factors."

Examining each of the major factors and sub-factors identified in the research offers a detailed picture of the health conditions in Prince George's County and, more importantly, identifies those issues that need to be addressed if the health of Prince George's County residents is to improve.

Acknowledgements

We are grateful to the **Community Foundation for Prince George's County**, the **Consumer Health Foundation** and **Kaiser Permanante** for sponsoring this report and a series of research examining health and human services in Prince George's County. This report was written by Jesse Austell, M.A., Megan Whelen, M.P.H., and Chris Madison, M.S., of Simplicity Metrics; as well as Heather Iliff, M.A., of Maryland Nonprofits and Neil Bergsman, M.P.M., of the Maryland Budget and Tax Policy Institute. For more information and research on health and human services in Prince George's County, please visit the Maryland Nonprofits website at **www.marylandnonprofits.org**.

Health Outcomes

Overall, Prince George's County is one of the lowest ranked counties in Maryland for health outcomes, ranking 17th out of 24 counties. One of the driving factors behind this lower ranking is a high rate of premature death, as measured by Years of Potential Life Lost (YPLL) before age 75 per 100,000 residents. With 8,374 YPLL, Prince George's County falls behind the national benchmark of 5,564 as well as the state average of 7,537. Only five counties in Maryland have a higher mortality rate than Prince George's County. In comparison, Howard and Montgomery Counties, which are immediately adjacent to Prince George's, have the lowest mortality rates in the state.

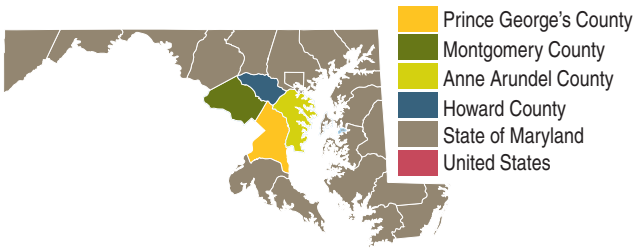
In terms of morbidity, Prince George's County ranks on par with both the national and state averages for self-reported measures of poor mental and physical health; however, the county's percentage of live births with low birth weight (10.5 percent) far exceeds the national benchmark of 6 percent and is in excess of the state average of 9.1 percent. This unfavorable statistic reflects the poor overall morbidity of the county and contributes to its subsequent ranking of 15th. In comparison, the five counties immediately surrounding Prince George's (Anne Arundel, Calvert, Charles, Howard, and Montgomery) all have lower percentages of low birth weight, ranging from 6.7 percent to 8.7 percent.

Health Factors

The data on health factors include information in four broad categories: health behaviors, clinical care, social and economic factors, and the physical environment. Within these categories are subcategories that identify specific behaviors or conditions that present a detailed picture of health conditions in the county.

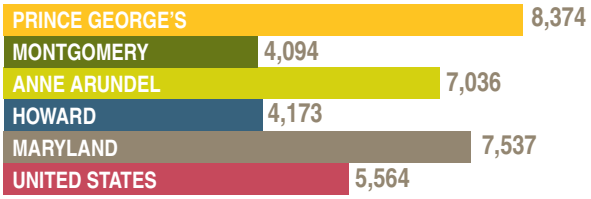
Health Behaviors

The health behaviors ranking, for example, is based on adult smoking, adult obesity, excessive drinking, motor vehicle crash deaths, incidence of sexually transmitted infections, and teen birth rate. On several of these behaviors — smoking, drinking, and auto deaths — Prince George's County is on par with other counties in the state, which accounts for its ranking of 12 out of 24 counties, squarely in the middle. But also within the behaviors category, the county's performance on adult obesity, teen births, and sexually transmitted infections is worse than the state average. Obesity is measured by the percentage of adults having a body mass index (BMI) above 30, and Prince George's rate of 32% is five percent above the state average and seven percent above the national average. The teen birth rate in Prince George's County (38 births per 1,000 females) exceeds the state rate of 34 per 1,000



Premature deaths

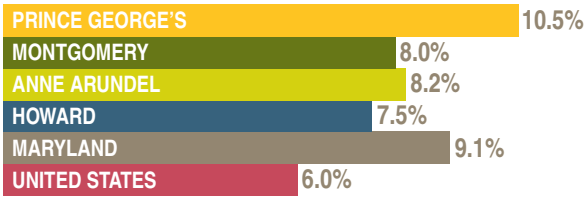
Years of potential life lost before age 75.
(75 minus the age of death where age is less than 75)



Source: National Center for Health Statistics (NCHS)

Low birthweight

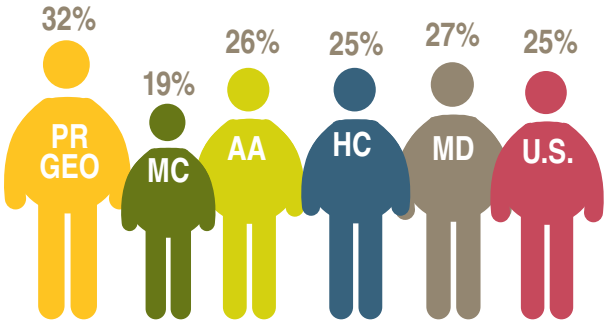
Percent of live birth infants weighing less than 5 lbs., 8 oz.



Source: NCHS

Adult obesity

Adult population with body mass index greater than or equal to 30 kg/m2.



Source: National Center for Chronic Disease Prevention and Health Promotion

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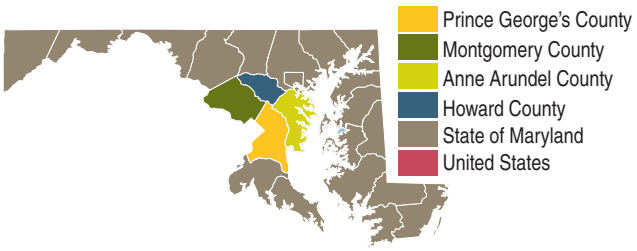
and far exceeds that of the nation (22 per 1,000). On the sexually transmitted infections category, which measures the incidence of chlamydia per 100,000 residents, Prince George's County's rate of 638 is significantly higher than the state average of 439, and nearly eight times the national average of 83.



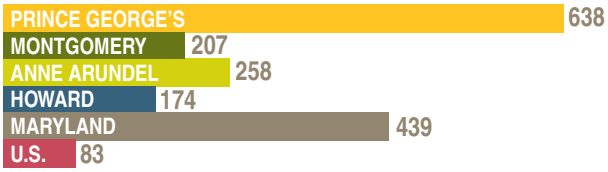
Clinical Care

The clinical care category in the health rankings compares counties on a number of conditions related to the availability of medical care and access to health insurance. Overall, Prince George's County ranked 22 out of the state's 24 counties in this category. Specifically, Prince George's County's rate of 22 percent of uninsured adults younger than 65 is higher than the statewide average of 17 percent and the national benchmark of 13 percent. Similarly, the number of primary care physicians per citizen is significantly lower than the state and national average: one physician per 1,077 citizens in Prince George's County does not compare favorably with the state average of one per 713 citizens or one per 613 citizens nationwide.

On the other hand, the county's rate of preventable hospital stays per 1,000 Medicare enrollees — 62 — is lower than the state average of 70 and not significantly higher than the nationwide benchmark of 52. Also measured in the clinical category is the number of Medicare enrollees screened for diabetes and the percentage of females in Medicare who get mammograms. Prince George's County's 76 percent performance on diabetes screening is not significantly below the state (81 percent) or national (89 percent) averages. But Prince George's County's screening percentage for mammograms — 56 percent — compares unfavorably with the overall state rate of 64 percent and the national benchmark of 74 percent.

Sexually transmitted infections

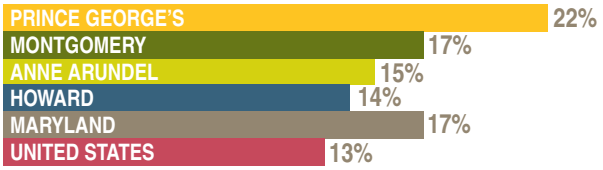
Chlamydia incidence per 100,000 population



Source: National Center for Hepatitis, HIV, STD, and TB Prevention

Uninsured adults

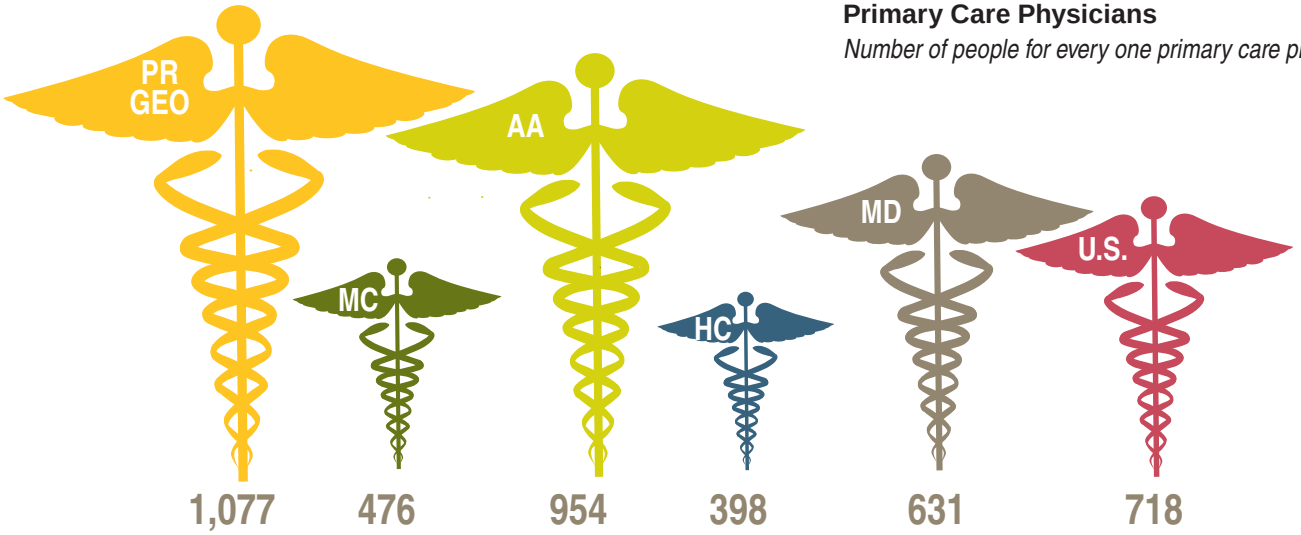
Adults under age 65 without health insurance



Source: Census/Current Population Survey (CPS), Small Area Health Insurance Estimates (SAHIE)

Primary Care Physicians

Number of people for every one primary care physician



Source: Health Resources and Services Administration, Area Resource File (ARF) ARF elements from AMA Master File and Census Population Estimates

Socioeconomic Factors

Social and economic factors are closely correlated with the overall health status of populations. In particular, the 70 percent high school graduation rate in Prince George's County matches up poorly against the 80 percent rate in other Maryland counties and the national benchmark of 90 percent. The percentage of citizens receiving "some" college or post-secondary education is somewhat more equal: 60 percent for Prince George's County, 66 percent for all Maryland counties, and 68 percent for the national benchmark. According to the rankings report, "The relationship between higher education and improved health outcomes is well known, although the explanation for this correlation is less certain. This positive relationship between health outcomes and advanced education levels is an important concept for understanding a community's health."

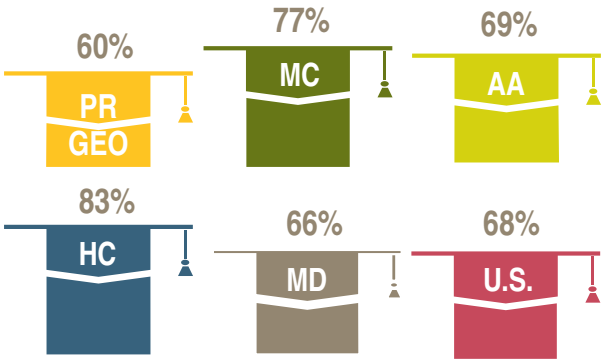
Other social and economic conditions measured in the report present a mixed picture for Prince George's County compared with other counties in the state and the national benchmark. The county's unemployment rate of 7.4 percent is slightly lower than the state average of 7.5 percent, and well below the 9.6 percent national average. Employment influences access to a variety of resources that help people maintain or improve their health. The percentage of children living in poverty in Prince George's County is 8 percent, compared with a state average of 10 percent and a national benchmark of 11 percent. Another measure that indicates the level of need among children in the County is the percentage of students who receive free and reduced price meals in public schools. In Prince George's, 57% of the students are eligible for free or reduced meals, whereas the state average is 41%.[1] This is an important statistic because it measures a community's ability to meet basic needs necessary to maintain health.

The percentage of children in single-parent households, 40 percent in Prince George's County, is twice as high as the national benchmark and also higher than the 32 percent reported for all 24 Maryland counties. The report notes that adults and children in single- or lone-parent households are both at risk for adverse health outcomes such as mental health problems (including substance abuse, depression, and suicide) and unhealthy behaviors such as smoking and excessive alcohol use.

The violent crime rate per 100,000 residents is 940 in Prince George's County compared with 649 for all 24 Maryland counties and 100 for all counties nationwide. Crime has a pervasive effect on both mental and physical health, from the obvious impact of violence on the victim to the symptoms of post-traumatic stress disorder

Some college

Population age 25-44 with some post-secondary education



Source: American Community Survey (ACS)

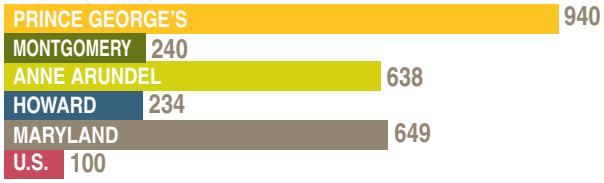
Children in single-parent households

Children in family households that live in a household headed by a single parent

Source: American Community Survey (ACS)

Violent crime rate

Annual rate per 100,000 population



Source: Uniform Crime Reporting, Federal Bureau of Investigation

1 Source: mdreportcard.org

(PTSD) and psychological distress felt by those who are routinely exposed to violence. Crime also affects various other health factors and outcomes, including birth weight, diet and exercise, and family and social support.

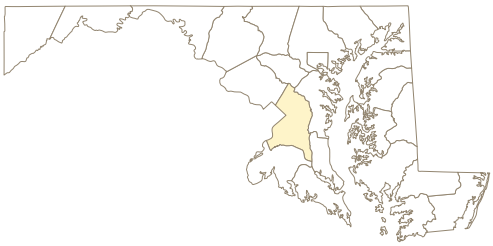
The remaining measure contributing to the social and economic factors ranking is the percentage of adults who report inadequate social support. In Prince George's County that number is 24 percent, compared with 21 percent for all Maryland counties and 14 percent for the national benchmark.

Physical environment

Prince George's County's worst ranking came on physical environment, 23 out of 24, with only Baltimore City having a worse environment. The physical environment ranking is produced by measuring the following health-related data: air pollution as measured by the number of days with high readings of ozone and particulate matter; the number of healthy food outlets in the area as measured by the percentage of zip codes in a county with a grocery store or produce stand/farmers' market; and the number of recreational facilities per 100,000 residents.

Prince George's County's poor ranking on the physical environment category appears to result from its performance on just two of these categories: the number of days annually with unhealthy air due to ozone levels and the lack of recreational facilities in comparison with other counties in the state and the nation. Prince George's reported 29 high ozone days, compared with 16 in all Maryland counties and no reported instances in the national benchmark. On recreational facilities Prince George's County had 8 recreational facilities per 100,000 people, below the state average of 12. Recreational facilities are defined as establishments primarily engaged in operating fitness and recreational sports facilities.

On other measures in the physical environment ranking, Prince George's County did well, surpassing the state average on access to healthy food and having the same number of days as other counties in the state when particulate matter pollution was reported at unhealthy levels. Access to healthy foods is measured as the percentage of residential zip codes in a county with a healthy food outlet. In Prince George's County, 31 out of 34 residential zip codes, or 91 percent, had a healthy food outlet. This is above the Maryland average of 62 percent. The measure is based on data from the US Census Bureau's Zip Code Business Patterns. Healthy food outlets include grocery stores and produce/farmers' markets, as defined by their North American Industrial Classification System (NAICS) codes. However, a recent study by the University of Maryland Urban Studies and Planning program found that food access in the highly concentrated part of Prince George's was still limited. Many residents must travel more than half a mile to gain access to a healthy food market in areas where 20 percent or more of households do not have access to a car.



Policy Priorities

Prince George's County's poor showing in the County Health Rankings suggests key areas where state, local, and nongovernmental health policymakers and service providers need to concentrate their efforts to improve the overall health of the county's citizens. Efforts to reduce obesity, increase access to care, raise education levels, and improve air quality are just a few ways that health conditions in Prince George's County would improve.

State and local officials should seek to expand health coverage and to provide greater incentives for healthcare providers to practice in the county. They should adopt policies to promote healthier lifestyle choices, including access to nutritional food and recreation opportunities in all areas of the county. Ultimately, they should promote the public education and economic development initiatives that will generate the improved health outcomes that tend to come along with general prosperity.

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820 Georgia Avenue Suite 303, Silver Spring, MD 20910
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EXHIBIT 5

MARYLAND HEALTH CARE COMMISSION

MATTER/DOCKET NO.

DATE DOCKETED

HOSPITALS
APPLICATION FOR CERTIFICATE OF NEED

ALL PAGES THROUGHOUT THE APPLICATION, ATTACHMENTS AND EXHIBITS SHOULD BE NUMBERED CONSECUTIVELY.

PART I - PROJECT IDENTIFICATION AND GENERAL INFORMATION

1.a. MedStar Southern Maryland Hospital Center, Inc.
Legal Name of Project Applicant (ie. Licensee or Proposed Licensee)

b. 7503 Surratts Road
Street

c. Clinton 20735 Prince George's
City Zip County

d. 301-877-4530
Telephone

e. Michael J. Chiaramonte, President
Name of Owner/Chief Executive

2.a. none
Legal Name of Project Co-Applicant (ie. if more than one applicant)

b. _____
Street

c. _____
City Zip County

d. _____
Telephone

e. _____
Name of Owner/Chief Executive

3.a. MedStar Southern Maryland Hospital Center
Name of Facility

b. same
Street (Project Site)

c. same
City Zip County

4. _____
Name of Owner (if different than applicant)

5.a. _____
Representative of Co-Applicant

b. _____
Street

c. _____
City Zip County

d. _____
Telephone

6. Person(s) to whom questions regarding this application should be directed:
(Attach sheets if additional persons are to be contacted)

a. Richard G. McAlee, Hospital Counsel Name and Title	a. Patricia G. Cameron Name and Title
b. 2000 North 15th Street; Suite 302 Street	b. 5565 Sterrett Place Street
c. Arlington, VA 22201 City Zip County	c. Columbia, MD 21044 City Zip County
d. (703) 558-1118 Telephone No.	d. 410-772-6689 Telephone No.
e. (703) 558-1111 Fax No.	e. Fax No.
f. richard.mcalee@medstar.net E-mail Address	f. patricia.cameron@medstar.net E-mail address

7. Brief Project Description (for identification only; see also item #14):
New construction and renovation to modernize and enhance the Intensive Care Unit, the Emergency Department, the operating rooms and associated pre- and post-surgical care units.

8. Legal Structure of Licensee (check one from each column):

a.	b.	c.
Governmental ___	Sole Proprietorship ___	To be Formed ___
Proprietary ___	Partnership ___	Existing √
Nonprofit √	Corporation √	
	Subchapter "S" ___	

9. Current Physical Capacity and Proposed Changes: (Staff will also provide separately a detailed spreadsheet on which the applicant will display current and proposed physical bed capacity by location.)

Service	Current Physical Beds	Beds to be Added or Reduced	Total Beds if Project is Approved
M/S/G/A	230	0	230
Pediatrics	4	0	4
Obstetrics	27	0	30
ICU/CCU Care	18	8	24
Psychiatry	28	0	28
Rehabilitation	0	0	0
Chronic	0	0	0
Other (Sub-Acute)	24	0	24
TOTAL BEDS	331	0	337

10. Project Location and Site Control:

A. Site Size 15.8 acres. The professional buildings are on 19.5 acres for a total of 35.3 acres.

B. Have all necessary State and local land use approvals, including zoning, for the project as proposed been obtained? YES_____ NO X (If NO, describe below the current status and timetable for receiving necessary approvals.)

The subject property is zoned R-R (Rural Residential) and C-O (Commercial Office). The existing Medical Health Campus has been developed over the years through various approved Special Exception Site Plans including SE 3949, SE 3355, SE 3305, SE 2403 & the most recent of 3949-05. The proposed additions to the building and campus will require a new Special Exception Site Plan as well as a Preliminary Plan of Subdivision to obtain the necessary improvements, revisions and expansion to the campus. It is anticipated that these approval processes could take approximately fifteen to eighteen months.
Building Permit will also be obtained.

C. Site Control:

(1) Title held by: MedStar Southern Maryland Hospital Center, Inc.

(2) Options to purchase held by: N/A
(i) Expiration date of option _____
(ii) Is option renewable? _____ If yes, please explain
_____
_____
(iii) Cost of Option _____

(3) Land Lease held by: N/A
(i) Expiration date of lease _____
(ii) Is lease renewable _____ If yes, please explain
_____
_____
(iii) Cost of Lease _____

(4) Option to lease held by: N/A
(i) Expiration date of option _____
(ii) Is option renewable?_____ If yes, please explain
_____
_____
(iii) Cost of option _____

(5) If site is not controlled by ownership, lease, or option, please explain how site control will be obtained_____
_____

(INSTRUCTION: IN COMPLETING ITEMS 11, 12 & 13, PLEASE NOTE APPLICABLE PERFORMANCE REQUIREMENT TARGET DATES SET FORTH IN COMMISSION REGULATIONS, COMAR 10.24.01.12)

11. Project Implementation Target Dates (for construction or renovation projects)

This project will require phased construction: _____

A. Obligation of Capital Expenditure _12_ months from approval date.
B. Beginning Construction _4_ months from capital obligation.
C. Pre-Licensure/First Use _48_ months from capital obligation.
D. Full Utilization _12_ months from first use.

12. Project Implementation Target Dates (for projects not involving construction or renovations):

A. Obligation of Capital Expenditure _____ months from approval date.
B. Pre-Licensure/First Use _____ months from capital obligation.
C. Full Utilization _____ months from first use.

13. Project Implementation Target Dates (for new service projects not involving a capital expenditure):

A. Obligation of Capital Expenditure _____ months from approval date.
B. Pre-Licensure/First Use _____ months from capital obligation.
C. Full Utilization _____ months from first use.

14. Project Description:

Describe the project's construction and renovation plan, and all services to be provided following completion of the project.

About MedStar Southern Maryland Hospital Center

Southern Maryland Hospitals Center was founded in 1977 by Francis P. Chiaramonte, M.D. In December 2012 the hospital became part of MedStar Health Inc. and was renamed MedStar Southern Maryland Hospital Center (MSMHC). MSMHC is a full-service acute care hospital serving Southern Maryland: Prince George's County, Charles County, Calvert County, and St. Mary's County. Its primary service area is southern Prince George's County and northern Charles County. MSMHC is located approximately five miles south of the Capitol Beltway, and only a few miles from Joint Base Andrews. MSMHC is licensed for 227 acute care beds for FY 2014.

The hospital is governed by a Board of Directors consisting of eleven members, is accredited by The Joint Commission, and licensed by the Maryland Department of Health & Mental Hygiene. MSMHC is located on a site adjacent to Surratts Road and Branch Avenue (Maryland Route 5) in Prince George's County. The hospital site is approximately 15.8 acres, and is part of a campus of approximately 35.3 acres which includes two medical office buildings. The central hospital building consists of two levels, including diagnostic, treatment and other patients support spaces. Attached to the central building are Bed Towers I and II, where all the nursing units except Critical Care are located. Bed Tower I is a four-story structure and Bed Tower II has three floors (including a lower level).

Scope of Services

MedStar Southern Maryland Hospital Center provides a complete range of services along the entire health delivery continuum. Emergency care services, mental healthcare, outpatient medical services, and a skilled nursing unit (Subacute Care) are also important parts of the MSMHC continuum. The Partial Hospitalization Program for patients with mental illness (1999), Heartburn Center (2001), and Primary Angioplasty under the C-Port protocol (2002) have added new dimensions to the levels of care which are delivered at MSMHC.

Services offered at MedStar Southern Maryland Hospital Center:

- 24-hour Emergency Department
- Imaging (Radiology, Ultrasound, Nuclear Medicine, CT Scan, MRI, Mammography)
- Maternal-Child Health
- Level II Perinatal Program
- Surgical Services
- Ambulatory "Same Day" surgery
- Critical Care-Intensive Care Unit

- Critical Cardiac Care Unit
- Telemetry-Cardiac Observation Unit
- Cardiology, Cardiac Catheterization, Angiography
- Cardio/Pulmonary Rehabilitation
- Chest Pain Evaluation Center
- Medical-Surgical Services
- Orthopedics and Physical Medicine
- Dialysis
- Mental Health Services
- Partial Hospitalization Program
- Pediatrics
- Primary Angioplasty (C-Port)
- Sleep Disorders Laboratory
- Diabetes Program
- Physical, Occupational and Speech Therapy
- Case Management/Social Services
- Nutrition Services
- Respiratory Care
- Laboratory
- Lithotripsy
- Subacute Care Center
- Asthma and Allergy Center
- Heartburn Center
- Abdominal Aortic Aneurysm (AAA) Screening

Since 1977, the hospital has been a medical center that not only treats illnesses and injuries, but also promotes wellness and community health. As a strong supporter of health care education, MSMHC's goal is to help the residents of Southern Maryland achieve the highest possible level of physical and mental health. It has done this through extensive clinical outreach services, support groups, and health education programming. MSMHC has also provided wellness services, including cardiac risk reduction, diabetes self-management, and weight management. MSMHC's affiliates in the MedStar Health system also operate outpatient clinics and physician office practices in local communities in an effort to ensure that the approximately one million residents of southern Maryland have access to a comprehensive array of healthcare services. As a resource center, MSMHC seeks to prevent illness and promote health through education and screening. Lectures, classes, and seminars are offered throughout the year on topics of interest to the community.

In addition to the hospital's services, MSMHC also offers:

- Primary Care Services:
  - Clinton Family Medical Center
  - Fort Washington Family Medical Center
  - Pediatrics after Hours Family Medical Center in Waldorf
  - Upper Marlboro Family Medical Center
  - Waldorf Family Medical Center

- Medical Office Facilities:
  - Lakeside Professional Center
  - Southern Maryland Professional Building
  - Waldorf-St. Charles Professional Center
- Outpatient Imaging Services:
  - Mammography Center of Southern Maryland
  - Southern Maryland Professional Radiology
  - MRI of Maryland
- The Asthma and Allergy Center of Southern Maryland
- Waldorf ENT
- Clinton ENT
- Clinton OB/GYN
- White Plains OB/GYN

Southern Maryland Hospital's Merger with MedStar Health

Since its founding in 1977, Southern Maryland Hospital Center has been guided by its vision, both of becoming a center of excellence in patient care and of being an extraordinary place to work. Then, as now, the people who work here are our greatest asset and it is they who define our patient-first culture. Over the past 36 years, the hospital has been guided by an unwavering vision to provide the highest quality medical and surgical care to the community – and becoming a regional medical center for the one million residents of Prince George's County and the southern Maryland region.

In 2012, SMHC engaged in discussions to partner with a health system as a way of expanding the range of clinical services offered, reconfiguring the facility and campus to address the needs of the service area population, and preparing for a changing health care landscape. The partnership with MedStar Health was finalized on December 11, 2012, which was a watershed moment as Southern Maryland Hospital Center joined the leading provider of health care services in Washington D.C. and Maryland.

Partnering with MedStar Health mirrors a trend in the healthcare industry as many independent hospitals are aligning with larger health systems. It was seen as a way to better position Southern Maryland Hospital Center for the future as the nation's health care systems continues to undergo monumental transformation. Dr. Francis Chiaramonte, founder and then-chairman of the board of the hospital, and Michael Chiaramonte, the hospital's CEO, felt that MedStar Health was the best partner for the hospital's patients, staff and physicians, and the southern Maryland community, and would greatly enhance the hospital's position for the long term.

Through its merger with MedStar Health, the hospital will continue to grow and meet the needs of southern Maryland residents by providing the highest quality clinical care with advanced technology, innovative medical services, and the region's top doctors. Being part of MedStar Health makes it possible for the hospital to rapidly expand the range of clinical programs offered to the community, particularly in oncology, neurosciences, and

cardiology. It also provides access to capital for a building program to improve and modernize key services. The new partnership with MedStar Health helps the hospital realize its vision while maintaining its culture and tradition of service to the community. MedStar Southern Maryland Hospital Center has become a non-profit organization as a result of the merger. It plans to draw on MedStar Health's expertise in charitable fund-raising and to solicit gifts and contributions totaling five million dollars in support of the project described in this application.

About MedStar Health

MedStar Health is a not-for-profit, regional healthcare system based in Columbia Maryland, and is one of the largest employers in the region. It is the largest healthcare provider in the Maryland and Washington, D.C. region, a $4.2 billion enterprise. MedStar's ten hospitals, including seven in Maryland, and 20 other health-related organizations are recognized regionally and nationally for excellence in medical care. Its more than 27,000 associates and 5,600 affiliated physicians all support MedStar's patient-first philosophy that combines care, compassion and clinical excellence with an emphasis on customer service. MedStar Health combines the best aspects of academic medicine, research and innovation with a complete spectrum of clinical services to advance patient care.

In the greater Baltimore-Washington region, MedStar Health serves 1 in 5 patients receiving acute services, with 20% of the market. MedStar has one of the largest graduate medical education programs in the country, training more than 1,100 medical residents annually, and is the medical education and clinical partner of Georgetown University. With a broad network of primary care and hospitals, as well as MedStar Family Choice, our Medicaid HMO, MedStar Health is well positioned to serve those currently uninsured residents who will have insurance coverage beginning January 2014.

Figure 1. Other MedStar Health Statistics

MedStar Health Benchmarks	FY 2012
Admissions and Observation Cases	163,800
Outpatient Visits	3.6 million
Home Health Visits	200,500
Clinical Trials	1,044
Community Benefits – Research	$7.8 million
Community Benefits – Community Services	$43.2 million
Community Benefits – Charity Care/Bad Debt	87.5 million
Community Benefits – Medical Education	$144.7 million
Community Benefits –Total	$283.3 million

Source: MedStar Health 2012 Annual Report

MedStar Health hospitals:

- MedStar Franklin Square Medical Center
- MedStar Georgetown University Hospital
- MedStar Good Samaritan Hospital
- MedStar Harbor Hospital
- MedStar Montgomery Medical Center
- MedStar National Rehabilitation Network
- MedStar St. Mary's Hospital
- MedStar Southern Maryland Hospital Center
- MedStar Union Memorial Hospital
- MedStar Washington Hospital Center

A few of the MedStar Health related organizations:

- MedStar Health Research Institute (MHRI) – in Hyattsville, MD, provides scientific, administrative and regulatory support for research that complements MedStar's clinical services and teaching programs. MHRI conducts clinical, healthcare delivery and outcomes research in hospital and ambulatory settings.
- MedStar Ambulatory Services – as MedStar's philosophy of a distributed care delivery network is implemented, moving away from a hospital-centric model of health care, MAS is focused on developing convenient and accessible locations throughout the community for patients to receive a variety of health services in the neighborhoods where they live and work. This includes large multi-specialty centers that bring together a variety of diagnostic and treatment services to a single location. One of the newest of these is in Mitchellville, in Prince George's County.
- MedStar Medical Group – MedStar's physician network, with more than 5,600 affiliated physicians, includes more than 1,560 employed physicians across the region, in addition to the 1,100+ residents going through their clinical rotations. Major multi-specialty groups within the network are MGUH, MWHC and MedStar Physician Partners, a primary care group of more than 100 physicians.
- MedStar Visiting Nurse Association – a nonprofit in-home healthcare provider offering skilled nursing, rehabilitation and infusion therapy serving the entire Baltimore Washington region.
- MedStar Family Choice – a licensed HMO which services nearly 37,000 Medicaid enrollees in Maryland. MFC has recently added Prince George's County to its service area, and to date has 2,589 members who reside in Prince George's County. MFC already manages care for over 34,000 Medicaid recipients in Washington, D.C. since beginning there in 2012.

Prince George's County

In 2008, the Prince George's County Council contracted with the RAND Corporation to study the changing health care needs of County residents and the capacity of the County's health care system to meet those needs. Key findings included:

- Prince George's County residents are uninsured at relatively high rates – more than twice as many as Howard County and one-third more than in Montgomery County;
- Primary care physicians are in short supply in Prince George's County – a substantially lower per capita number of primary care physicians compared to neighboring jurisdictions;
- Prince George's County residents use hospital emergency department capacity more intensively than residents of other jurisdictions; and
- A substantial proportion of Prince George's County residents leave the County for hospital and emergency care.

These findings were confirmed in the 2012 report issued by the University of Maryland's School of Public Health – *Transforming Health Care in Prince George's, Maryland: A Public Health Impact Study.*

MedStar has identified several opportunities to significantly improve access to care in Prince George's County in a comprehensive manner. MedStar's steps to address these issues include:

- Expanding MedStar's Medicaid managed care organization (MedStar Family Choice) in Prince George's County.
- Developing additional primary care sites in Prince George's County that will expand access to primary and specialty care physicians, and seamlessly link patients to referral services as needed.
- Developing urgent care sites to help alleviate ED use by providing an easily accessible, after-hours option for non-urgent uses as proposed in this project.
- Addressing severe space constraints at MSMHC and providing state-of-the-art facility upgrades.

MedStar Southern Maryland Hospital Center Renovation and Expansion Project

MedStar Southern Maryland Hospital Center ("MSMHC") is proposing a major renovation and expansion for modernizing of its existing facility. The proposed renovation and expansion seeks to address critical space needs, and create the facilities necessary for MSMHC to continue to upgrade its programs and services while also accommodating the growing need for specialty, sub-specialty and general medical care for patients throughout the southern Maryland region. This transformation and modernization will enhance patient care, particularly in relation to emergency services, critical care, surgery and cardiovascular services.

The MSMHC renovation and expansion project is the outgrowth of comprehensive facility master planning work conducted during 2012 and early 2013 that took into account several specific factors including:

1. Anticipated population growth and demographic change in Prince George's County and the southern Maryland region;

2. Collaborative patient care agreements with Malcolm Grow Medical Clinic at Joint Base Andrews;
3. Current outmigration of patients for services such as oncology, orthopedics, and neurosurgery;
4. Development of separate clinical pathways as a part of the MedStar system (e.g. geriatric, pediatric, behavioral health, diabetes, and bariatric programs); and
5. Comprehensive community needs assessment with direct community member involvement.

The overarching goal of the MedStar Southern Maryland Hospital Center renovation & expansion project is to meet the growing and changing needs of its community, the region and the state for providing access to comprehensive, high-quality health care programs and services. The proposed project includes approximately 165,000 square feet of floor area of new construction which would provide the hospital with additional space needed for modernization of the thirty-six year old facility by enhancing existing space and capabilities for the Emergency Department, Surgery Department, Cardiovascular Interventional Services, and Critical Care. Expansion and modernization will allow the facility to greatly improve utilization, efficiency and patient safety in each area. These improvements are essential to have the continued ability to serve the needs of patients in a comprehensive manner.

The key driver of this project is to create a contemporary facility, accommodating the changing needs of the patients services, improving efficiencies and addressing the significant lack of space in most of the hospital's clinical areas. Many critical clinical services are provided in spaces that are significantly undersized to support contemporary practice for both existing and anticipated community need. The restrictive size of these spaces also presents significant challenges for the introduction of both established and emerging advances in diagnostic and therapeutic technology. Departmental square footage is well below national benchmarks of similar size and location in many areas, particularly critical care beds, medical/surgical beds, ED, radiology, surgery, administration, central supply and materials management, dietary and cafeteria, lab, and public lobby space. These areas all lack sufficient staff and physician support space, and often lack of space hinders family members from participating in patient care. Space constraints in the Emergency Department, Surgery and Critical Care restrict operational efficiency. Critical care rooms are very dissimilar to each other, contributing to inefficiencies for staff. ICU space shortages impact multiple service lines. The undersized specialty procedure and diagnostic rooms and operating rooms do not support current or future technology. In addition, with a new level of care being provided, more space is needed for the growing number of observation patients.

The primary objectives of this project are to:

- Right-size the hospital for the current and projected mix of inpatient and outpatient volumes, and expected growth in strategic service lines.
- Provide needed additional space for growing clinical services to enhance the hospital's ability to provide care consistent with current clinical standards.
- Clarify and simplify circulation patterns.

- Improve the patient and visitor experience.
- Provide necessary staff support space.

Based on study of the existing floor plan layouts, projected volumes and benchmark comparison with similar hospitals, key clinical departments will be resized to meet the facility's projected needs through 2017 and beyond. The area covered by this project has been designed with both connectivity and long-term growth in mind, thereby allowing valuable flexibility so that the hospital can continue to grow, as needed, in an efficient and planned manner in future years.

To address these space needs, new construction will be added along the south side of the main building and across the west side of the hospital. The south addition will extend the main floor, Level 01, by 80 feet to allow the southward expansion of the ED, Surgery and Interventional Cardiology. Due to the grade in that area, the basement level, Level 00, will also be extended to support the main floor extension. This will allow future expansion of patient support, business operations, and employee needs such as a renovated cafeteria, and a new central supply area. On the front side, the vertical expansion will change the hospital's main and emergency entrances, allow additional expansion of the ED, and construct three new floors above the ED. The relocated Critical Care Unit will move to the new Level 02. A dedicated observation unit will go into the new Level 03, easing capacity constraints in the ED and inpatient beds. The top floor, Level 04, will be constructed as shell space and will eventually be used to allow conversion of the hospital's semi-private rooms to private rooms. The renovations will then create the public concourse that will help consolidate visitor and outpatient movement and include improved amenities for patients and their families, expand pre- and post-op areas of the Surgery Department, and add much-needed staff office, staff lounge, and private consultations spaces as well as a dedicated waiting area serving the Surgery Department.

Overview of Major Project Components

Emergency Services: One of the preeminent factors driving this proposal involves emergency services. The department is significantly undersized for the current and projected patient volumes, based on best practice programming and comparable facilities. Improving patient flow and reducing length of stay is a critical goal of this project, as is enhancing care for those in need of mental health needs of our community. Minor renovations to the Emergency Department had been undertaken over ten years ago in an attempt to improve patient flow, accommodate increased volumes to better meet code requirements and current health care standards, but there is simply no way to further expand the ED within the existing facility.

The renovated and expanded Emergency Department will enhance efficiency of care and privacy for patients, as well as meet the growing demand for emergency care. This plan has been developed to meet long-term needs by expanding the ED square footage by approximately 150%. Renovation and expansion of the footprint would increase the Emergency Department from its current size of 13,009 square feet to a total of 32,500

square feet, and accommodate 48 treatment bays, 3 triage bays, and 2 resuscitation rooms. Private treatment rooms will be constructed that are larger in size to support advanced monitoring and treatment technology, and encourage family involvement during a patient's emergency visit. The treatment spaces will be designed to accommodate acuity ebb and flow. The plan also includes establishing a separate behavioral health section within the Emergency Department with six dedicated treatment rooms to better serve those with behavioral health needs.

Surgery Department: The surgery, pre-op and post-op areas are undersized based on best practice programming and comparable facilities. There is a significant lack of adequate storage space in the Surgery Department. The ten existing ORs average 416 square feet. Larger operating rooms are essential for the requirements of orthopedic, neurosurgical and spine surgery as well as intra-operatory imaging. The expanded and renovated Surgery Department will have six new large state-of-the-art operating rooms in the new area, and the PACU/Pre/Post area will expand into the space currently occupied by the Critical Care Unit. Six of the existing ORs will become part of the new PACU/Pre/Post area, and four will remain in service, with no addition to the hospital's current count of 10 licensed OR's.

Critical Care: The Critical Care Unit is also significantly undersized based on best practice programming and comparable facilities. The ICU/CCU will be relocated to new construction directly above the ED in the vertical expansion. The new unit will bring the patient rooms into appropriate size and provide adequate space for staff, family and equipment.

Cardiovascular Services: This service also needs more space. The project will extend the current first floor location of the cath labs, EP lab and interventional radiology on the south side of facility for the purpose of providing appropriate space when systems undergo replacement. The additional space will be used to increase the number of holding rooms for patients before and after cardiac and vascular procedures.

Observation Unit: Currently, observation beds are distributed among the inpatient nursing units throughout the hospital. A new dedicated Observation Unit will relieve the patient flow back-up in the ED and integrate new treatment areas within the existing facility for improved flows. Creation of an observation unit will ultimately enable the hospital to convert some of its semi-private rooms into private rooms.

Main Entrance Plaza: Renovation and expansion of the main lobby will create an internal public concourse with public amenities linking the front entrance with the Emergency Department, and waiting areas for key diagnostic and treatment departments. The creation of a primary circulation path east-west along the north face of the Hospital will clarify way-finding for patients and their families. It will also provide a much more visible entrance and a more welcome 'front door' experience for patients and visitors alike. Along the circulation, patients and families will have access to the gift shop, café and chapel amenities. An internal corridor, running east-west, will be a dedicated staff corridor.

Support space: The loading dock will be relocated, and the hospital utilities infrastructure will be upgraded.

Site Work: The helipad will be relocated to allow for more efficient ambulance entry, drop-off and exit. Some employee parking spaces displaced by construction due to expansion on southern most part of hospital will be relocated to space vacated by dismantling a metal storage building behind southeast corner of hospital campus. Existing generators, oxygen tank, below-grade fuel tanks, and other infrastructure will also be replaced or relocated, and existing site utilities will be moved or supplemented to better serve the expanded hospital footprint.

In summary, the MSMHC renovation and expansion project is an $126 million undertaking that will substantially enhance the operational profile of the MSMHC campus by it completion in 2018. The project will increase functional space within the hospital by almost 70% and will position MSMHC to provide for the community's well-being for many years to come. The addition of this space to the hospital will increase privacy, comfort and safety for patients and improve the setting provided for family members and others who visit the hospital every day.

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15. Project Drawings:

Projects involving renovations or new construction should include architectural drawings of the current facility (if applicable), the new facility (if applicable) and the proposed new configuration. These drawings should include, as applicable:

1) the number and location of nursing stations,
2) approximate room sizes,
3) number of beds to a room,
4) number and location of bath rooms,
5) any proposed space for future expansion, and
6) the "footprint" and location of the facility on the proposed or existing site.

Please see Attachment 1, which includes the architectural drawings and area tabulations with approximate room sizes from Perkins + Will.

16. Features of Project Construction:

A. Please Complete **"CHART 1. PROJECT CONSTRUCTION CHARACTERISTICS AND COSTS"** describing the applicable characteristics of the project, if the project involves new construction or renovation.

B. Explain any plans for bed expansion subsequent to approval which are incorporated in the project's construction plan.

We have included one floor of shell space above the Critical Care Unit and Observation Unit. This space will share the same footprint as those two units. We anticipate the gradual conversion, as funds allow, of semi-private rooms to private rooms. MSMHC will eventually seek the appropriate level of MHCC approval to finish this shell space.

C. Please discuss the availability of utilities (water, electricity, sewage, etc.) for the proposed project, and the steps that will be necessary to obtain utilities.

The Washington Suburban Sanitary Commission (WSSC) provides ten inch water and eight inch sewer service to the existing buildings and Health Campus. The water and sewer lines for the proposed expansion will be provided from the existing service. Roof drains from the existing hospital consist of underground pipes that connect to an existing storm drain system around the perimeter of the hospital which conveys stormwater runoff to an existing stormwater management pond on the western side of the property. The proposed expansion of the hospital and the proposed improvements adjacent to the hospital will require the relocation of the roof drain and storm drain system. The size of the roof drain pipes are anticipated to be approximately 12" in diameter. The hospital building expansion will require the relocation of existing 24" and 27" diameter reinforced concrete pipe

(RCP) on the east and south sides of the building. An additional 15" RCP will be relocated on the western side of the building to accommodate parking lot improvements. Diversion manholes will be utilized to divert the first floor of stormwater runoff to bio-trenches.

Chart 1. Project Construction Characteristics and Costs		
Base Building Characteristics	Complete if Applicable	
	New Construction	Renovation
Class of Construction		
Class A	X	X
Class B		
Class C		
Class D		
Type of Construction/Renovation		
Low		
Average		
Good	X	X
Excellent		
Number of Stories	5	2
Total Square Footage		
Basement	21,955	575
First Floor	51,812	42,772
Second Floor	30,533	NA
Third Floor	30,533	NA
Fourth Floor	30,533	NA
Perimeter in Linear Feet		
Basement	1,258	0
First Floor	1,389	972
Second Floor	1,008	NA
Third Floor	1,008	NA
Fourth Floor	1,008	NA
Wall Height (floor to eaves)		
Basement	16'-0"	16'-0"
First Floor	16'-0"	16'-0"
Second Floor	15'-0"	NA
Third Floor	15'-0"	NA
Fourth Floor	15'-0"	NA
Elevators		
Type *Passenger* *Freight*	Passenger	NA
Number	4	NA
Sprinklers (Wet or Dry System)	Wet and dry	Wet
Type of HVAC System	Central plant with package air handlers	Central plant with package air handlers
Type of Exterior Walls	Brick w/ CMU or metal stud backup	Brick w/ CMU or metal stud backup

Chart 1. Project Construction Characteristics and Costs (cont.)		
	Costs	Costs
Site Preparation Costs	$	$
Normal Site Preparation*	37,265	
Demolition	312,894	
Storm Drains	150,039	
Rough Grading	879,612	
Hillside Foundation	0	
Terracing	0	
Pilings	3,584,100	
Offsite Costs	$	$
Roads	0	
Utilities	0	
Jurisdictional Hook-up Fees	0	
Signs	$175,00	$
Landscaping	$346,029	$

*As defined by Marshall Valuation Service. Copies of the definitions may be obtained by contacting staff of the Commission.

PART II - PROJECT BUDGET

(INSTRUCTION: All estimates for 1.a.-d., 2.a.-h., and 3 are for current costs as of the date of application submission and should include the costs for all intended construction and renovations to be undertaken. DO NOT CHANGE THIS FORM OR ITS LINE ITEMS. IF ADDITIONAL DETAIL OR CLARIFICATION IS NEEDED, ATTACH ADDITIONAL SHEET.)

A. Use of Funds

1. Capital Costs:

a.	New Construction	
(1)	Building	$ 56,846,021
(2)	Fixed Equipment (not included in construction)	8,090,000
(3)	Land Purchase	0
(4)	Site Preparation	7,313,002
(5)	Architect/Engineering Fees	6,135,902
(6)	Permits, (Building, Utilities, Etc)	288,750
SUBTOTAL		$ 78,673,676
b.	Renovations	
(1)	Building	$ 12,480,685
(2)	Fixed Equipment (not included in construction)	4,045,000
(3)	Architect/Engineering Fees	1,248,068
(4)	Permits, (Building, Utilities, Etc.)	96,250
SUBTOTAL		$ 17,870,003
c.	Other Capital Costs	
(1)	Major Movable Equipment	7,225,000
(2)	Minor Movable Equipment	1,850,000
(3)	Contingencies	3,691,985
(4)	Other (Specify)	0
TOTAL CURRENT CAPITAL COSTS (a - c)		$ 109,310,663
d.	Non Current Capital Cost	
(1)	Interest (Gross)	$ 5,580,030
(2)	Inflation (state all assumptions, Including time period and rate)	$ 9,729,969
TOTAL PROPOSED CAPITAL COSTS (a - d)		$ 124,620,662

2. Financing Cost and Other Cash Requirements:

a.	Loan Placement Fees	$ 1,100,000
b.	Bond Discount	0
c.	Legal Fees (CON Related)	500,000
d.	Legal Fees (Other)	0
e.	Printing	10,000
f.	Consultant Fees	
	CON Application Assistance	150,000
	Other (Specify)	0
g.	Liquidation of Existing Debt	0
h.	Debt Service Reserve Fund	0
i.	Principal Amortization Reserve Fund	0
j.	Other (Specify)	0
	TOTAL (a - j)	$ 1,760,000

3. Working Capital Startup Costs $ _____

TOTAL USES OF FUNDS (1 - 3) **$ 126,380,662**

B. Sources of Funds for Project:

1.	Cash	32,100,188
2.	Pledges: Gross _____, less allowance for uncollectables _____ = Net	0
3.	Gifts, bequests	5,000,000
4.	Interest income (gross)	0
5.	Authorized Bonds	89,280,474
6.	Mortgage	0
7.	Working capital loans	0
8.	Grants or Appropriation	
	(a) Federal	0
	(b) State	0
	(c) Local	0
9.	Other (Specify)	0

TOTAL SOURCES OF FUNDS (1-9) **$ 126,380,662**

Lease Costs:

a. Land	$_____	x _____	= $_____
b. Building	$_____	x _____	= $_____
c. Major Movable Equipment	$_____	x _____	= $_____
d. Minor Movable Equipment	$_____	x _____	= $_____
e. Other (Specify)	$_____	x _____	= $_____

PART III - CONSISTENCY WITH GENERAL REVIEW CRITERIA AT COMAR 10.24.01.08G(3):

(INSTRUCTION: Each applicant must respond to all criteria included in COMAR 10.24.01.08G(3), listed below.)

10.24.01.08G(3)(a). The State Health Plan.

List each applicable standard from each appropriate chapter of the State Health Plan and provide a direct, concise response explaining the project's consistency with that standard. In cases where standards require specific documentation, please include the documentation as a part of the application.

COMAR 10.24.10.04 Acute Inpatient Services Standards

A. General Standards.

The following general standards encompass Commission expectations for the delivery of acute care services by all hospitals in Maryland. Each hospital that seeks a Certificate of Need for a project covered by this Chapter of the State Health Plan must address and document its compliance with each of the following general standards as part of its Certificate of Need application. Each hospital that seeks a Certificate of Need exemption for a project covered by this Chapter of the State Health Plan must address and demonstrate consistency with each of the following general standards as part of its exemption request.

(1) Information Regarding Charges.

Information regarding hospital charges shall be available to the public. After July 1, 2010, each hospital shall have a written policy for the provision of information to the public concerning charges for its services. At a minimum, this policy shall include:

(a) Maintenance of a Representative List of Services and Charges that is readily available to the public in written form at the hospital and on the hospital's internet web site;

(b) Procedures for promptly responding to individual requests for current charges for specific services/procedures; and

(c) Requirements for staff training to ensure that inquiries regarding charges for its services are appropriately handled.

Response: MSMHC has a policy regarding the provision of information on hospital charges. See Attachment 2. A list of services and charges is posted on the hospital's website. See http://www.medstarsouthernmaryland.org/average_charges.php. The list includes inpatient and outpatient surgical procedures.

(2) Charity Care Policy.

Each hospital shall have a written policy for the provision of charity care for indigent patients to ensure access to services regardless of an individual's ability to pay.

(a) The policy shall provide:

(i) Determination of Probable Eligibility. Within two business days following a patient's request for charity care services, application for medical assistance, or both, the hospital must make a determination of probable eligibility.

(ii) Minimum Required Notice of Charity Care Policy.

1. Public notice of information regarding the hospital's charity care policy shall be distributed through methods designed to best reach the target population and in a format understandable by the target population on an annual basis;

2. Notices regarding the hospital's charity care policy shall be posted in the admissions office, business office, and emergency department areas within the hospital

3. Individual notice regarding the hospital's charity care policy shall be provided at the time of preadmission or admission to each person who seeks services in the hospital.

(b) A hospital with a level of charity care, defined as the percentage of total operating expenses that falls within the bottom quartile of all hospitals, as reported in the most recent Health Service Cost Review Commission Community Benefit Report, shall demonstrate that its level of charity care is appropriate to the needs of its service area population.

Response: MSMHC complies fully with the HSCRC's regulations on financial assistance policies [COMAR 10.37.10.26], as revised in 2010. See Attachment 3 for MSMHC's financial assistance charity care policy. Notice of the hospital's financial assistance policy is posted in the admissions office, business office, and emergency department.

Prior to its merger with MedStar Health, MSMHC was a for-profit organization, and as such did not fall under the same rules on financial assistance as non-profit organizations. Since the merger, MSMHC converted to a non-profit hospital in the MedStar system. MedStar hospitals provide over 11% of the charity care provided by all Maryland hospitals and three of the hospitals provided more that the state average in charity care in the HSCRC 2012 Community Benefit Report. MSMHC, as a new no-profit hospital is expected to be in line with the MedStar Health hospitals for provision of charity care.

(3) Quality of Care.

An acute care hospital shall provide high quality care.

(a) Each hospital shall document that it is:

(i) Licensed, in good standing, by the Maryland Department of Health and Mental Hygiene;

(ii) Accredited by the Joint Commission; and

(iii) In compliance with the conditions of participation of the Medicare and Medicaid programs.

(b) A hospital with a measure value for a Quality Measure included in the most recent update of the Maryland Hospital Performance Evaluation Guide that falls within the bottom quartile of all hospitals' reported performance measured for that Quality Measure and also falls below a 90% level of compliance with the Quality Measure, shall document each action it is taking to improve performance for that Quality Measure.

Response: MSMHC is properly licensed and accredited by the Joint Commission. Our most recent licensure letter from the Office of Health Care Quality and the most recent certificate of accreditation are included as Attachment 4. The hospital is working with the Office of Licensing and Certification Programs on a Plan of Correction that will put the hospital in full compliance with the CMMS conditions of participation. That Plan has been accepted by OLCP, and full resolution is anticipated. An update will be provided as soon as it is available.

MSMHC scored at the 90% level or above for all but four of the 25 applicable quality indicators in the most recent update of the *Maryland Hospital Performance Evaluation Guide*. As shown in the figure below, three are also ranked in the bottom quartile of all hospitals reported on that measure. The score for pneumococcal immunization, while below 90%, is not in the bottom quartile of reporting hospitals.

Figure 2. MSMHC Quality Indicator Comparison

Quality Indicator	Total Hospitals	MSMHC Rank	MSMHC Score	Beginning of 4th Quartile
Quality of Care for Pneumonia				
Performing the recommended blood test	44	44	88%	95%
Quality of Care for Children's Asthma				
Children and their caregivers who received a home management plan of care document	19	19	58%	86%
Quality of Care for Immunizations				
Pneumococcal Immunization	45	32	88%	85%
Influenza Immunization	45	38	85%	86%

To address the performance in the other three measures, MSMHC has taken the following actions:

Performing the recommended blood test for pneumonia –

- Educated emergency department physicians and nurses on need for blood test prior to antibiotic administration.
- Medication dispenser (Pyxis) has an alert to the nurses reminding them to obtain blood culture prior to administering antibiotic.
- Department feedback provided to individuals that fail to obtain blood culture prior to antibiotic.
- Monthly update to department manager regarding core measure pneumonia compliance.
- Core measure compliance rates provided to emergency department medical director, vice president of medical affairs, and chief nursing officer.
- Educated emergency department staff to document correct time of blood culture and not the time sent to the lab.

Children and their caregivers who received a home management plan of care document for asthma –

- Developed and educated physicians on the Childhood Asthma Discharge Form.
- Educated nursing staff to document asthma patient education on the plan of care.
- Nurse director of the pediatric unit receives a daily report to follow pediatric asthma patients and ensure proper documentation for plan of care.

Influenza immunization –

- Nurses screen all patients upon initial admission to the nursing units
- If immunizations are needed, an order is placed on the patient chart to go to pharmacy.
- Nurse administers the necessary immunization and records it on the medication record.
- Unit secretaries provide oversight of the immunization need and inform nurse to address.
- Chief nursing officer and vice president of medical affairs receive monthly core measure reports
- New-Horizon HEV program monitors on nursing unit alert nursing staff of immunization needs on each patient.
- Daily report from IT to all nursing departments and quality office to follow up on missed immunizations.

B. Project Review Standards

The standards in this section are intended to guide reviews of Certificate of Need applications and exemption requests involving acute hospital facilities and services. An applicant for a Certificate of Need must address, and its proposed projects will be evaluated for compliance with, all applicable review standards. An applicant for a Certificate of Need exemption must address, and its proposed project will be evaluated for consistency with, all applicable review standards.

(1) Geographic Accessibility.

A new acute care general hospital or an acute care general hospital being replaced on a new site shall be located to optimize accessibility in terms of travel time for its likely service area population. Optimal travel time for general medical/surgical, intensive/critical care and pediatric services shall be within 30 minutes under normal driving conditions for 90 percent of the population in its likely service area.

Response: MSMHC is not relocating therefore, this standard does not apply.

(2) Identification of Bed Need and Addition of Beds.

Only medical/surgical/gynecological/addictions ("MSGA") beds and pediatric beds identified as needed and/or currently licensed shall be developed at acute care general hospitals.

(a) Minimum and maximum need for MSGA and pediatric beds are determined using the need projection methodologies in Regulation .05 of this Chapter.

(b) Projected need for trauma unit, intensive care unit, critical care unit, progressive care unit, and care for AIDS patients is included in the MSGA need projection.

(c) Additional MSGA or pediatric beds may be developed or put into operation only if:

(i) The proposed additional beds will not cause the total bed capacity of the hospital to exceed the most recent annual calculation of licensed bed capacity for the hospital made pursuant to Health-General §19-307.2; or

(ii) The proposed additional beds do not exceed the minimum jurisdictional bed need projection adopted by the Commission and calculated using the bed need projection methodology in Regulation .05 of this Chapter; or

(iii) The proposed additional beds exceed the minimum jurisdictional bed need projection but do not exceed the maximum jurisdictional bed need projection adopted by the Commission and calculated using the bed need projection methodology in Regulation .05 of this Chapter and the applicant can demonstrate need at the applicant hospital for bed capacity that exceeds the minimum jurisdictional bed need projection; or

(iv) The number of proposed additional MSGA or pediatric beds may be derived through application of the projection methodology, assumptions, and targets contained in Regulation .05 of this Chapter, as applied to the service area of the hospital.

Response: MSMHC does not propose to develop new acute care beds. Therefore, this standard does not apply.

(3) Minimum Average Daily Census for Establishment of a Pediatric Unit.

An acute care general hospital may establish a new pediatric service only if the projected average daily census of pediatric patients to be served by the hospital is at least five patients, unless:

(a) The hospital is located more than 30 minutes travel time under normal driving conditions from a hospital with a pediatric unit; or

(b) The hospital is the sole provider of acute care general hospital services in its jurisdiction.

Response: MSMHC does not propose to establish a new pediatric service.

(4) Adverse Impact.

A capital project undertaken by a hospital shall not have an unwarranted adverse impact on hospital charges, availability of services, or access to services. The Commission will grant a Certificate of Need only if the hospital documents the following:

(a) If the hospital is seeking an increase in rates from the Health Services Cost Review Commission to account for the increase in capital costs associated with the proposed project and the hospital has a fully-adjusted Charge Per Case that exceeds the fully adjusted average Charge Per Case for its peer group, the hospital must document that its Debt to Capitalization ratio is below the average ratio for its peer group. In addition, if the project involves replacement of physical plant assets, the hospital must document that the age of the physical plant assets being replaced exceed the Average Age of Plant for its peer group or otherwise demonstrate why the physical plant assets require replacement in order to achieve the primary objectives of the project; and

(b) If the project reduces the potential availability or accessibility of a facility or service by eliminating, downsizing, or otherwise modifying a facility or service, the applicant shall document that each proposed change will not inappropriately diminish, for the population in the primary service area, the availability or accessibility to care, including access for the indigent and/or uninsured.

Response: This application does not include an increase in hospital rates to cover the capital cost. Therefore, part (a) does not apply to this project. No reductions in service are proposed, therefore part (b) does not apply to this project.

(5) Cost-Effectiveness.

A proposed hospital capital project should represent the most cost effective approach to meeting the needs that the project seeks to address.

(a) To demonstrate cost effectiveness, an applicant shall identify each primary objective of its proposed project and shall identify at least two alternative approaches that it considered for achieving these primary objectives. For each approach, the hospital must:

(i) To the extent possible, quantify the level of effectiveness of each alternative in achieving each primary objective;

(ii) Detail the capital and operational cost estimates and projections developed by the hospital for each alternative; and

(iii) Explain the basis for choosing the proposed project and rejecting alternative approaches to achieving the project's objectives.

(b) An applicant proposing a project involving limited objectives, including, but not limited to, the introduction of a new single service, the expansion of capacity for a single service, or a project limited to renovation of an existing facility for purposes of modernization, may address the cost-effectiveness of the project without undertaking the analysis outlined in (a) above, by demonstrating that there is only one practical approach to achieving the project's objectives.

(c) An applicant proposing establishment of a new hospital or relocation of an existing hospital to a new site that is not within a Priority Funding Area as defined under Title 5, Subtitle 7B of the State Finance and Procurement Article of the Annotated Code of Maryland shall demonstrate:

(i) That it has considered, at a minimum, the two alternative project sites located within a Priority Funding Area that provide the most optimal geographic accessibility to the population in its likely service area, as defined in Project Review Standard (1);

(ii) That it has quantified, to the extent possible, the level of effectiveness, in terms of achieving primary project objectives, of implementing the proposed project at each alternative project site and at the proposed project site;

(iii) That it has detailed the capital and operational costs associated with implementing the project at each alternative project site and at the proposed project site, with a full accounting of the cost associated with transportation system and other public utility infrastructure costs; and

(iv) That the proposed project site is superior, in terms of cost-effectiveness, to the alternative project sites located within a Priority Funding Area.

Response: The primary objectives of this project are to:

- Right-size the hospital for the current and projected mix of inpatient and outpatient volumes, and expected growth in strategic service lines.
- Provide needed additional space for growing clinical services to enhance the hospital's ability to provide care consistent with current clinical standards.
- Clarify and simplify circulation patterns.
- Improve the patient and visitor experience.
- Provide necessary staff support space.

Facility Master Plan Options

Option 0: Do nothing/ Refurbish only:
This option is not a feasible solution to achieve the stated goals of MSMHC to meet the growing and changing needs of the community. A strategy to only refurbish areas of greatest need has served the hospital center in the past. However, the under-sizing of key departments has reached the point where the quality of patient care will be impacted unless additional clinical space is provided. Further, the physical limitations of the existing buildings and infrastructure make it cost-prohibitive for MSMHC to implement updated patient care practices (i.e. family-based care) and the installation of new medical equipment.

Option 1: Minimal Renovation / Elbow Room
This option, which was ultimately selected as the preferred approach moving forward, is the least costly of the three master plan options. This option minimally improves the visibility and approach for visitors. The location of the primary entries – the main public, the Emergency Department walk-in and ambulance - remain close to their existing locations. However, the creation of a primary circulation path east-west through the center of the Hospital will clarify way-finding for patients and their families. Along this key public corridor are located key amenities and waiting areas for the diagnostic and treatment departments. The orientation and the location of the building expansion, along the south edge of the diagnostic & treatment block, ideally locates the needed renovation and "in-place" expansion of the key departments: the Emergency Department, Imaging and Surgery. While the two existing Bed Towers (BT I & BT II) will remain primarily acute inpatient nursing, a second level of the new expansion will include new replacement patient beds for intensive care and critical care. These will be designed to the most current standards and vertically adjacent to the ED, Imaging and Surgery. By creating a new intensive/critical care core with area designated for vertical expansion, this approach provides flexibility for the future. Further, retaining the land to the south of the site as surface parking keeps MSHMC's options open for future site development. Making the most of the existing facilities while expanding key departments, as well as providing a framework for later-phase expansion, are the most cost-effective ways to address MSMHC's stated goals.

Option 2: Moderate Renovation / Satisfy Best Practice Standards
This option is of moderate cost. While not addressing visibility and approach (similar to Option 1), the proposed arrangement of new on-site parking and entries would separate the outpatient and inpatient traffic flow upon entering the site. This would complement the proposed concentration of outpatient functions at the north end of campus (the SMPB and BT 1) and the inpatient functions at the south end. The relocation of the Main Entry to the south would allow patients and visitors to use a later-phase South Parking Deck. Also, the ED Ambulance traffic would be more clearly separated from the public traffic flow. Similar to Option 1, a new public circulation spine is an organizing element and its location along the south edge of the proposed expansion would feed additional, later-phase expansion. In addition to the new Main Entry and connecting public circulation spine, a new patient tower would be built and would provide an opportunity for MSMHC to create a new, modern image. Despite this, the current problems with the internal flows (e.g. the lack of a direct connection between the diagnostic and treatment areas of the hospital and the new beds; the cross traffic between Public & Patient/ Staff) are not eliminated. Also, the location of the South Parking Deck would reduce future expansion

opportunities. The additional cost and disruption required to implement this approach make it incompatible with MSMHC's key goals of creating a cost-effective solution to enhance patient care.

Option 3: Extensive Renovation / Support Future Growth

This option is the most costly and complex to implement. The idea behind this approach is to create a new outpatient, ambulatory care center which will be highly visible and serve as the main public face of MSMHC from Branch Ave/Highway 5. Similar to Option 2, the arrangement of site parking and entries would separate the outpatient and inpatient flow upon entering the site, thereby reducing the traffic congestion on site. The main Hospital entries would maintain their existing orientation. All outpatient services would be located on the north side of campus, which would create a remote connection between the existing and new outpatient functions. Consolidated parking on the west, Hotel site – either surface or structured, depending on need – is cost effective, but is distant from the main Hospital entry points. The ultimate strategy for future expansion – the development of the adjacent Hotel site – will allow for phased replacement of the entire facility, but this would require significant property acquisition and a timeline not compatible with MSMHC's stated goals and needs.

After extensive review and analysis, Option 1 was identified as the most cost effective option. Three refinements were then developed as a variation of Option 1 to further confirm and refine the effectiveness of both cost and care improvements. The major difference between the three variations of Option 1 is the placement and renovation of Patient Beds on the campus. The following diagnostic and treatment departments remain identical in all three variations of Option 1:

- Emergency Department expansion and dedicated behavioral health area to meet increased demand for ED services;
- Surgery Department expansion to allow for larger ORs, increased Prep and Post bays, improved staff support space;
- Cardiology expansion to right-size patient treatment space and improve circulation for staff and patients.

Public concourse and amenities are likewise unchanged within each of the below options.

Option 1A: Horizontal Expansion at Bed Tower II

The new public concourse conflicted with the existing Critical Care Unit and Intensive Care Unit (CCU/ICU) and would require the department to be relocated. The CCU/ICU was proposed to be moved to the first level of Bed Tower II and maintain a bed count of 18. This move required expansion of the south end of Bed Tower II along two perimeter walls at the main level and the basement level below. The distance between the Emergency Department and CCU/ICU increases in this option while the travel distance between Surgery and CCU/ICU is relatively unchanged. Post-Partum Beds were relocated to Level 02 of Bed Tower II, consolidating the Post-Partum Department and Nursery. Sub-Acute Beds were relocated to a single story addition above the expanded ED with new vertical circulation. A new staff-only elevator was also proposed at Bed Tower II to improve safety and patient privacy. The construction cost of this option was initially estimated to be approximately $78.7 million dollars.

Option 1B: Vertical Expansion at Bed Tower II

Option 1B also relocated CCU/ICU to Level 01 of Bed Tower II; however, in this option, CCU/ICU would take over the entirety of Bed Tower II's Level 01 footprint as compared to Option 1A in which only the south end of Bed Tower II was effected. The number of CCU/ICU beds increased from 18 to 24, the current licensed CCU/ICU bed number. Travel distance between CCU/ICU increased while distances between CCU/ICU and Surgery would remain unchanged. At the time of Bed Tower II's construction, it was designed structurally to accommodate two additional levels. This option required the addition of two floors to Bed Tower II; however, new structural support and infrastructure would be required to meet current structural code requirements. A Consolidated Post-Partum unit and Nursery was placed on the existing Level 02. The new Level 03 housed Labor and Delivery along with shell space for future expansion. Sub-Acute beds were relocated to the new Level 04. A staff-only elevator was added to Bed Tower II to improve safety and patient privacy. The construction cost of this option was initially estimated to be approximately $87.6 million dollars.

Option 1C: No Expansion of Existing Bed Towers

Both Options 1A and 1B proposed extensive renovation at Bed Tower II and subsequent significant phasing to build. In contrast, Option 1C proposes no renovation or expansion within either existing Bed Tower. Instead, Option 1C proposes building vertically over the expanded Emergency Department (ED) to accommodate the new CCU/ICU and a dedicated Observation Bed Unit. Currently, observation beds within the hospital are scattered throughout the existing Bed Towers. The CCU/ICU would be placed on the first level above the ED and would increase from 18 beds to 24 beds. Travel distance between CCU/ICU and ED is reduced, while travel distance between Surgery and CCU/ICU is increased, but not to a significant distance. Both dedicated staff and public elevators would be added and placed remotely, providing segregated Staff and Public flow. A consolidated Observation Unit is placed on Level 02. The vertical expansion also includes one level of shell space above the Observation Unit. This future addition of two nursing floors allows the facility to transition to private beds and potentially decommission and transition the oldest Bed Tower, Bed Tower I, to alternate function. Additionally, the vertical expansion at the front facade will provide significant visual connection from the main thoroughfare, Route 5. This option was selected as the most cost-effective, patient-centered, and staff-supportive, and is described in more detail throughout the remainder of this application. The comparable construction cost of this option was initially estimated to be approximately $77.7 million dollars.

(6) Burden of Proof Regarding Need.

A hospital project shall be approved only if there is demonstrable need. The burden of demonstrating need for a service not covered by Regulation .05 of this Chapter or by another chapter of the State Health Plan, including a service for which need is not separately projected, rests with the applicant.

Response: No new services are proposed with this project, therefore this standard does not apply.

(7) Construction Cost of Hospital Space.

The proposed cost of a hospital construction project shall be reasonable and consistent with current industry cost experience in Maryland. The projected cost per square foot of a hospital construction project or renovation project shall be compared to the benchmark cost of good quality Class A hospital construction given in the Marshall Valuation Service® guide, updated using Marshall Valuation Service® update multipliers, and adjusted as shown in the Marshall Valuation Service® guide as necessary for site terrain, number of building levels, geographic locality, and other listed factors. If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of the projected construction cost that exceeds the Marshall Valuation Service® benchmark and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess construction cost.

Response: The Marshall Valuation benchmark for this project is $373.49, compared to the project cost of $393.57. See Attachment 5.

(8) Construction Cost of Non-Hospital Space.

The proposed construction costs of non-hospital space shall be reasonable and in line with current industry cost experience. The projected cost per square foot of non-hospital space shall be compared to the benchmark cost of good quality Class A construction given in the Marshall Valuation Service® guide for the appropriate structure. If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the non-hospital space shall not include the amount of the projected construction cost that exceeds the Marshall Valuation Service® benchmark and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess construction cost. In general, rate increases authorized for hospitals should not recognize the costs associated with construction of non-hospital space.

Response: This project does not involve construction of non-hospital space.

(9) Inpatient Nursing Unit Space.

Space built or renovated for inpatient nursing units that exceeds reasonable space standards per bed for the type of unit being developed shall not be recognized in a rate adjustment. If the Inpatient Unit Program Space per bed of a new or modified inpatient nursing unit exceeds 500 square feet per bed, any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of the projected construction cost for the space that exceeds the per bed square footage limitation in this standard or those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess space.

Response: The Critical Care Unit will be reconstructed in a different location within the existing hospital. The purpose of this renovation is to provide much needed space for critical care to be consistent with state-of-the-art modern practices. In addition to the space reconfiguration, the MSMHC projects an increase in more complex patients being admitted in the future, requiring a higher mix of critical care beds. The proposed new Critical Care Unit will be approximately 27,050 square feet. The patient care rooms will be 372 net square feet, which is consistent with industry standards. The Unit Program Space shown in Figure 3 was prepared according to the State Health Plan definition by Perkins + Will.

Figure 3. Critical Care Units – Proposed Program Space

Critical Care Unit	Program Space	# of Beds	Space per Bed
Current	3,636	18	202
Proposed	15,816	24	659

Please note that although this standard appears to apply one standard to all nursing units, critical care units are not like general medical-surgical nursing units in their size requirements. Higher intensity of patient care required means more equipment and more staff in the unit and in each room. This application is consistent with the standard's policy because the unit is designed to meet the reasonable space standards developed by architects and industry experts over the past few years, consistent with the way critical care is provided today.

(10) Rate Reduction Agreement.

A high-charge hospital will not be granted a Certificate of Need to establish a new acute care service, or to construct, renovate, upgrade, expand, or modernize acute care facilities, including support and ancillary facilities, unless it has first agreed to enter into a rate reduction agreement with the Health Services Cost Review Commission, or the Health Services Cost Review Commission has determined that a rate reduction agreement is not necessary.

Response: The HSCRC does not have a current measure of Reasonableness of Charges (ROC) report, and is not currently labeling any hospitals as high-cost. The HSCRC has not determined that MSMHC is a high cost hospital, and therefore, this standard does not apply.

(11) Efficiency.

A hospital shall be designed to operate efficiently. Hospitals proposing to replace or expand diagnostic or treatment facilities and services shall:

(a) Provide an analysis of each change in operational efficiency projected for each diagnostic or treatment facility and service being replaced or expanded, and document the manner in which the planning and design of the project took efficiency improvements into account; and

(b) Demonstrate that the proposed project will improve operational efficiency when the proposed replacement or expanded diagnostic or treatment facilities and services are projected to experience increases in the volume of services delivered; or

(c) Demonstrate why improvements in operational efficiency cannot be achieved.

Response: A key goal of the MSMHC Renovation & Expansion Project is to maximize efficiency of its functional space and operations. The master plan, which preceded the Project, identified several areas where inefficiency was impacting the quality of patient care.

For example, the arrival experience for patients and their families to the hospital is affected by traffic congestion on the site, inadequate space for patient drop-off at the main entry points and difficulty finding parking. The project will address this through improved exterior signage which will clarify the arrival paths and entries, expanded drop-off zones and segregation of traffic flow types on campus. The exterior signage will tie into the interior so that the path from entry, through security to treatment area, support area or patient room remains clear. This will improve efficiency by reducing incidents where patients and their families are delayed to their destination because they lost their way.

Another example is the high number of ambulance transport re-routings occurring at the Emergency Department. The master plan identified the lack of open ED exam beds as a key factor causing these diversions. Upon closer study, it was determined that the turnover of patients in the ED exam rooms was slowed due to a combination of non-critical patients who needed observation but not acute care, as well as those more-critical patients waiting for an ICU or CCU bed to become available. In addition, several existing Operating Rooms within Surgery were underutilized due to the lack of modernized services and materials, therefore causing a delay in clearing surgical cases from the ED exam rooms. All three of these conditions create a bottleneck in the throughput that ultimately results in back-ups at the ambulance drop-off area. The project proposes an observation unit above the Emergency Department for the former group and Intensive/Critical Care beds immediately above the ED for the latter group. Additionally, adequate space, protected from the elements, is provided at the ambulance entry for the staging of arriving gurneys.

A third example and overarching strategy to improve efficiency throughout the clinical care areas is the provision of additional equipment and supply storage along primary staff circulation pathways, convenient to its target patient recipients. This will result in the nursing staff spending less time finding, transporting and storing supplies and more time with patients.

These specific examples illustrate how the scope of renovation and new construction takes into account current inefficiencies within the existing facility and addresses them through the programming and design of the new project.

(12) Patient Safety.

The design of a hospital project shall take patient safety into consideration and shall include design features that enhance and improve patient safety. A hospital proposing to replace or expand its physical plant shall provide an analysis of patient safety features included for each facility or service being replaced or expanded, and document the manner in which the planning and design of the project took patient safety into account.

Response: The MSMHC Renovation & Expansion Project is focused on improving the experience for patients, physicians, staff and visitors. A primary goal of the project is to provide a superior environment of care. Furthermore, as a part of MedStar Health, a partner in the "Healthier Hospitals Initiative," this project will enhance MSMHC's environmental sustainability and improved patient care. This will allow the hospital to recruit and retain the best physicians and staff in the region.

The project will implement overarching strategies which include the following:

- Design following the most recent design guidelines (e.g. FGI) as well as building and life safety codes.
- Improve the patient experience through the creation of defined pathways and improved access to services.
- Create a culture and environment around the immediacy of care.
- Provide areas for staff-patient information exchange to better meet the most recent HIPAA guidelines.

- Provide an information infrastructure (i.e. EMR) that enables the best possible coordination among care providers.
- Standardize fundamentals: space, layout, location, equipment and supplies.
- Create dedicated staff support areas as well as areas of respite.
- Clearly identify future expansion zones and plan for flexible space which anticipates changes in technology.

Many critical clinical services are provided in spaces that are significantly undersized to support contemporary practice for both existing and anticipated community need. The restrictive size of these spaces also presents significant challenges for the introduction of both established and emerging advances in diagnostic and therapeutic technology. This project will right-size these spaces to support the best possible clinical practice.

Department locations have become somewhat fragmented and dissociated due to incremental development within the facility over time. This project will re-establish appropriate departmental adjacencies, based on the optimal flow of patients, clinicians, staff, and supplies. This will promote greater efficiency and safety in the delivery of patient care.

Critical care rooms are very dissimilar to each other, contributing to inefficiencies for staff. This project will standardize the patient rooms in this area promoting greater safety by increasing staff familiarity with the environment and facilitating greater observation of the patient. In the critical care areas, additional, specific steps include the following:

- Support family involvement in the care of the patient by providing both shared and dedicated space.
- Design workstations to foster better staff collaboration and communication.
- Establish immediate accessibility of information, supplies and material in close proximity to the patient, and the caregiver in close proximity to the patient.
- Improve visibility of patient to staff and staff to patient.
- Locate staff work areas to provide visibility to patients, and accessibility for patient to care provider.

In Surgery, additional, specific steps include the following:

- Integrate technology as tools to aid the caregiver. For example, a focus on clinical documentation and communication.
- Design and plan around scalability and flexibility.
- Plan in the context of longer-term master plan strategies.

(13) Financial Feasibility.

A hospital capital project shall be financially feasible and shall not jeopardize the long-term financial viability of the hospital.

(a) Financial projections filed as part of a hospital Certificate of Need application must be accompanied by a statement containing each assumption used to develop the projections.

(b) Each applicant must document that:

(i) Utilization projections are consistent with observed historic trends in use of the applicable service(s) by the service area population of the hospital or State Health Plan need projections, if relevant;

(ii) Revenue estimates are consistent with utilization projections and are based on current charge levels, rates of reimbursement, contractual adjustments and discounts, bad debt, and charity care provision, as experienced by the applicant hospital or, if a new hospital, the recent experience of other similar hospitals;

(iii) Staffing and overall expense projections are consistent with utilization projections and are based on current expenditure levels and reasonably anticipated future staffing levels as experienced by the applicant hospital, or, if a new hospital, the recent experience of other similar hospitals; and

(iv) The hospital will generate excess revenues over total expenses (including debt service expenses and plant and equipment depreciation), if utilization forecasts are achieved for the specific services affected by the project within five years or less of initiating operations with the exception that a hospital may receive a Certificate of Need for a project that does not generate excess revenues over total expenses even if utilization forecasts are achieved for the services affected by the project when the hospital can demonstrate that overall hospital financial performance will be positive and that the services will benefit the hospital's primary service area population.

Response: The statistical and financial projections found in Tables 1 and 3, respectively, indicate that the project is financially feasible. Statistical projections are based on estimated capture of additional inpatient and outpatient volumes in the total service area (TSA) and from the Southern Maryland peninsula. FY 2017 represents the largest growth based on project completion and expanded services in neurosciences, cancer, orthopedics and cardiology. Revenue and expenses reflect the following assumptions:

- There is no increase in Revenues or Expenses due to inflation. All values represent current dollars.
- Increases in revenues and expenses are the result of volume growth.
- Interest capitalized during construction has been expensed starting in FY 2018.
- Physician revenues and expenses have been eliminated in an attempt to normalize the fiscal year presentations.
- The interest (financing cost) and depreciation are based on the project budget and are reflected in FY 2018.

(14) Emergency Department Treatment Capacity and Space.

(a) An applicant proposing a new or expanded emergency department shall classify service as low range or high range based on the parameters in the most recent edition of Emergency Department Design: A Practical Guide to Planning for the Future from the American College of Emergency Physicians. The number of emergency department treatment spaces and the departmental space proposed by the applicant shall be consistent with the range set forth in the most recent edition of the American College of Emergency Physicians Emergency Department Design: A Practical Guide to Planning for the Future, given the classification of the emergency department as low or high range and the projected emergency department visit volume.

(b) In developing projections of emergency department visit volume, the applicant shall consider, at a minimum:

(i) The existing and projected primary service areas of the hospital, historic trends in emergency department utilization at the hospital, and the number of hospital emergency department service providers in the applicant hospital's primary service areas;

(ii) The number of uninsured, underinsured, indigent, and otherwise underserved patients in the applicant's primary service area and the impact of these patient groups on emergency department use;

(iii) Any demographic or health service utilization data and/or analyses that support the need for the proposed project;

(iv) The impact of efforts the applicant has made or will make to divert non-emergency cases from its emergency department to more appropriate primary care or urgent care settings; and

(v) Any other relevant information on the unmet need for emergency department or urgent care services in the service area.

Response: MSMHC proposes to expand the hospital's emergency department treatment beds to 53 treatment spaces, and increase square footage from approximately 13,009 to approximately 32,500 square feet. The expansion is needed to accommodate the current and increasing visit volume, and to provide modern state-of-the-art treatment space. The hospital's current and planned emergency department inventory is shown on Figure 4 below.

Figure 4. Emergency Department Inventory, By Room Type, Current and Proposed

Category	Treatment Space?	Monitored?	Current	Proposed
Treatment - General	√	√	24	42
Resuscitation	√	√	4	2
Results Pending/Holding	√		11	0
Dedicated Psych	√	√	0	6
Triage/Intake		√	2	3
Total			41	53
Decontamination Room/Shower			1	1

The Emergency Department is significantly undersized for current and projected patient volumes based on best practice programming and comparable facilities. The ED and/or the critical care beds are often full, resulting in 1,416 total hours on diversion in CY 2012, and over 1,000 hours in the first seven months of CY13. The ED design does not lend itself to optimal ED work flow. For example, line of sight hindrances between staff and the treatment bays and staff flow patterns in the existing ED reduces staff efficiency.

Figure 5 shows the relatively steady increase in ED visits over the past ten years, and the projected increase through 2018. MSMHC projects a 2% annual increase, consistent with this historical trend. Utilization forecasts are based on an examination of emergency department visit trends in the hospital's service area. The projections are based on assumptions of population growth and use rates remaining consistent with current trends, and observations of volume increases at other hospitals that have expanded and upgraded their emergency departments. Medical assistance and self-pay patients make up 38% of ED visits, overall, and from the primary service area. Several urgent care centers have entered the market in the service area,

slowing the growth in ED visits, especially for lower acuity care, but increasing average acuity levels at the hospital.

Figure 5. Historical and Projected ED Visits, FY 2004 – 2018

	FY	ED Visits	Percent Change
Historical	2004	52,427	
	2005	53,057	1.2%
	2006	58,350	10.0%
	2007	64,073	9.8%
	2008	67,547	5.4%
	2009	65,497	-3.0%
	2010	68,333	4.3%
	2011	63,345	-7.3%
	2012	66,423	4.9%
	2013	65,316	-1.7%
Current	2014	65,316	0.0%
Projected	2015	66,622	2.0%
	2016	67,954	2.0%
	2017	72,031	6.0%
	2018	73,472	2.0%

Figure 6 shows the trend in visits over the last three years that resulted in admission compared to those that did not result in admission. This reflects the growing use of observation status.

Figure 7 compares the MSMHC emergency department characteristics with the guidelines from the American College of Emergency Physicians, used to determine the optimal size of an emergency department based on its unique characteristics. Of the 11 categories, MSMHC is consistent with the low range in two categories, and with the high range in seven categories.

Figure 6. MedStar Southern Maryland Hospital Center ER Visits; FY 2011 thru FY 2013

Month	FY 2011			FY 2012			FY 2013		
	IP	OP	Total	IP	OP	Total	IP	OP	Total
Jul	1,115	4,091	5,206	1,030	4,064	5,094	993	4,757	5,750
Aug	1,055	4,332	5,387	1,216	4,545	5,761	950	5,475	6,425
Sep	1,066	4,177	5,243	1,097	4,470	5,567	768	4,078	4,846
Oct	983	3,901	4,884	1,025	4,236	5,261	1,008	4,845	5,853
Nov	1,009	4,099	5,108	991	4,425	5,416	856	4,286	5,142
Dec	1,042	4,104	5,146	1,003	4,340	5,343	838	4,352	5,190
Jan	1,051	4,556	5,607	1,087	4,734	5,821	977	5,124	6,101
Feb	1,049	4,214	5,263	996	4,513	5,509	688	3,799	4,487
Mar	1,063	4,366	5,429	978	4,657	5,635	799	4,499	5,298
Apr	1,013	4,047	5,060	1,020	4,816	5,836	818	4,771	5,589
May	1,091	4,387	5,478	1,020	4,816	5,836	830	4,715	5,545
Jun	1,041	4,493	5,534	962	4,382	5,344	780	4,310	5,090
Totals	12,578	50,767	63,345	12,425	53,998	66,423	10,305	55,011	65,316

Figure 7. Comparison of American College of Emergency Physicians Low and High Range Guidelines and MedStar Southern Maryland Hospital Center's Emergency Department

	Low Range	High Range	MSMHC
ALOS	< 2.5 hrs	> 3.5 hrs	> 6.2 hours, admitted 2.5 hours non-admitted
Location of Observation Beds	Outside ED	Inside ED	Outside ED
Time to admit	< 60 minutes	> 90 minutes	175 minutes
Turnaround time Dx Tests	< 31 minutes	> 60 minutes	71 minutes
% Admitted	< 18%	> 23%	21%
Percent Nonurgent/%Urgent	Nonurgent > Urgent by > 10%	Urgent > Nonurgent by > 10%	Urgent 63%, Nonurgent 36%
Age of Patient	< 20% 65+	> 25% 65+	15.3%
Admin/Teaching Space	Minimal	Extensive	Moderate
Imaging w/in ED	No	Yes	Yes
Specialty components	No	Yes	Yes, Psych
Flight/Trauma Services	No	Yes	Yes

Based on the current recommendations in *Emergency Department Design: A Practical Guide to Planning for the Future*, the current Emergency Department at MedStar Southern Maryland Hospital Center should have over 39,000 square feet and over 50 formal treatment spaces. This is consistent with the benchmarks used by Perkins + Will, MSMHC's architectural consultant, calling for 34,850 square feet for an ED with this volume. The proposed ED with 53 treatment spaces and 32,500 square feet is well within with both guidelines. Careful planning of the new ED configuration allowed an augmented ED program to be accommodated within a footprint smaller than the guidelines

Figure 8. MedStar Southern Maryland Hospital Center's Emergency Department Current and Optimal Size

	MSMHC Current Size	MSMHC Proposed Size	ACEP Guideline at 70,000 Projected Visits/Low Range	ACEP Guideline at 80,000 Projected Visits/High Range
Beds	28+11=39	56/55	40	61
DGSF	13,009	32,600	33,000	50,325

The new Emergency Department will have dedicated space for psychiatric emergencies to provide this needed specialized care in a focused environment. Ambulance flow and accessibility will be improved with a circular one way in and one way out approach. Rather than the current arrangement of physical division between areas in the ED, flexibility in treatment spaces will allow staffing to ebb and flow with census and acuity, with improved visibility staff-to-staff and staff-to-patient throughout. The new dedicated Observation Unit, another component of this project, will relieve the patient flow back-up in the ED. In addition, the new ED will feature:

- Better separation of the higher acuity patient from the lower acuity patient.
- Dedicated bariatric patient rooms and negative pressure rooms.
- A satellite Lab and CT.
- More space and privacy in the intake and registration areas.
- A designated play area for pediatric patients in the lobby
- A bereavement room for family
- Improved presence for Security in the ED Lobby.
- More space for staff documentation and support.
- Medical gases in the Triage lounge for potential overflow or crisis situation.
- More toilets for patients and staff.
- Better separation between ambulance vestibule and patient care areas.
- A Rapid Admission Hold Area
- A fast track unit with dedicated staff

(15) Emergency Department Expansion.

A hospital proposing expansion of emergency department treatment capacity shall demonstrate that it has made appropriate efforts, consistent with federal and state law, to maximize effective use of existing capacity for emergent medical needs and has appropriately integrated emergency department planning with planning for bed capacity, and diagnostic and treatment service capacity. At a minimum:

(a) The applicant hospital must demonstrate that, in cooperation with its medical staff, it has attempted to reduce use of its emergency department for non-emergency medical care. This demonstration shall, at a minimum, address the feasibility of reducing or redirecting patients with non-emergent illnesses, injuries, and conditions, to lower cost alternative facilities or programs;

(b) The applicant hospital must demonstrate that it has effectively managed its existing emergency department treatment capacity to maximize use; and

(c) The applicant hospital must demonstrate that it has considered the need for bed and other facility and system capacity that will be affected by greater volumes of emergency department patients.

Response: All patients that present to the ED are provided a Medical Screening Exam, as required by the Emergency Medical Treatment and Labor Act (EMTALA). Several other steps have been implemented to alleviate the overcrowding in the Emergency Department. All discharged patients are encouraged to follow-up with their primary care provider and/or medical specialists in order to prevent non-emergency use of the ED. A low acuity triage area was designed and implemented, referred to internally as "First Track", to treat non-emergent cases similar to an outpatient clinic environment (such as sore throat, sprained joints). By doing this, patient populations are effectively differentiated as true emergencies vs. non-emergent issues. MedStar Southern Maryland Hospital Center is part of the (202) 877-DOCS physician referral system which is a way for patients to geographically locate a primary care provider or medical specialist after discharge that is close to their home.

Regarding part (b), the Emergency Department is appropriately sized for 20,000 to 40,000 patients per year. Since 2001, we have worked to accommodate over 50,000 patients per year, indicating that the hospital is working to effectively managed its existing treatment capacity to maximum use. Examples of department management efforts include:

- The Director of Emergency Services, Donald Charlson, led a Nursing Centric Patient Flow Group where a faxed report from the ED to the receiving nurse was conceived and implemented. Faxing the Nursing Report with a brief follow-up phone call for hospital documenting non-electronically is considered a clinical 'best practice'. This practice, established two years ago, has now been supplanted by reliance on a fully integrated Electronic Medical Record system that went live in February 2013.
- In the past 18-months, a multidisciplinary team was formed to assess patient throughput in the ED from initial triage and treatment to admission to the nursing unit. This team includes the ED Director, the ED Medical Director, the Associate CNO, the Nursing Supervisor, the Director of Case Management, the Chair of Psychiatry, and the Director of the hospitalist group serving the hospital ED. This team has developed a pre-diversion policy, psychiatric admission criteria and a handoff communication policy.
- An expedited process was also created and implemented for obtaining a bed for critical care patients. The purpose of this effort was to decrease the length of time that admitted critical care patients are in the Emergency Department. Literature has stated that there is a positive correlation between critical care patient's length-of-stay and mortality.
- A Bed Board Flow Coordinator was established in 2011 to rapidly facilitate assignment of patients from the ED to the nursing unit.
- A Bed Board team meets twice daily at 9:00AM and 12:30PM comprised of nursing leaders to discuss clinical needs of individual patients and determine bed availability as well as placement.
- In 2013, the ED implemented a pre-diversion policy that has led to a decrease in the hours of diversion for EMS. Hospitals with higher hours of diversion are not able to effectively

serve their communities and cause patients to be transported to other facilities that are further away from their home.

- Inpatient nursing leadership implemented a Patient Pull Program to help decrease the ED's length-of-stay for admitted patients. Inpatient nursing staff occasionally have the capacity to transport admitted patients from the Emergency Department when the ED staff was busy caring for critical patients. After the bed is assigned, if the ED does not bring the patient to the inpatient Nursing Unit, the receiving staff is to call the ED to see if the patient is ready to go to the inpatient nursing unit. If the patient is ready for transfer but no one in ED is available to transport, then the receiving staff or the Nursing Supervisor transports the patient to the receiving unit.

Regarding part (c), this project is intended to provide an appropriate environment for the current volume of patients and the increase in volume associated with population growth, as well as to improve ED throughput. One related component of this project is the construction of a 32-bed observation unit to be located in new space above the Emergency Department. This dedicated unit will be close to the ED, and will keep observation patients out of ED and inpatient beds, improving ED throughput and easing overcrowding. Finally, if we do not address the critical need for space, we could see a higher Left Without Being Seen ("LWBS") rate, longer lengths-of-stay, and increased hours of diversion.

(16) Shell Space.

(a) Unfinished hospital space for which there is no immediate need or use, known as "shell space," shall not be built unless the applicant can demonstrate that construction of the shell space is cost effective.

(b) If the proposed shell space is not supporting finished building space being constructed above the shell space, the applicant shall provide an analysis demonstrating that constructing the space in the proposed time frame has a positive net present value that:

(i) considers the most likely use identified by the hospital for the unfinished space;

(ii) Considers the time frame projected for finishing the space; and

(iii) Demonstrate that the hospital is likely to need the space for the most likely identified use in the projected time frame.

(c) Shell space being constructed on lower floors of a building addition that supports finished building space on upper floors does not require a net present value analysis. Applicants shall provide information on the cost, the most likely uses, and the likely time frame for using such shell space.

(d) The cost of shell space included in an approved project and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the construction cost of the shell space will be excluded from consideration in any rate adjustment by the Health Service Cost Review Commission.

Response: Shell space is proposed at three locations within the proposed addition and renovation: below grade at Level 00 adjacent to the existing cafeteria, on grade at Level 00 beneath the proposed south addition, and above grade positioned above the proposed Observation level.

Approximately 5,100 square feet of below-grade shell space is proposed at the west side of Level 00 adjacent to the existing cafeteria. This shell space is intended to allow for future expansion of the cafeteria and kitchen that would be required to adequately accommodate future growth of the facility as a whole. It is most cost-effective to construct this shell space in conjunction with the foundation work for the new Emergency Department, as it would be impractical and very expensive to excavate this space at a later date from beneath the new structure proposed at the west side of the building. Further, this new structure would likely require deep foundations (piles and pile caps) which would greatly hamper a future expansion of the dining facility if not adequately prepared for.

In addition, approximately 3,200 square feet of shell space is proposed at the southwest corner of the same level, although this space will be mostly at-grade at this location. The creation of this shell space is a direct consequence of the southern expansion of the Emergency Department above, and is the most cost-effective method of addressing this expansion on Level 00. It would be possible to leave this area unenclosed, but this would likely result in increased construction and operating costs associated with additional paving; insulation, fireproofing, and architectural treatment of the exposed suspended slab, plumbing, and ductwork; and increased energy consumption associated with a larger area of exposed building envelope.

It is anticipated that this shell space would be used in the near term for storage, but also as additional transitional or "flex" space for other departments with space constraints that are not directly addressed by this project. Over the long term, the space would likely be occupied through full relocation of another department, or by introduction of a new service line. This shell space is also directly connected to the shell space adjacent to the dining facility, so both spaces can be accessed from multiple locations and the division between both functions can remain fluid, allowing for maximum flexibility and efficiency.

In addition to the two shell space locations described above, one full floor of shell space is proposed above the Nursing Observation level (Level 04). This will provide the space necessary to facilitate a gradual future transition to private rooms within the Bed Towers, as well as providing the option of immediately available space for any other future expansion.

It is conceivable that this additional shell space could be constructed at some point in the future, but we believe that constructing it in conjunction with the overall project scope is the most cost-effective option. Doing so would allow contractor mobilization and demobilization costs associated with a separate construction phase to be avoided. Constructing this floor at a future time would also be highly disruptive operationally, as this would require construction staging and congestion directly in front of the main entrance and Emergency Department, and would also likely require the Nursing Observation level to be shut down during construction.

COMAR 10.24.11.05 Surgical Services Standards

A. General Standards.

The following general standards encompass Commission expectations for the delivery of surgical services by all health care facilities in Maryland, as defined in Health General §19-114 (d). Each applicant that seeks a Certificate of Need for a project or an exemption from Certificate of Need review for a project covered by this Chapter shall address and document its compliance with each of the following general standards as part of its application.

(1) Information Regarding Charges.

Information regarding charges for surgical services shall be available to the public. A hospital or an ambulatory surgical facility shall provide to the public, upon inquiry or as required by applicable regulations or law, information concerning charges for the full range of surgical services provided.

Response: See response to standard at COMAR 10.24.10.04A(1). MSMHC is consistent with this standard.

(2) Charity Care Policy.

(a) Each hospital and ambulatory surgical facility shall have a written policy for the provision of charity care that ensures access to services regardless of an individual's ability to pay and shall provide ambulatory surgical services on a charitable basis to qualified indigent persons consistent with this policy. The policy shall have the following provisions:

(i) Determination of Eligibility for Charity Care. Within two business days following a patient's request for charity care services, application for medical assistance, or both, the facility shall make a determination of probable eligibility.

(ii) Notice of Charity Care Policy. Public notice and information regarding the facility's charity care policy shall be disseminated, on an annual basis, through methods designed to best reach the facility's service area population and in a format understandable by the service area population. Notices regarding the surgical facility's charity care policy shall be posted in the registration area and business office of the facility. Prior to a patient's arrival for surgery, facilities should address any financial concerns of patients, and individual notice regarding the facility's charity care policy shall be provided.

(iii) Criteria for Eligibility. Hospitals shall comply with applicable State statutes and HSCRC regulations regarding financial assistance policies and charity care eligibility. ASFs, at a minimum, must include the following eligibility criteria in charity care policies. Persons with family income below 100 percent of the current federal poverty guideline who have no health insurance coverage and are not eligible for any public program providing coverage for medical expenses shall be eligible for services free of charge. At a minimum, persons with family income above 100 percent of the federal poverty guideline but below 200 percent of the federal poverty guideline shall be eligible for services at a discounted charge, based on a sliding scale of discounts for family income bands. A health maintenance organization, acting as both the insurer and provider of health care services for members, shall have a financial assistance policy for its members that is consistent with the minimum eligibility criteria for charity care required of

ASFs described in these regulations.

(b) A hospital with a level of charity care, defined as the percentage of total operating expenses that falls within the bottom quartile of all hospitals, as reported in the most recent Health Service Cost Review Commission Community Benefit Report, shall demonstrate that its level of charity care is appropriate to the needs of its service area population.

(c) A proposal to establish or expand an ASF for which third party reimbursement is available, shall commit to provide charitable surgical services to indigent patients that are equivalent to at least the average amount of charity care provided by ASFs in the most recent year reported, measured as a percentage of total operating expenses. The applicant shall demonstrate that:

(i) Its track record in the provision of charitable health care facility services supports the credibility of its commitment; and

(ii) It has a specific plan for achieving the level of charitable care provision to which it is committed.

(iii) If an existing ASF has not met the expected level of charity care for the two most recent years reported to MHCC, the applicant shall demonstrate that the historic level of charity care was appropriate to the needs of the service area population.

(d) A health maintenance organization, acting as both the insurer and provider of health care services for members, if applying for a Certificate of Need for a surgical facility project, shall commit to provide charitable services to indigent patients. Charitable services may be surgical or non-surgical and may include charitable programs that subsidize health plan coverage. At a minimum, the amount of charitable services provided as a percentage of total operating expenses for the health maintenance organization will be equivalent to the average amount of charity care provided statewide by ASFs, measured as a percentage of total ASF expenses, in the most recent year reported. The applicant shall demonstrate that:

(i) Its track record in the provision of charitable health care facility services supports the credibility of its commitment; and

(ii) It has a specific plan for achieving the level of charitable care provision to which it is committed.

(iii) If the health maintenance organization's track record is not consistent with the expected level for the population in the proposed service area, the applicant shall demonstrate that the historic level of charity care was appropriate to the needs of the population in the proposed service area.

Response: MSMHC's financial assistance policy is in Attachment 3. See also our response to standard at COMAR 10.24.10.04A(2).

(3) Quality of Care.

A facility providing surgical services shall provide high quality care.

(a) An existing hospital or ambulatory surgical facility shall document that it is licensed, in good standing, by the Maryland Department of Health and Mental Hygiene.

(b) A hospital shall document that it is accredited by the Joint Commission.

(c) An existing ambulatory surgical facility shall document that it is:

(i) In compliance with the conditions of participation of the Medicare and Medicaid programs; and

(ii) Accredited by the Joint Commission, the Accreditation Association for Ambulatory Health Care, the American Association for Accreditation of Ambulatory Surgery Facilities, or another accreditation agency recognized by the

Centers for Medicare and Medicaid as acceptable for obtaining Medicare certification.

(d) A person proposing the development of an ambulatory surgical facility shall demonstrate that the proposed facility will:

(i) Meet or exceed the minimum requirements for licensure in Maryland in the areas of administration, personnel, surgical services provision, anesthesia services provision, emergency services, hospitalization, pharmaceutical services, laboratory and radiologic services, medical records, and physical environment.

(ii) Obtain accreditation by the Joint Commission, the Accreditation Association for Ambulatory Health Care, or the American Association for Accreditation of Ambulatory Surgery Facilities within two years of initiating service at the facility or voluntarily suspend operation of the facility.

Response: See response to standard at COMAR 10.24.10.04A(3)(a).

(4) Transfer Agreements.

(a) Each ASF and hospital shall have written transfer and referral agreements with hospitals capable of managing cases that exceed the capabilities of the ASF or hospital.

(b) Written transfer agreements between hospitals shall comply with the Department of Health and Mental Hygiene regulations implementing the requirements of Health-General Article §19-308.2.

(c) Each ASF shall have procedures for emergency transfer to a hospital that meet or exceed the minimum requirements in COMAR 10.05.05.09.

Response: MSMHC has written transfer agreements with Washington Adventist Hospital and with MedStar Washington Hospital Center. See attachment 6.

B. Project Review Standards.

The standards in this section govern reviews of Certificate of Need applications and requests for exemption from Certificate of Need review involving surgical facilities and services. An applicant for a Certificate of Need or an exemption from Certificate of Need shall demonstrate consistency with all applicable review standards.

(1) Service Area.

An applicant proposing to establish a new hospital providing surgical services or a new ambulatory surgical facility shall identify its projected service area. An applicant proposing to expand the number of operating rooms at an existing hospital or ambulatory surgical facility shall document its existing service area, based on the origin of patients served.

Response: Not applicable.

(2) Need - Minimum Utilization for Establishment of a New or Replacement Facility.

An applicant proposing to establish or replace a hospital or ambulatory surgical facility shall demonstrate the need for the number of operating rooms proposed for the facility. This need demonstration shall utilize the operating room capacity assumptions and other guidance

included in Regulation .06 of this Chapter. This needs assessment shall demonstrate that each proposed operating room is likely to be utilized at optimal capacity or higher levels within three years of the initiation of surgical services at the proposed facility.

(a) An applicant proposing the establishment or replacement of a hospital shall submit a needs assessment that includes the following:

(i) Historic trends in the use of surgical facilities for inpatient and outpatient surgical procedures by the new or replacement hospital's likely service area population;

(ii) The operating room time required for surgical cases projected at the proposed new or replacement hospital by surgical specialty or operating room category; and

(iii) In the case of a replacement hospital project involving relocation to a new site, an analysis of how surgical case volume is likely to change as a result of changes in the surgical practitioners using the hospital.

(b) An applicant proposing the establishment of a new ambulatory surgical facility shall submit a needs assessment that includes the following:

(i) Historic trends in the use of surgical facilities for outpatient surgical procedures by the proposed facility's likely service area population;

(ii) The operating room time required for surgical cases projected at the proposed facility by surgical specialty or, if approved by Commission staff, another set of categories; and

(iii) Documentation of the current surgical caseload of each physician likely to perform surgery at the proposed facility.

Response: Not applicable.

(3) Need - Minimum Utilization for Expansion of An Existing Facility.

An applicant proposing to expand the number of operating rooms at an existing hospital or ambulatory surgical facility shall:

(a) Demonstrate the need for each proposed additional operating room, utilizing the operating room capacity assumptions and other guidance included at Regulation .06 of this Chapter;

(b) Demonstrate that its existing operating rooms were utilized at optimal capacity in the most recent 12-month period for which data has been reported to the Health Services Cost Review Commission or to the Maryland Health Care Commission; and

(c) Provide a needs assessment demonstrating that each proposed operating room is likely to be utilized at optimal capacity or higher levels within three years of the completion of the additional operating room capacity. The needs assessment shall include the following:

(i) Historic trends in the use of surgical facilities at the existing facility;

(ii) Operating room time required for surgical cases historically provided at the facility by surgical specialty or operating room category; and

(iii) Projected cases to be performed in each proposed additional operating room.

Response: MSMHC proposes to construct six operating rooms as replacements for six existing rooms. Six existing operating rooms will be removed from service as ORs, and will instead be used for expansion of the prep/recovery area. As no new capacity is proposed, this standard does not apply.

*(4) **Design Requirements.***

Floor plans submitted by an applicant must be consistent with the current FGI Guidelines.

(a) A hospital shall meet the requirements in Section 2.2 of the FGI Guidelines.

(b) An ASF shall meet the requirements in Section 3.7 of the FGI Guidelines.

(c) Design features of a hospital or ASF that are at variance with the current FGI Guidelines shall be justified. The Commission may consider the opinion of staff at the Facility Guidelines Institute, which publishes the FGI Guidelines, to help determine whether the proposed variance is acceptable.

Response: The floor plans and planned new space are consistent with FGI guidelines, and are developed to meet the requirements of section 2.2 of those guidelines.

*(5) **Support Services.***

Each applicant shall agree to provide as needed, either directly or through contractual agreements, laboratory, radiology, and pathology services.

Response: MSMHC provides lab, radiology and pathology services directly.

*(6) **Patient Safety.***

The design of surgical facilities or changes to existing surgical facilities shall include features that enhance and improve patient safety. An applicant shall:

(a) Document the manner in which the planning of the project took patient safety into account; and

(b) Provide an analysis of patient safety features included in the design of proposed new, replacement, or renovated surgical facilities;

Response: The new space is designed to have more clear circulation, better separation of restricted and semi-restricted corridors, better separation of individual patient spaces and improved nursing visualization, a negative pressure room for isolation patients, more space for storage, equipment and staff, better adjacencies, and to have services and equipment more at hand. See also response to review standard B(12), COMAR 10.24.10.04B.

*(7) **Construction Costs.***

The cost of constructing surgical facilities shall be reasonable and consistent with current industry cost experience.

(a) Hospital projects.

(i) The projected cost per square foot of a hospital construction or renovation project that includes surgical facilities shall be compared to the benchmark cost of good quality Class A hospital construction given in the Marshall Valuation Service® guide, updated using Marshall Valuation Service® update multipliers, and adjusted as shown in the Marshall Valuation Service® guide as necessary for site terrain, number of building levels, geographic locality, and other listed factors.

(ii) If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the project shall not include:

1. The amount of the projected construction cost and associated capitalized construction cost that exceeds the Marshall

Valuation Service® benchmark; and

2. Those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess construction cost.

(b) Ambulatory Surgical Facilities.

(i) The projected cost per square foot of an ambulatory surgical facility construction or renovation project shall be compared to the benchmark cost of good quality Class A construction given in the Marshall Valuation Service® guide, updated using Marshall Valuation Service® update multipliers, and adjusted as shown in the Marshall Valuation Service® guide as necessary for site terrain, number of building levels, geographic locality, and other listed factors.

(ii) If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost by 15% or more, then the applicant's project shall not be approved unless the applicant demonstrates the reasonableness of the construction costs. Additional independent construction cost estimates or information on the actual cost of recently constructed surgical facilities similar to the proposed facility may be provided to support an applicant's analysis of the reasonableness of the construction costs.

Response: The Marshall Valuation benchmark for the surgical component of this project is $610.72, compared to the project cost of $407.54. See Attachment 5.

(8) Financial Feasibility.

A surgical facility project shall be financially feasible. Financial projections filed as part of an application that includes the establishment or expansion of surgical facilities and services shall be accompanied by a statement containing each assumption used to develop the projections.

(a) An applicant shall document that:

(i) Utilization projections are consistent with observed historic trends in use of the applicable service(s) by the likely service area population of the facility;

(ii) Revenue estimates are consistent with utilization projections and are based on current charge levels, rates of reimbursement, contractual adjustments and discounts, bad debt, and charity care provision, as experienced by the applicant facility or, if a new facility, the recent experience of similar facilities;

(iii) Staffing and overall expense projections are consistent with utilization projections and are based on current expenditure levels and reasonably anticipated future staffing levels as experienced by the applicant facility, or, if a new facility, the recent experience of similar facilities; and

(iv) The facility will generate excess revenues over total expenses (including debt service expenses and plant and equipment depreciation), if utilization forecasts are achieved for the specific services affected by the project within five years of initiating operations.

(b) A project that does not generate excess revenues over total expenses even if utilization forecasts are achieved for the services affected by the project may be approved upon demonstration that overall facility financial performance will be positive and that the services will benefit the facility's primary service area population.

Response: The financial feasibility analysis presented in response to COMAR 10.24.10.B(13)

demonstrates that the entire project is financially feasible. That analysis includes all assumptions pertaining to surgical services.

(9) Preference in Comparative Reviews.

In the case of a comparative review of CON applications to establish an ambulatory surgical facility or provide surgical services, preference will be given to a project that commits to serve a larger proportion of charity care and Medicaid patients. Applicants' commitment to provide charity care will be evaluated based on their past record of providing such care and their proposed outreach strategies for meeting their projected levels of charity care.

Response: Not applicable.

COMAR 10.24.01.08G(3)(b). Need.

For purposes of evaluating an application under this subsection, the Commission shall consider the applicable need analysis in the State Health Plan. If no State Health Plan need analysis is applicable, the Commission shall consider whether the applicant has demonstrated unmet needs of the population to be served, and established that the proposed project meets those needs.

Please discuss the need of the population served or to be served by the Project.

Responses should include a quantitative analysis that, at a minimum, describes the Project's expected service area, population size, characteristics, and projected growth. For applications proposing to address the need of special population groups identified in this criterion, please specifically identify those populations that are underserved and describe how this Project will address their needs.

Service Area and Demographic Analysis

MedStar Southern Maryland Hospital Center defines its service area as the zip code areas that account for 75% of the hospital's inpatient discharges. MSMHC's service area has a population of approximately 376,000 people in 2010, which is slightly younger in comparison to the nation. The service area is projected to see about 0.2% growth through 2015, less than the State average of 2.1%. All growth will occur in the 45 and older age cohorts, especially in the 65+ age group, the age cohort with the highest use of healthcare services, which will see a 23.2% growth.

Significant numbers of service area residents seek care in facilities outside Prince George's County, particularly Montgomery County and the District of Columbia. One goal of this project is to provide the modern, state of the art services that will encourage more county/service area residents to seek care within their home county with modern facilities. By joining the MedStar Health system of care that includes tertiary services at MedStar Washington Hospital Center and MedStar Georgetown University Hospital, MSMHC plans to bring world class services to Prince George's County over time. Modernizing the hospital is the first step in achieving this goal. Conservative assumptions suggest recapturing market share lost over the past several years to Hospitals in Washington, D.C. and other Maryland jurisdictions will result in very modest growth in selected service lines, including orthopedics, cancer, neurology, cardiology and some

additional outpatient surgery expertise.

MedStar Southern Maryland Hospital's service area, as defined by the State Health Plan, is shown in Figure 9.

Figure 9. MSMHC's Service Area by Zip Code and Community, 12 Months Ending 31 August 2013

ZIP CODE	Community	Location	Discharges	Percent of Total	Cumm %	Service Area
20735	CLINTON	MD	2,301	15.75%	15.7%	PSA
20748	TEMPLE HILLS	MD	1,492	10.21%	26.0%	PSA
20744	FORT WASHINGTON	MD	1,209	8.27%	34.2%	PSA
20747	DISRICT HEIGHTS	MD	1,091	7.47%	41.7%	PSA
20772	UPPER MARLBORO	MD	1,071	7.33%	49.0%	PSA
20746	SUITLAND	MD	990	6.78%	55.8%	PSA
20745	OXON HILL	MD	694	4.75%	60.6%	PSA
20613	BRANDYWINE	MD	525	3.59%	64.2%	SSA
20743	CAPITOL HEIGHTS	MD	513	3.51%	67.7%	SSA
20602	WALDORF	MD	507	3.47%	71.1%	SSA
20601	WALDORF	MD	425	2.91%	74.0%	SSA
20603	WALDORF	MD	347	2.37%	76.4%	SSA
20774	UPPER MARLBORO	MD	218	1.49%	77.9%	SSA
20646	LAPLATA	MD	215	1.47%	79.4%	SSA
20607	ACCOKEEK	MD	208	1.42%	80.8%	SSA
20020	WASHINGTON	DC	193	1.32%	82.1%	SSA
20032	WASHINGTON	DC	182	1.25%	83.4%	SSA
20640	INDIAN HEAD	MD	160	1.10%	84.5%	SSA
20019	WASHINGTON	DC	125	0.86%	85.3%	SSA
	All Other		2,145	14.68%	100%	
	Total		14,611			

Volume projections are shown in Table 1. MedStar Health uses a sophisticated forecasting tool, developed by Sg2, to project future need by service line for inpatient and outpatient services. The baseline projections use national and regional trends, market data and institutional data and then account for population, expected changes in epidemiology, economic drivers, payment drivers, changes in innovation and technology and anticipated changes in the care delivery system. The factors are impacted by a rapidly changing market environment, including the emergence of new levels of care and care settings, such as observation and urgent care centers and unique financial drivers in the state of Maryland. As such, these baseline projections are then adjusted using management's knowledge of discrete market dynamics that may impact the baseline forecast. Program volumes are developed using a more detailed understanding of the

market by service lines, opportunities to grow and balance a mix of services needed by the market, with an additional focus on patients who are leaving the county for care who could be cared for closer to home if the expertise was available.

Emergency Department – see analysis at Review Standard B(14), COMAR 10.24.10.04.

Surgery Department

The existing Surgery Department was constructed as part of the original Hospital in the 1970's and few changes to the layout of this unit have been implemented over the past thirty-plus years. At the time the hospital was constructed, most surgeries were performed on an inpatient basis and the design of this unit reflected an inpatient surgery model. Today, approximately two-thirds of surgical procedures are performed on an outpatient basis, significantly changing the spatial requirements of surgical units. Specifically, outpatients need to be prepared for surgery when they arrive at the Hospital and recovered before leaving the same day. At the time this unit was constructed, the majority of patients were prepared for surgery in their inpatient room. The majority of patients now must be prepared within the surgical department as they are not inpatients and therefore have not been transported from a patient room. As a stop-gap measure, a small and very constrained intake/prep area was developed within the Surgery Department, but it is problematic, not meeting most Guideline space requirements. Additionally, the PACU/Pre/Post area is undersized and will not support future growth in surgical procedures. Surgical supply and storage areas are also significantly undersized. Many of the spaces within this unit no longer meet the current FGI Guideline requirements. The department is so short of space that it does not allow for efficient patient flow and work processes, and storage is almost non-existent.

The need for the Surgery Department expansion is driven by inadequate space and antiquated facilities that present daily challenges for staff. The space is badly outdated, and must be consistent with how surgical care is delivered today. Pre-surgical testing and anesthesia evaluations are conducted in two separate areas, the Professional Building and the hospital OR, respectively. The current surgical patient intake area does not allow for efficient patient throughput or workflow. Space that is cramped and poorly lit by modern standards does not accommodate modern medical and EMR equipment related to the pre-surgical patient preparation. The space does not allow for family visitation, or for patient or staff comfort. The workspace is not ergonomically designed. Backup generator/emergency power is limited. There are no dedicated locations for physicians to speak with patients and families privately, to obtain the history & physical, informed consent, operative site marking and answer last minute questions.

The operating room average size is 416 square feet. For the many procedures requiring multiple types of equipment, ORs of this size present significant problems. The storage space is extremely inadequate resulting in cluttered work areas throughout the department. There are no boom arms to house our video towers resulting in inefficiency caused by moving video equipment from room-to-room, case-to-case. The department must use additional storage space on the ground floor, which can result in additional delays and inefficiencies. There are no dedicated ORs for isolation patients. Current finishes, flooring, ceiling and walls are outdated and in need of

regular repair. The locker room space is very small with two bathrooms and one sink on the female side. The male locker room is a bit larger but still inadequate. Surgeons frequently complain about the lack of locker space and privacy. The adjoining surgeon waiting area is extremely cramped with only two computer workstations.

The PACU consists of 13 bays with inadequate space and little provision for privacy. This environment is quite challenging when trying to provide for family visitation. There are no rest rooms immediately available for PACU patient or staff use. There are sometimes delays in the OR related to overcrowding of the PACU related to surgical volume, lack of PACU phase 2, and boarding of patients without a bed assignment.

GI Endoscopy consists of two procedure rooms that are not large enough to accommodate a C-arm or anesthesia ventilator. Intubated patients requiring an endoscopy procedure must go to an OR, or be performed in the ICU. The GI endoscopy recovery space will only accommodate two patients simultaneously, often requiring the unit to recover these patients to the main PACU. Patients may wait in the hallway or procedure room for physician arrival.

Any practical renovation of this department must involve expansion to gain the space necessary to meet current programmatic requirements. Possible expansion of this unit is constrained by its location within the first floor of the main hospital. The surgical core is located to the immediate south of the PACU, and the Critical Care Unit is located immediately to the north. Radiology and the Clinical Lab are located to the immediate west and GI Services is located to the east. The department is essentially landlocked on three sides, with only one possibility for expansion.

The proposed project calls for six new ORs to be built within an expanded footprint and six of the existing ten ORs to be decommissioned to make way for a more appropriately sized PACU and support space. The total number of ORs will remain the same. The number of Prep/PACU/Recovery bays will increase to 34. Two dedicated cystoscopy suites and two GI suites will remain, and will be replaced, enlarged and upgraded. The new construction will alleviate our patient flow issues related to restricted and semi-restricted corridors. Prep/recovery space is expanded in the new plan to alleviate overcrowding and associated delays. The new Prep/Recovery space will also have the ability to flex between Prep and Recovery as volumes change depending on time of day. Support space for staff within Prep and Recovery allows for off-stage support areas and adequate staff toilet rooms as well as meeting guidelines for quantities of patient toilets. The new ORs will have sufficient space to accommodate procedures requiring extra space such as major orthopedic cases, neurosurgery, colo-rectal and vascular surgery. At least one room will be able to change to negative pressure when needed for isolation patients. The plan provides for additional needed storage space in alcoves and storage rooms. The new space will have more staff space and private consultation rooms. Sufficient modernized OR locker rooms as well as staff lounge areas will replace the current overcrowded space.

Industry benchmarks used by MSMHC's architectural consultant, Perkins + Will, suggest the Surgery Department should be 31,050 square feet for the current volume and mix of cases. MSMHC has 13,435 square feet. Current best practice guidelines call for general ORs of 484 square feet, ORs for neurosurgery cases of 676 square feet, and ORs for orthopedics of 621 square feet. Benchmarks for the PACU/Prep/Recovery area call for a range of three to four bays

per operating room of 400 – 500 square feet. At MSMHC this would be a minimum of 12,000 square feet. MSMHC has 2,686 square feet. As a result of the expansion, the surgery area will have approximately 19,183 square feet, and the PACU area will have approximately 9,662 square feet.

Critical Care

The existing Critical Care Unit was constructed as part of the original hospital in the 1970's. It was originally developed as two units, a Coronary Care Unit and a Medical/Surgical Intensive Care Unit, each with nine beds. It has essentially remained in its original configuration, although the two units have, from an operational perspective, been combined into one 18-bed Critical Care Unit. Even more so than the Emergency Department and Surgery Department, the need for more space in the Critical Care Unit is a key factor in this project. The size of critical care rooms restricts advancement or integration of new technology as well as adequate space for family or guests. The current unit cannot support growth in the Surgery or Emergency Departments. Lack of standardization in ICU rooms creates inefficiency for staff. The size of the entire unit is only 5,846 square feet. This equates to less than 315 DGSF per bed.

Limitations in the current environment include:

1. The current patient rooms do not meet existing requirements for room space.
2. Lack of space for a wide variety of supplies and patient support equipment including mechanical ventilation, multiple IV drips, balloon pump support, hyperthermia treatment, etc.
3. Lack of space for other personnel such as respiratory therapy, case management and other ancillary staff who care for critical care patients daily.
4. Clinical support space is severely lacking, which impedes workflow, cannot accommodate equipment or computer needs, and is inadequate for the current volume of patients and activity.
5. Many procedures are performed in the patient rooms including cardioversion, bedside tracheostomy, central line placement, thoracentesis, lumbar puncture, etc., all of which require equipment and personnel.
6. The shortage of space makes these procedures, as well as mobilizing patients, responding to patient arrest, accommodating equipment, etc., a constant daily challenge for the team members.
7. Access to the room is limited by small doorways, which is an issue during emergencies such as Code Blue.
8. All physicians share one computer workstation in the ICU and CCU.
9. A separate private family meeting area is needed for confidential discussions about the patient's condition.

The need for enhancing Critical Care Unit design has its basis in having a larger consolidated unit with standardized patient room size and circulation around the patient for the interdisciplinary teams that render care to the patient appropriately integrated with diagnostic and treatment facilities. The Critical Care Unit in its current configuration and bed capacity will not be able to support anticipated growth of surgical procedures or planned expansion of the Emergency Department that represent two major drivers of critical care admission. The current

18 bed complement will be increased to 24 beds to maintain the ratio of ED treatment bays to critical care beds, and accommodate volume increases in both ED and surgery.

The new Critical Care Unit will be constructed in the vertical expansion because the unit is landlocked on Level 01 of the main building with no room for in-place expansion, and because that space will be used for PACU expansion. The new unit will provide direct sight-lines between staff and patients, private patient toilet rooms per bed, off-stage space for staff and off-stage space for families, outside of patient rooms. To anticipate any needs in the future, the new Critical Care Unit is designed with acuity-adaptable beds in a typical nursing floor layout, allowing for future flexibility. Clinical support areas such as clean, soil, med supply and nourishment are located uniformly through the unit to negate long travel distances for nurses within the increased departmental footprint. Views to daylight are incorporated in family waiting areas, staff lounges, conference areas and at the ends of corridors, where available. The patient care rooms will be 372 NSF, including the toilet room, ample size to meet current code, and to accommodate the complement of equipment required in today's critical care settings. The design also allows space for current technology at the head of the patient, enhanced privacy and safety, defined in-room family space, private patient-staff travel pathway to and from Critical Care and ED or Surgery, separate family/guest travel pathway to the unit, and better adjacency between the ED and the unit. The benchmarks used by Perkins + Will call for at least 22,800 square feet for a 24-bed Critical Care Unit. The proposed new Critical Care Unit will provide approximately 27,050 square feet.

Cardiovascular Services

Within the Interventional Radiology (IR) area, there are three labs with approximately 480 to 612 square feet per lab. MSMHC has one Cardiac Catheterization Lab (CCL), one combo cardiac/peripheral lab, and one Angiography suite within the allotted space for interventional procedures. An additional specialty combo lab with 950 square feet is utilized as an Electrophysiology room in an adjacent hallway. A small three bay preparation and recovery area is also located in the IR corridor, with six beds allotted on one of the nursing units for preparation and recovery of patients.

A variety of procedures are performed in the CCL and CCL/combo labs such as diagnostic cardiac catheterizations and percutaneous coronary interventions (both elective and emergent), diagnostic peripheral procedures and vascular interventions, diagnostic carotid procedures and interventions, insertion of permanent pacemakers, bi-ventricular pacemakers, implantable cardioverter-defibrillators (ICDs); and utilize imaging technologies such as intravascular ultrasound (IVUS) and Fractional Flow Reserve (FFR). At MSMHC approximately 25 procedures per week are performed in the CCL and CCL/combo labs. There are approximately 50 to 60 procedures performed within the angiography suite each week. These procedures are performed by interventional cardiologists, diagnostic cardiologists, vascular surgeons and electrophysiology cardiologists.

As MSMHC continues to evolve into a regional cardiac center, growth in the area of cardiology and electrophysiology will be seen. The addition of new services of stimulation and ablation for cardiac rhythm disturbances will lead to patients being able to have cardiac procedures closer to

their home. The cardiac center is already a SPCP (Society of Chest Pain Centers) accredited Cycle III cardiac center with percutaneous cardiovascular intervention (PCI). MSMHC is also accredited by MIEMSS as a Cardiac Intervention Center to receive patients needing emergent care for ST segment elevation myocardial infarction (STEMI).

The addition of planned services in neurological, vascular, oncology, and general surgical care within the hospital will increase the volume of procedures needed while caring for patients in an angiography suite which is already very busy. These additional procedures include biopsies, tumor ablation, endovascular procedures, for example. The Interventional Radiology, Cardiology and Electrophysiology service lines require space for continued growth of these services and improved patient care experiences.

In order to accommodate this growth, the addition of a combination lab is planned into the space configuration which will allow for cardiac, peripheral vascular and neurovascular procedures as well as electrophysiological studies and interventions. By making this lab multi-functional, it will allow for growth in many areas and help with the overflow from the other interventional labs. A preparation and recovery area will be included to accommodate patients for studies and procedures within close proximity to the labs. A lab to assist in studies for cardiac procedures will be added so that a safe, controlled environment will be available for tilt table and TEE (Trans Esophageal Echocardiography) with cardioversion.

The present Interventional Radiology area is surrounded by other departments in the present location which allows no ability for growth. Hallways are shared with other departments and sterile procedure rooms are accessed from these hallways. There is no space for transition from sterile to clean locations. At present there are no dressing rooms, break room, storage or clean/dirty utility rooms within the IR corridor. No ADA bathroom is available in close vicinity of the IR corridor.

The benchmarks for cardiovascular services with comparable volumes is 17,500 square feet. The department currently has only 6,579 square feet. This project will increase this substantially to approximately 9,580 square feet, thereby better meeting appropriate standard of care practices. The new space increases Prep and Recovery bays to current guideline sizing. In addition, Prep and Recovery include dressing spaces and accessible patient toilets. Prep and Recovery are adjacent to new procedural spaces, with separate entries and exits for the Prep and Recovery suite. The new 'hybrid rooms' will improve utilization. The multi-purpose procedure use room will be available to provide a release valve for procedural busy times. This will move patients through the system much more efficiently. Taking advantage of the adjacencies with the Surgery and Emergency Departments will provide additional relief from the severely cramped conditions. The project will provide additional space for designated clean areas prior to red-lined passage into the procedure rooms. Additionally, the department will include storage space for mobile equipment and sterilization space. Staff will receive dedicated off-stage space with lockers, lounges and dictation space. Staff changing and break areas will allow for staff to change into appropriate hospital-provided clean attire and remain within the designated clean area.

Observation Unit

The concept for establishing Observation Units has evolved over the past several years as a viable solution to pressing problems hospitals face with respect to capacity constraints in the Emergency Department, lack of inpatient beds and the continued movement towards outpatient based services by the Centers for Medicare & Medicaid Services and other payers.

Patients initially coming to the Emergency Department (ED) are referred to such a unit for testing and observation for a minimum of eight hours to a maximum of 48 hours. Observation units function more efficiently when located in close proximity to the ED where the unit can help streamline ED throughput by moving patients presenting with more complex conditions, such as decompensated congestive heart failure, into an area better suited for their treatment, thereby freeing up treatment beds in the ED. Observation units can help mitigate unnecessary and costly inpatient admissions by aggressively diagnosing and treating symptoms, as an effective means for reducing the patient's stay.

The 32-bed dedicated observation unit will allow MSMHC to adapt to this changing environment. The need for the observation unit at MSMHC is driven by the increasing use of observation status. Keeping patients in acute care beds or Emergency Department beds is not an optimal alternative. Like many other hospitals in Maryland, the number of observation patients has been increasing at MSMHC, as shown in Figure 10. The summer of 2013 has seen the biggest increases in the number of observation patients to date. Average daily census is now averaging 24 to 26 patients per day. As this trend is not expected to reverse, MSMHC must be prepared to accommodate this new standard of care with a dedicated observation unit.

Dedicated observation beds allows for improved staffing compared to the current observation beds, which are dispersed throughout the hospital. The dedicated unit also supports the operations within the ED. The most recent data for MedStar Southern Maryland Hospital Center's Emergency Department has 500-hours of yellow alert for the first eight months of the current year (January through August 2013). The new observation unit will help decrease the hours of diversion and contribute to better throughput and improved turnaround time.

The new Observation Unit is designed with acuity-adaptable beds in a typical nursing floor layout, allowing for future flexibility. The move to private Observation Beds with private toilet rooms will assist in infection control, allow for family support space within the room and adequate staff off-stage areas. The unit will include dispersed clinical support areas such as clean, soil, medication supply and nourishment, to negate long travel distances for nurses within the departmental footprint. Views to daylight are incorporated in family waiting areas, staff lounges, and conference areas and at the ends of corridors, where available.

Figure 10. Trends in Observation Status Patients, CY 2011 - CY 2013 (thru August)

Month	CY11	CY12	CY13	% Change CY11-CY12	% Change CY12-CY13
Jan	364	566	467	55.5%	-17.5%
Feb	363	661	591	82.1%	-10.6%
Mar	455	670	696	47.3%	3.9%
Apr	411	453	771	10.2%	70.2%
May	426	516	790	21.1%	53.1%
Jun	420	487	787	16.0%	61.6%
Jul	388	526	749	35.6%	42.4%
Aug	471	588	788	24.8%	34.0%
Sep	505	521		3.2%	
Oct	512	464		-9.4%	
Nov	549	461		-16.0%	
Dec	537	492		-8.4%	
Total	5,401	6,405	5,639	18.6%	

TABLE 1: STATISTICAL PROJECTIONS - ENTIRE FACILITY

	Two Most Actual Ended Recent Years		Current Year Projected	Projected Years (ending with first full year at full utilization)			
CY or FY (Circle)	2012	2013	2014	2015	2016	2017	2018
1. Admissions							
a. M/S/G/A	11,761	10,559	10,657	10,864	11,055	12,605	12,668
b. Pediatric	118	106	105	105	104	117	115
c. Obstetric	2,223	1,996	2,014	2,054	2,090	2,383	2,395
d. Intensive Care	1,180	1,059	1,069	1,090	1,109	1,263	1,270
e. Psychiatric	1,162	1,043	1,053	1,073	1,092	1,244	1,250
f. Rehabilitation	-	-	-	-	-	-	-
g. Chronic	453	492	497	506	515	586	589
h. Other (Nursery)	1,973	1,771	1,808	1,842	1,882	1,928	1,938
j. TOTAL (excluding Nursery)	**16,897**	**15,255**	**15,395**	**15,692**	**15,965**	**18,198**	**18,287**
2. Patient Days							
a. M/S/G/A	45,478	42,713	43,161	43,999	44,773	51,050	51,305
b. Pediatric	234	173	171	171	170	191	187
c. Obstetric	6,064	5,348	5,398	5,505	5,601	6,386	6,419
d. Intensive Care	4,633	4,633	4,672	4,742	4,802	5,444	5,448
e. Psychiatric	5,688	4,313	4,359	4,442	4,510	5,138	5,175
f. Rehabilitation	-	-	-	-	-	-	-
g. Chronic	6,710	7,205	7,276	7,418	7,540	8,591	8,623
h. Other (Nursery)	5,582	4,999	5,099	5,194	5,307	5,437	5,465
j. TOTAL (excluding Nursery)	**74,389**	**64,385**	**65,037**	**66,277**	**67,396**	**76,800**	**77,157**
3. Average Length of Stay							
a. M/S/G/A	3.9	4.0	4.1	4.0	4.1	4.0	4.0
b. Pediatric	2.0	1.6	1.6	1.6	1.6	1.6	1.6
c. Obstetric	2.7	2.7	2.7	2.7	2.7	2.7	2.7
d. Intensive Care	3.9	4.4	4.4	4.4	4.3	4.3	4.3
e. Psychiatric	4.9	4.1	4.1	4.1	4.1	4.1	4.1
f. Rehabilitation	-	-	-	-	-	-	-
g. Chronic	14.8	14.6	14.6	14.7	14.6	14.7	14.6
h. Other (Nursery)	2.8	2.8	2.8	2.8	2.8	2.8	2.8
j. TOTAL (excluding Nursery)	**4.4**	**4.2**	**4.2**	**4.2**	**4.2**	**4.2**	**4.2**
4. Occupancy Percentage*							
a. M/S/G/A	80.4%	75.0%	82.1%	84.3%	83.4%	78.1%	78.1%
b. Pediatric	16.0%	11.8%	11.7%	11.7%	11.6%	13.1%	12.8%
c. Obstetric	55.4%	48.8%	49.3%	50.3%	51.2%	58.3%	58.6%
d. Intensive Care	52.9%	52.9%	53.3%	54.1%	54.8%	62.1%	62.2%
e. Psychiatric	62.3%	51.8%	51.8%	52.1%	52.4%	52.6%	52.9%
f. Rehabilitation	-	-	-	-	-	-	-
g. Chronic	76.6%	82.2%	83.1%	84.7%	86.1%	98.1%	98.4%
h. Other (Nursery)	63.7%	57.1%	58.2%	59.3%	60.6%	62.1%	62.4%
j. TOTAL (excluding nursery)	**77.8%**	**67.1%**	**71.0%**	**72.6%**	**72.7%**	**73.6%**	**73.7%**

	Two Most Actual Ended Recent Years		Current Year Projected	Projected Years (ending with first full year at full utilization)			
CY or FY (Circle)	2012	2013	2014	2015	2016	2017	2018
5. Number of Licensed Beds							
a. M/S/G/A	155	156	144	143	147	179	180
b. Pediatric	4	4	4	4	4	4	4
c. Obstetric	30	30	30	30	30	30	30
d. Intensive Care	24	24	24	24	24	24	24
e. Psychiatric	25	25	25	25	25	25	25
f. Rehabilitation	-	-	-	-	-	-	-
g. Chronic	24	24	24	24	24	24	24
h. Other (Nursery)	24	24	24	24	24	24	24
j. TOTAL (excluding nursery)	**262**	**263**	**251**	**250**	**254**	**286**	**287**
6. Outpatient Visits							
a. Emergency	66,423	65,316	65,316	66,622	67,954	72,031	73,472
b. Outpatient Dept. (Lab, Rad, PT, STH, OTH)	64,617	66,671	66,671	70,005	73,505	77,180	81,039
c. Other (PDC, CL)	7,199	5,963	5,963	6,202	6,450	6,837	7,247
d. Other (SDS)	5,849	5,252	5,252	5,462	5,680	6,021	6,382
e. Other (observation)	2,883	4,429	4,429	4,872	5,359	5,895	6,485
f. TOTAL	**146,971**	**147,631**	**147,631**	**153,163**	**158,948**	**167,964**	**174,625**

TABLE 2: STATISTICAL PROJECTIONS - PROPOSED PROJECT

Not applicable.

COMAR 10.24.01.08G(3)(c). Availability of More Cost-Effective Alternatives.
For purposes of evaluating an application under this subsection, the Commission shall compare the cost-effectiveness of providing the proposed service through the proposed project with the cost-effectiveness of providing the service at alternative existing facilities, or alternative facilities which have submitted a competitive application as part of a comparative review.

Please explain the characteristics of the Project which demonstrate why it is a less costly or a more effective alternative for meeting the needs identified.

For applications proposing to demonstrate superior patient care effectiveness, please describe the characteristics of the Project which will assure the quality of care to be provided. These may include, but are not limited to: meeting accreditation standards, personnel qualifications of caregivers, special relationships with public agencies for patient care services affected by the Project, the development of community-based services or other characteristics that the Commission should take into account.

The purpose of this project is to modernize the hospital, and provide sufficient space to provide services in an updated current environment. MSMHC and MedStar considered three options to meet the need for more space.

Option A is the option presented in this application. This includes minimal expansion of the diagnostic and treatment block, expansion of the ED, a new front door, reconfiguration of the public / staff circulation, and the addition of a new outpatient facility across the campus.

Option B included decommissioning Bed Tower I and converting it to an outpatient services building, construction of a new bed tower, minimal expansion of the diagnostic and treatment block, expansion of the ED, a new front door, and reconfiguration of public / staff circulation. This option would have provided significantly more new construction and space for expansion and modernization, located all outpatient functions on the north side of the campus for greater separation as well as convenience, and a revised main entry separate from the ED/ambulance traffic. Option B was not priced, but was clearly more expensive than Option A. This option was rejected due to the higher cost and reduced future flexibility.

Option C involved purchase of the hotel property that lies between the hospital and Branch Avenue for future replacement hospital, and expansion of the ED in the meantime. This would provide the best long term solution, would locate all outpatient activity on the north side of the campus and inpatient activity at the South side, and would result in minimal disruption during construction. This option was not priced, but was clearly more expensive than Option B. Option C was rejected because it did not meet the current pressing needs for more space, and was the most expensive option.

COMAR 10.24.01.08G(3)(d). Viability of the Proposal.
For purposes of evaluating an application under this subsection, the Commission shall consider the availability of financial and non-financial resources, including community support, necessary to implement the project within the time frame set forth in the Commission's performance requirements, as well as the availability of resources necessary to sustain the project.

Please include in your response:

a. Audited Financial Statements for the past two years. In the absence of audited financial statements, provide documentation of the adequacy of financial resources to fund this project signed by a Certified Public Accountant who is not directly employed by the applicant. The availability of each source of funds listed in Part II, B. Sources of Funds for Project, must be documented.

Audited financial statements for the past two years are attached at Attachment 7. Please note that these statements reflect MSMHC prior to the merger with MedStar.

b. Existing facilities shall provide an analysis of the probable impact of the Project on the costs and charges for services at your facility.

At this time, MSMHC is not requesting a rate increase from the HSCRC to cover costs of this project, therefore, we are not projecting an impact of the project on costs and charges.

c. A discussion of the probable impact of the Project on the cost and charges for

similar services at other facilities in the area.

Regarding potential impact on the cost and charges at other hospitals in the service area, this project is consistent with State and County policy to reduce the outmigration by providing state-of-the-art services within the county. As utilization increases over time, we believe the impact on DC and Montgomery County facilities will be gradual.

d. All applicants shall provide a detailed list of proposed patient charges for affected services.

The latest rate order from the HSCRC is attached at Attachment 8.

TABLE 3: REVENUES AND EXPENSES - ENTIRE FACILITY (including proposed project)

	Two Most Actual Ended Recent Years		Current Year Projected	Projected Years (ending with first full year at full utilization)			
CY or FY (Circle)	2012	2013	2014	2015	2016	2017	2018
1. Revenue**							
a. Inpatient Services	$ 184,149,559	$ 167,004,215	$ 159,806,755	$ 162,269,904	$ 164,599,473	$ 185,241,927	$ 189,595,735
b. Outpatient Services	$ 86,487,262	$ 100,950,594	$ 103,574,125	$ 107,793,625	$ 112,295,725	$ 118,778,625	$ 124,296,325
c. Gross Patient Services	$ 270,636,821	$ 267,954,809	$ 263,380,880	$ 270,063,529	$ 276,895,198	$ 304,020,552	$ 313,892,060
d. Allowance for Bad Debt	$ 14,841,008	$ 15,671,754	$ 14,345,397	$ 15,104,677	$ 15,486,773	$ 17,003,897	$ 17,556,011
e. Contractual Allowance	$ 29,096,276	$ 38,500,483	$ 39,154,132	$ 35,995,228	$ 36,905,782	$ 40,521,166	$ 41,836,883
f. Charity Care	$ 1,038,183	$ 2,463,285	$ 1,208,139	$ 1,585,816	$ 1,625,931	$ 1,785,212	$ 1,843,177
g. Net Patient Services	$ 225,661,354	$ 211,319,287	$ 208,673,212	$ 217,377,808	$ 222,876,712	$ 244,710,277	$ 252,655,989
h. Other Operating Revenues (Specify)	$ 232,482	$ 895,398	$ 1,083,016	$ 1,115,506	$ 1,148,971	$ 1,183,440	$ 1,218,943
i. Net Operating Revenue	$ 225,893,836	$ 212,214,685	$ 209,756,228	$ 218,493,314	$ 224,025,683	$ 245,893,717	$ 253,874,932
2. Expenses*							
a. Salaries, Wages, and Professional Fees, (including fringe benefits)	$ 106,115,073	$ 116,724,246	$ 112,159,923	$ 114,365,198	$ 116,619,648	$ 125,571,015	$ 128,828,613
b. Contractual Services	$ 19,689,858	$ 28,235,612	$ 13,598,032	$ 13,865,338	$ 14,138,605	$ 15,223,619	$ 15,618,479
c. Interest on Current Debt	$ 1,237,744	$ 2,412,769	$ 8,094,955	$ 7,690,207	$ 7,305,697	$ 6,940,412	$ 6,593,391
d. Interest on Project Debt***	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,332,016
e. Current Depreciation	$ 5,566,726	$ 4,599,985	$ 7,830,137	$ 7,830,137	$ 7,830,137	$ 7,830,137	$ 7,830,137
f. Project Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,950,377
g. Current Amortization	$ -	$ 1,278,012	$ 2,019,054	$ 2,019,054	$ 2,019,054	$ 2,019,054	$ 2,019,054
h. Project Amortization	$ -	$ -	$ -	$ -	$ -	$ -	$ 58,667
i. Supplies	$ 42,849,230	$ 40,409,909	$ 37,990,100	$ 38,858,845	$ 39,746,962	$ 43,273,258	$ 44,556,554
j. Other Expenses (Specify)	$ 37,225,241	$ 32,593,472	$ 28,045,294	$ 29,187,621	$ 30,263,763	$ 34,339,048	$ 35,502,588
k. Total Operating Expenses	$ 212,683,872	$ 226,254,005	$ 209,737,495	$ 213,816,400	$ 217,923,866	$ 235,196,543	$ 251,289,876
3. Income							
a. Income from Operation	$ 13,209,964	$ (14,039,320)	$ 18,733	$ 4,676,914	$ 6,101,817	$ 10,697,174	$ 2,585,056
b. Non-Operating Income	$ 376,895	$ 342,029	$ -	$ -	$ -	$ -	$ -
c. Subtotal	$ 13,586,859	$ (13,697,291)	$ 18,733	$ 4,676,914	$ 6,101,817	$ 10,697,174	$ 2,585,056
d. Income Taxes	$ -	$ -	$ -	$ -	$ -	$ -	$ -
e. Net Income (Loss)	$ 13,586,859	$ (13,697,291)	$ 18,733	$ 4,676,914	$ 6,101,817	$ 10,697,174	$ 2,585,056
4. Patient Mix:							
A. Percent of Total Revenue							
1) Medicare	39.2%	41.1%	41.1%	41.1%	41.1%	41.1%	41.1%
2) Medicaid	4.1%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
3) Blue Cross	16.4%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%
4) Commercial Insurance	8.7%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%
5) Self-Pay	5.5%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%
6) Other (Specify)	26.1%	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%
7) TOTAL	100%	100%	100%	100%	100%	100%	100%
B. Percent of Patient Days\Visits\Procedures (as applicable)							
1) Medicare	39.2%	41.1%	41.1%	41.1%	41.1%	41.1%	41.1%
2) Medicaid	4.1%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
3) Blue Cross	16.4%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%
4) Commercial Insurance	8.7%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%
5) Self-Pay	5.5%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%
6) Other (Specify)	26.1%	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%
7) TOTAL	100%	100%	100%	100%	100%	100%	100%

*Expenses exclude physicians expense and CRNA expense.

**Income excludes physicians income

***Interest capitalized during construction periods for Fys 2015, 2016, 2017 and expensed starting in FY 2018

TABLE 4: REVENUES AND EXPENSES - PROPOSED PROJECT

Not applicable.

COMAR 10.24.01.08G(3)(e). Compliance with Conditions of Previous Certificates of Need.

To meet this subsection, an applicant shall demonstrate compliance with all conditions applied to previous Certificates of Need granted to the applicant.
List all prior Certificates of Need that have been issued to the project applicant by the Commission since 1990, and their status.

MSMHC was granted one CON since 1990. The CON for a 20- bed sub-acute unit (96-16-1792), issued in 1995, has been fully implemented, and there are no unfulfilled conditions.

COMAR 10.24.01.08G(3)(f). Impact on Existing Providers.
For evaluation under this subsection, an applicant shall provide information and analysis with respect to the impact of the proposed project on existing health care providers in the service area, including the impact on geographic and demographic access to services, on occupancy when there is a risk that this will increase costs to the health care delivery system, and on costs and charges of other providers.
Indicate the positive impact on the health care system of the Project, and why the Project does not duplicate existing health care resources. Describe any special attributes of the project that will demonstrate why the project will have a positive impact on the existing health care system.

Complete Table 5

1. *an assessment of the sources available for recruiting additional personnel;*
2. *recruitment and retention plans for those personnel believed to be in short supply;*
3. *for existing facilities, a report on average vacancy rate and turnover rates for affected positions,*

(INSTRUCTION: FTE data shall be calculated as 2,080 paid hours per year. Indicate the factor to be used in converting paid hours to worked hours.

Regarding potential impact on other providers in the service area, this project is consistent with state and County policy to reduce the outmigration by providing state-of-the-art services within the county. As utilization increases over time, we believe the impact on DC and Montgomery County facilities will be gradual.

This project will have a positive impact on the existing health care system by providing a more modern, efficient hospital, able to attract and provide more Prince George's County residents access to care closer to where they live.

Table 5 reflects the incremental increase in staffing after the project completion from the increase in inpatient and outpatient utilization and square footage of the hospital.

The recruitment sources available for hiring additional Clinical and Non Clinical personnel will consist of the following:

- MSMHC website
- Social Media Outlets
- Newspaper Ads (Local & Regional)
- Website Ads (Focused at Clinical Specialties)
- Job Fairs
- College Career Fairs
- Direct Mailings
- Contingency Firms

TABLE 5. MANPOWER INFORMATION

(INSTRUCTION: List by service the staffing changes (specifying additions and/or deletions and distinguishing between employee and contractual services) required by this project.)

Position Title	Current No. FTEs	Change in FTEs (+/-)	Average Salary	Employee/ Contractual	TOTAL COST
Administration					
OBs Unit					
Nurse Director		+1	$115,000	Employee	$115,000
Asst. Nurse Dir		+1	90,000	Employee	90,000
Direct Care Staff					
NP	2.0	+ 2.0	$115,000	Employee	$ 230,000
RN	332.0	+51.0	72,800	Employee	3,712,800
CNA	119.0	+12.0	31,200	Employee	374,400
Cardio Cath RN	13.0	+ 7.0	72,800	Employee	509,600
OR RN	10.5	+ 4.0	72,800	Employee	291,200
CRNA	8.0	+ 2.0	162,000	Employee	324,000
SA	8.5	+ 3.0	85,000	Employee	255,000
OR Tech	10.5	+ 3.0	63,000	Employee	189,000
Support Staff					
Phlebotomist	17.0	+ 3	$ 33,000	Employee	$ 99,000
PT/OT	12.0	+ 6	88,000	Employee	528,000
Env. Services	64.0	+15	21,000	Employee	315,000
Security	19.0	+ 6	34,000	Employee	204,000
Maint./Engineering	21.0	+ 5	58,000	Employee	290,000
Bio-Med	3.0	+ 1	59,000	Employee	59,000
Pharmacist	8.0	+ 3	115,000	Employee	345,000
FTEs Sub-Total:		+125	Sub-Total (18%): Benefits		$1,427,580
		Sub-Total Base Hourly Rate			$7,931,000
		Sub-Total: Benefits (18%) & Base Hr Rate			$9,358,580

TABLE 5. MANPOWER INFORMATION (continued)

Position Title	Current No. FTEs	Change in FTEs (+/-)	Average Salary	Employee/ Contractual	TOTAL COST
Administration			$		$
Direct Care Staff			$		$
Support Staff					
Pharmacy Tech	10.0	+ 2	$ 38,000	Employee	$ 76,000
Radiology Tech	22.0	+ 3	69,000	Employee	207,000
Resp. Therapist	20.0	+ 3	67,000	Employee	201,000
Echo Tech	12.4	+ 4	102,098	Employee	204,196
Med Tech	29.0	+ 2	52,000	Employee	104,000
Soc. Worker	8.0	+ 3	69,000	Employee	207,000
Case Managers	19.0	+ 3	97,000	Employee	231,000
Tele Monitor	21.0	+ 3	34,000	Employee	102,000
	Sub Total: +23 FTEs		Sub-Total: Benefits 18%		$ 239,795
			Sub-Total: Base Hr Rate		$1,332,196
			Sub-Total: Benefits (18%) & Base Hr Rate		$1,571,991

(INSTRUCTION: Indicate method of calculating benefits percentage):
+18% of Base Hourly Rate of Pay (Vacation, Holiday, Sick Pay, Float Days, SS and Employee Benefits)

PART IV - APPLICANT HISTORY, STATEMENT OF RESPONSIBILITY, AUTHORIZATION AND RELEASE OF INFORMATION, AND SIGNATURE

1. List names and addresses of all owners and individuals responsible for the proposed project and its implementation.

   MedStar Southern Maryland Hospital Center, Inc.
   7503 Surratts Road
   Clinton, MD20735

2. Are the applicant, owners, or the responsible persons listed above now involved, or have they ever been involved, in the ownership, development, or management of another health care facility? If yes, provide a listing of these facilities, including facility name, address, and dates of involvement.

   MedStar Southern Maryland Hospital Center, Inc. was formed in 2012 and in December 2012 it acquired Southern Maryland Hospital Center. It has not been involved in the ownership, development, or management of any other health care facilities.

3. Has the Maryland license or certification of the applicant facility, or any of the facilities listed in response to number 2, above, ever been suspended or revoked, or been subject to any disciplinary action (such as a ban on admissions) in the last 5 years? If yes, provide a written explanation of the circumstances, including the date(s) of the actions and the disposition. If the applicant, owners or individuals responsible for implementation of the Project were not involved with the facility at the time a suspension, revocation, or disciplinary action took place, indicate in the explanation.

   No.

4. Are any facilities with which the applicant is involved, or have any facilities with which the applicant has in the past been involved (listed in response to Question 2, above) ever been found out of compliance with Maryland or Federal legal requirements for the provision of, payment for, or quality of health care services (other than the licensure or certification actions described in the response to Question 3, above) which have led to actions to suspend the licensure or certification at the applicant's facility or facilities listed in response to Question 2? If yes, provide copies of the findings of non-compliance including, if applicable, reports of non-compliance, responses of the facility, and any final disposition or conclusions reached by the applicable governmental authority.

   No.

5. Have the applicant, owners or responsible individuals listed in response to Question 1, above, ever pled guilty to or been convicted of a criminal offense in any way connected with the ownership, development or management of the applicant facility or any of the health care facilities listed in response to Question 2, above? If yes, provide a written

No.

One or more persons shall be officially authorized in writing by the applicant to sign for and act for the applicant for the project which is the subject of this application. Copies of this authorization shall be attached to the application. The undersigned is the owner(s), or Board-designated official of the proposed or existing facility.

I hereby declare and affirm under the penalties of perjury that the facts stated in this application and its attachments are true and correct to the best of my knowledge, information and belief.

10/3/13
Date

Michael J. Chiaramonte
Signature of Owner or
Board-designated Official

List of Attachments

1 – Construction Drawings and Area Tabulations

2 – Average Estimated Charges Policy

3 – Financial Assistance Policy

4 – Licensure and Accreditation

5 – Marshall Valuation Analysis

6 – Transfer Agreements

7 – Audited Financial Statements

8 – Rate Order

EXHIBIT 6

MEMORANDUM OF UNDERSTANDING AMONG
PRINCE GEORGE'S COUNTY,
UNIVERSITY OF MARYLAND MEDICAL SYSTEM CORPORATION,
UNIVERSITY SYSTEM OF MARYLAND,
DIMENSIONS HEALTH CORPORATION,
AND THE STATE OF MARYLAND

This Memorandum of Understanding (hereinafter "MOU" or "Agreement") is entered into this 21st day of July, 2011, by and among Prince George's County, Maryland, a body corporate and politic, organized pursuant to Article XI-A of the Constitution of Maryland, (hereinafter the "County"), the University of Maryland Medical System Corporation, (hereinafter "UMMS"), the University System of Maryland (hereinafter "USM"), Dimensions Health Corporation (hereinafter "Dimensions"), and the State of Maryland, (hereinafter the "State") and collectively referred to as the "Parties."

PREAMBLE

WHEREAS, the health care facilities and assets currently leased to Dimensions Health Corporation by the County (hereinafter the "Prince George's County health care system," or the "System,") pursuant to a long-term Fourth Amended and Restated Lease Agreement (hereinafter the "Master Lease Agreement"), have experienced severe financial difficulties over the past decade, including shortfalls in financial ratios and payments associated with bond indebtedness, unfunded pension obligations, high rates of uncompensated care and other challenges that have compromised the System's ability to meet the health care needs of the residents of the County and the Southern Maryland region; and

WHEREAS, multiple prior efforts, including the recent process undertaken by the Prince George's County Hospital Authority, to transfer ownership of the System to a new entity capable of transforming it into a health system which operates independently and provides high quality care, have been unsuccessful; and

WHEREAS, while Dimensions continues to make efforts to improve its operations, the System's severe financial distress, long-term undercapitalization, and other challenges render necessary the County and State's continued funding support; and

WHEREAS, these long-standing, intractable challenges continue to preclude the System from providing the high quality, community-based, primary and specialty care services the residents of the County need and deserve; and

WHEREAS, the Parties seek to effect a long-term solution to these challenges by developing and implementing a strategy to transform the System into an efficient, effective and financially viable healthcare delivery system with a new regional medical center, located in central Prince George's County, supported by a comprehensive ambulatory care network, which will improve the health of residents of the County and

Southern Maryland region by providing community-based access to high quality, cost-effective medical care; and

WHEREAS, UMMS has completed an initial study of the System and the health care needs of the County, the first phase of the entire scope of work and referred to as Phase 1A , which outlines an approach and strategy for effectuating this solution;

WHEREAS, this approach and strategy also includes the potential development of a University of Maryland Baltimore health sciences presence to accompany the regional medical center and the ambulatory care network in their mission to enhance the provision of quality health care services to the residents of the County and Southern Maryland region; and

WHEREAS, the Phase 1A study estimates the overall costs necessary to implement this vision and strategy to be in the range of $600 million; and

WHEREAS, the $600 million cost estimate developed in the Phase 1A study does not include the cost of implementing a comprehensive ambulatory care system; and

WHEREAS, the Phase 1A study identifies the additional need to resolve approximately $200 million of Dimension's unfunded pension liabilities, outstanding debt and unfunded retiree health benefits costs; and

WHEREAS, while the Parties anticipate that further refinement of the strategy to transform the System into a new regional medical center supported by a comprehensive ambulatory care network and University of Maryland Baltimore health sciences presence may result in adjustments to the individual cost estimates for implementing the different components of the strategy, the Parties agree that the estimate of the overall cost to be shared by the Parties is within a valid, realistic range; and

WHEREAS, the Parties are prepared to begin a more substantive and detailed development of this strategy and to set the stage for its subsequent and timely implementation.

NOW, THEREFORE, in consideration of the mutual promises of the Parties herein and other good and valuable consideration, the Parties hereto stipulate and agree as follows:

ARTICLE I.

UMMS' PHASE 1B STUDY AND DETERMINATION OF ITS ROLE IN THE PERIOD OF TRANSITION TO A NEW HEALTH CARE SYSTEM

UMMS will lead a 12-18 month study, Phase 1B (which is anticipated to be completed on or around the end of the first quarter of calendar year 2013), to refine and develop further its approach to enhance the delivery of health care in the County through transformation to a system with a new Regional Medical Center (hereinafter "RMC"),

supported by a comprehensive ambulatory care network, which together will provide high quality, accessible, and cost-effective primary, chronic, and specialty care services throughout the region. In leading the study, UMMS will select and manage the appropriate expert consultants and vendors. The County and State will each designate representatives to work with UMMS and USM throughout the period of the Phase 1B study to facilitate the development and execution of a successful plan.

Section A. Step One of Phase 1B: System Design

1. During the 4-6 months following execution of this Agreement, UMMS will undertake the following:

a. *Regional Medical Center*: Refinement of the Phase 1A study's market demand projections and estimated size for the RMC to reflect consideration of: i) the ambulatory care network strategy's projected impact on inpatient utilization; ii) the coordination of care among Laurel Regional Hospital, Bowie Health Campus, and the ambulatory care network (to include the Cheverly site); and iii) the State's Health Plan, which shall include analysis of the RMC's projected impact on other health systems operating in the region.

b. *Ambulatory Care Network*: Development of an ambulatory care network strategy which will provide primary and specialty ambulatory care and diagnostic services to serve the pre- and post-acute outpatient needs of County residents. The strategy will take into account the State's implementation of federal health care reform and other factors influencing current changes in the health care market. The strategy will also include appropriate clinical integration, relevant care models, and oversight intended to moderate the growth of health care services with improved clinical outcomes in an increasingly episodic-based care environment.

c. *Physician/Provider Needs*: Development of a strategy to address physician and other allied health care provider needs, including: i) assessment of the supply and quality of the existing primary and specialty care physicians and other allied health care providers serving the County; and ii) identification of the physician/allied health care provider needs gap and development of a plan to close it, which shall include strategies for recruitment, employment, joint ventures, *etc.*

2. In undertaking Step One of Phase 1B, UMMS shall:

a. Employ the capabilities of the University of Maryland College Park School of Public Health (UMCP) to include in its design considerations and strategy developments an assessment of the public health impact on the population to be served;

b. Work with the University of Maryland Baltimore (UMB) to develop an assessment of the potential for the development of a health sciences presence to be co-located at the site of the RMC sufficient for UMB to determine whether pursuit

of such a presence is feasible and, if so, what programs and other elements it may include;

c. Provide necessary financial resources for completion of Step One, including but not limited to cost reimbursements to UMCP and UMB for the completion of their respective assessments, as mutually deemed appropriate and reasonable; and

d. Provide to the County and State the written conclusions and recommendations of Step One of Phase 1B.

3. Prior to UMMS' commencement of Step Two of the Phase 1B study, the County and State shall review the conclusions and recommendations of Step One of Phase 1B and consult appropriate stakeholders, including Prince George's County Council, the Presiding Officers and other members of the General Assembly, regarding the conclusions and recommendations of Step One. After such review and consultation, the Parties shall reach agreement on the conclusions, recommendations, and any mutually acceptable modifications thereof.

Section B. UMMS and Dimensions' Role during the Period of Transition to a New Health Care System

1. *UMMS and Dimensions' Collaboration*: While UMMS is conducting its assessment and to the extent possible, UMMS and the Dimensions' management team shall work collaboratively to drive toward better operating results. This collaboration shall be designed to help ensure that decisions made during this interim period will effectively begin to mitigate costs, enhance quality of care, preserve public subsidies to assist in the discharge of liabilities, and lay groundwork consistent generally with the transition of the System to the envisioned RMC and ambulatory care network.

2 *Dimensions*:

a. *Board*: The County shall work with Dimensions and the Master Trustee under the Master Trust Indenture between First National Bank of Maryland and Dimensions dated June 1, 1992 (the "Bondholders' Trustee") to amend Dimensions' Bylaws and the Master Lease Agreement to allow for an expansion of Dimensions' Board so that it can be more broadly representative of the community it serves. The County shall consult with appropriate stakeholders to make recommendations for new appointments to the Board.

b. *Governance structure*: The Parties shall consider and, to the extent feasible and permissible under applicable contracts and laws, request the appropriate entity to implement any other changes in the structure or branding of Dimensions which they agree may be appropriate to enhance its governance or operations.

3. *Asset Transfer*: The County and UMMS shall develop a plan for transfer of the System's assets to Dimensions, or to a successor entity. They shall negotiate and reach agreement on the conditions upon which such a transfer would occur, including the potential conditions that: (1) the asset transfer may not occur until an affirmative decision has been made to proceed with the RMC; (2) any real property which ceases to be used for the provision of health care services shall revert to the County and/or (3) the transfer's effect on the discharge of liabilities. They will also reach agreement on the County receiving credit or payback for any assets sold to another entity.

Section C: Step Two of Phase 1B: Financial Analysis

1. During the 3-4 months following completion, review, and approval of the conclusions and recommendations of Step One of the Phase 1B study, UMMS will undertake the following:

a. Refinement of the projected costs of: i) construction of the RMC; ii) facility improvements and renovations at the existing sites of Laurel Regional Hospital and the Bowie Health Campus; iii) additional capital needs and operating costs for the ambulatory care network (including the Cheverly site); and iv) in conjunction with USM and UMB, programs and other elements of the UMB health sciences presence that may be included in the final recommendations of Step One of the Phase IB study; and

b. Updating of overall financial projections for the new health and hospital system, including the RMC, ambulatory care network, and a UMB health sciences presence.

2. UMMS, the County and the State shall divide equally among themselves and therefore each pay one-third of the total cost of Step Two of the Phase 1B study. The total cost of Step Two of the Phase 1B Study is estimated to be $375,000.

3. Prior to moving forward to Step Three of the Phase 1B study:

a. The results of Step Two must demonstrate that the proposed healthcare delivery system is financially viable, including the funding of capital costs, transition period operating losses and the elimination of outstanding Dimensions' liabilities; and

b. The County and State shall review and consult appropriate stakeholders, including the Prince George's County Council, the Presiding Officers and other members of the General Assembly, regarding the conclusions and recommendations of Step Two. After such review and consultation, the Parties shall reach agreement on the conclusions, recommendations, and any mutually acceptable modifications thereof; and

c. The Parties' agreement shall include approval of a plan to finance the costs of the RMC, the costs of a health sciences presence if the parties determine it is

feasible, and any capital and operating needs of the ambulatory care network, and to allocate responsibility for such financing among the Parties.

Section D. Step Three of Phase 1B: Architectural Plan and CON Submission

1. During the 4-6 months following completion, review, and approval of the conclusions and recommendations of Step Two of the Phase 1B study, UMMS will undertake the following:

a. Development of the site selection and architectural plans for the RMC;

b. Development of specific plans for: i) any site renovations or facility improvements at Laurel Regional Hospital and Bowie Health Campus; and ii) any capital and operating costs necessary for development of the ambulatory care network (to include the Cheverly site).

c. Preparation and submission of the Certificate of Need (CON) application for the RMC.

2. UMMS, the County, and the State shall divide equally among themselves and therefore each pay one-third of the cost of Step Three of the Phase 1B study except for the cost of legal counsel who may be engaged to assist the Parties in preparing and submitting the CON application. UMMS shall be responsible for engaging such counsel and paying the resulting attorneys fees and any CON application fees. The total cost of Step Three of the Phase 1B Study, including attorneys' fees and application fees related to the CON for which UMMS shall be responsible, is estimated to be $1.2 million.

3. The County and State shall review and consult appropriate stakeholders, including the Prince George's County Council, Presiding Officers and other members of the General Assembly, regarding the conclusions and recommendations of Step Three. After such review and consultation, the Parties shall reach agreement on the conclusions, recommendations, and any mutually acceptable modifications thereof.

ARTICLE II.

OPERATION OF THE SYSTEM DURING PERIOD OF TRANSITION TO NEW HEALTH CARE SYSTEM

The Parties anticipate that the Phase 1B study will be completed during the first quarter of calendar year 2013, with the application process to seek CON approval for the RMC and some capital improvements associated with the ambulatory care network to follow over the course of the following 9-12 months. If CON approval is received, construction of the RMC would be targeted to begin in the first quarter of calendar year 2014.

The System must continue to operate and provide the highest quality care possible to County residents during this interim period. Dimensions is engaged in an effort to create partnerships and institute cost-containment and quality improvement measures to stem operating losses and address quality of care concerns at the Prince George's Hospital Center in Cheverly and throughout the System. These efforts are critical to meet the needs of County residents, to help prepare the System for its transition to the new RMC, supported by a comprehensive ambulatory care network, and to begin to discharge its bond debt, unfunded pension obligations, and other liabilities. In addition, these measures must be successful to the extent possible in reducing operating losses so that County and State funding commitments can be diverted from sustaining operations to assisting in the discharge of the liabilities.

To facilitate continued and enhanced operations, the Parties agree to undertake the following:

1. *Strategic Plan for Discharging Liabilities*: The County, State, and UMMS will work with the Dimensions' Board, the Bondholders' Trustee and the Pension Benefit Guarantee Corporation to develop a feasible plan and timeline for satisfaction of the System's liabilities. Development of the plan should include consideration of the potential for refinancing or seeking discounts on satisfaction of certain debts, and exploration of the potential advantages and disadvantages of monetizing certain assets. The parties agree that establishing a plan and reaching resolution on how the System's liabilities will be discharged is a requirement for proceeding to Step 3 of the Phase 1B study.

2. *Public Funding*:

a. The County and State intend to execute a Letter of Intent that reflects their commitment to provide to the Prince George's County health care system a total of $30 million of funding ($15 million each) for FY 2012 which shall be used both to support the System's operations and to begin to discharge its liabilities. The State has made an additional capital commitment of $4 million for FY 2012. The Letter of Intent will also reflect the State and County's commitment to seek an additional $30 million annually ($15 million each) to provide to the System for FY 2013 - FY 2015 as needed for any continued operating losses and liabilities, and subject to their respective appropriations processes. The Letter of Intent will also reflect the State's intent to seek additional capital funds in the amount of $10 million for FY 2013 and $10 million for FY 2014, as needed and subject to the approval of the General Assembly; and

b. Any commitment to develop activities to support a UMB health sciences presence in Prince George's County under this MOU during the transition period is contingent upon the adequacy of public funding for such activities.

3. *Reducing and Eliminating Operating Losses*: This objective will be achieved, pursuant to Section B of Article I of this Agreement, through the development of a plan and timeline for implementing cost-containment, quality enhancement, and clinical integration measures necessary to reduce and ultimately eliminate the System's operating losses.

ARTICLE III.

MISCELLANEOUS PROVISIONS

Section 1. State and County Laws

The provisions of this Agreement shall in no way diminish or infringe any rights, responsibilities, power or duties conferred on the parties by the Constitution of the State of Maryland, the Annotated Code of Maryland, the Prince George's County Charter, and the Prince George's County Code, and all such laws are hereby incorporated in this Agreement as if fully set forth herein. In the event of a conflict between this Agreement and any of these laws, the applicable law shall prevail.

Section 2. Effective Date and Modification of Agreement

This Agreement shall become effective on the date herein above written. It may be modified only by written agreement of all Parties, with any such modifications to become effective on the date determined by the Parties.

[Signature page follows]

IN WITNESS THEREOF, the Parties hereto have caused this Agreement to be executed on the date herein above written.

PRINCE GEORGE'S COUNTY, MARYLAND

Rushern L. Baker, III
County Executive

Ingrid M. Turner
Chair, Prince George's County Council

STATE OF MARYLAND

Martin O'Malley
Governor

UNIVERSITY OF MARYLAND MEDICAL SYSTEM CORPORATION

Robert A. Chrencik
President and Chief Executive Officer

UNIVERSITY SYSTEM OF MARYLAND

William E. Kirwan
Chancellor

DIMENSIONS HEALTH CORPORATION

C. Philip Nichols, Jr.
Chairman

DIMENSIONS HEALTH CORPORATION

Kenneth E. Glover
President and Chief Executive Officer

EXHIBIT 7

IN THE MATTER OF Application of Encompass Health Rehabilitation Hospital for Inpatient Rehabilitation Hospital Docket No. 18-16-2423	* * * * * * * *	BEFORE THE MARYLAND HEALTH CARE COMMISSION

* * * * * * * * * * * * *

AFFIRMATION OF JOE MEHRA

1. I, Joe Mehra, am employed by MCV Associates, Inc., located in Alexandria, Virginia. I performed a travel time study in connection with the Certificate of Need application of Encompass Health Rehabilitation Hospital of Southern Maryland for the proposed establishment of a facility located in Bowie, Maryland. I understand that the results of the travel time study were represented in the Certificate of Need application in the summary table appearing on pages 43 and 121 of the application.

2. The travel time study was performed by calculating the travel time from each Zip Code within the county referenced in the table to each referenced provider. The times for each Zip Code were then averaged for the entire county in a summary table. The source for the travel time and distances was "Google Maps." The travel times utilized were for the AM peak period, as both the AM and PM peak travel time were similar for most zip code locations.

I hereby declare and affirm under the penalties of perjury that the facts stated in this Affirmation are true and correct to the best of my knowledge, information, and belief.

4-1-19
Date

Joe Mehra

Joe Mehra, P.E. PTOE
MCV Associates, Inc.

EXHIBIT 8

Impact of Levels of Service

How Much Is Postacute Care Use Affected by Its Availability?

Melinda Beeuwkes Buntin, Anita Datar Garten, Susan Paddock, Debra Saliba, Mark Totten, and José J. Escarce

Objective. To assess the relative impact of clinical factors versus nonclinical factors—such as postacute care (PAC) supply—in determining whether patients receive care from skilled nursing facilities (SNFs) or inpatient rehabilitation facilities (IRFs) after discharge from acute care.

Data Sources and Study Setting. Medicare acute hospital, IRF, and SNF claims provided data on PAC choices; predictors of site of PAC chosen were generated from Medicare claims, provider of services, enrollment file, and Area Resource File data.

Study Design. We used multinomial logit models to predict PAC use by elderly patients after hospitalizations for stroke, hip fractures, or lower extremity joint replacements.

Data Collection/Extraction Methods. A file was constructed linking acute and postacute utilization data for all medicare patients hospitalized in 1999.

Principal Findings. PAC availability is a more powerful predictor of PAC use than the clinical characteristics in many of our models. The effects of distance to providers and supply of providers are particularly clear in the choice between IRF and SNF care. The farther away the nearest IRF is, and the closer the nearest SNF is, the less likely a patient is to go to an IRF. Similarly, the fewer IRFs, and the more SNFs, there are in the patient's area the less likely the patient is to go to an IRF. In addition, if the hospital from which the patient is discharged has a related IRF or a related SNF the patient is more likely to go there.

Conclusions. We find that the availability of PAC is a major determinant of whether patients use such care and which type of PAC facility they use. Further research is needed in order to evaluate whether these findings indicate that a greater supply of PAC leads to both higher use of institutional care and better outcomes—or whether it leads to unwarranted expenditures of resources and delays in returning patients to their homes.

Key Words. postacute care, provider supply, Medicare, rehabilatation, nursing homes

Postacute care (PAC) was the fastest growing sector of the Medicare program throughout the early to mid-1990s. A number of factors including payment incentives, advances in drug treatments and surgical techniques, and improvements in outpatient care contributed to shorter lengths of stay in acute care hospitals and corresponding increases in PAC use. As more hospitalized patients transfer to PAC, the need to better understand the factors driving such transfers is growing.

Patients can access PAC services in many settings including skilled nursing facilities (SNFs), inpatient rehabilitation facilities (IRFs), and patients' homes with services from home health agencies (HHAs).[1] IRFs provide intensive rehabilitation (three or more hours a day of therapy) in an inpatient setting. SNFs can also provide inpatient rehabilitation under the Medicare benefit, although it is generally less intensive than that provided in an IRF (Gage 1999). Home health care agencies provide therapy, nursing care, and assistance from home health aides.

In many instances, referrals to these settings are made in the absence of clear clinical criteria that would identify the best PAC setting for maximizing outcomes. Although studies have explored variations in outcomes across settings for stroke and hip fracture patients, there is a dearth of research that explains which patients are most appropriate for each PAC setting (Kane 1997; Kramer et al. 1997; Kane et al. 2000). Thus patients and doctors must weigh a range of clinical and nonclinical factors—such as the perceived quality of care delivered by a PAC provider and its convenience—when making these decisions.

In addition, admissions to PAC are often guided by a hospital discharge planner and PAC providers play a role in deciding which patients to accept. Although Medicare PAC eligibility criteria are codified in regulations, as a practical matter PAC providers, physicians, and hospital discharge planners have discretion in interpreting these guidelines. In fact, researchers examining PAC have observed tremendous variation in utilization rates, geographically and by type of discharging hospital (Benjamin 1986; Neu, Harrison, and Heilbrunn 1989; Swan and Benjamin 1990; Kenney and Dubay 1992; Kane et al. 1996; Schore 1996; Cohen and Tumlinson 1997; Kane, Lin, and Blewett 2002; MedPAC 2003).

All of this suggests that a variety of nonclinical factors are likely to affect where patients go for PAC. Previous research has noted the importance of the supply or availability of PAC in an area on rates of use (Neu, Harrison and Heilbrunn 1989; Swan and Benjamin 1990; Kenney and Dubay 1992; Kane et al. 1996; Cohen and Tumlinson 1997; MedPAC 2003). This study develops more refined methods of measuring PAC availability and assesses the relative

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impact of clinical versus nonclinical factors, especially availability, in determining where patients go for PAC services.

Determinants of PAC Use

Researchers have found a number of patient-level, provider-specific, and area factors that affect the use of PAC and choice of PAC settings. Demographic and clinical factors including age, gender, race, marital status, functional status, history of disability, medical condition, and comorbidities influence the sites to which patients are discharged (Neu, Harrison, and Heilbrunn 1989; Manton et al. 1993; Steiner and Neu 1993; Blewett, Kane, and Finch 1995; Lee, Huber, and Stason 1997; Kane et al. 1998; Liu, Wissoker, and Rimes 1998; Gage 1999; Bronskill, Normand, and McNeil 2002; Finlayson 2002; McCall et al. 2003; MedPAC 2003). Use of PAC is generally positively associated with age and negatively associated with being married, presumably because patients' spouses often serve as informal caregivers (Kane et al. 1994; Liu, Wissoker, and Rimes 1998; Gage 1999; Shatto 2002). Primary and comorbid diagnoses affect decision making with respect to patient suitability for one site of PAC over another. For example, researchers have found that use of PAC was highest among people with Alzheimer's and Parkinson's, diseases that require a high level of clinical monitoring and assistance (Liu, Wissoker, and Rimes 1998). Living alone and functional dependency at discharge from inpatient care were also significant predictors of PAC (Kane et al. 1996; McCall et al. 2003).

Additional factors that influence use of PAC include hospital-level predictors such as the volume of Medicare patients served, hospital size, percent low-income patients, ownership, and status as a teaching hospital (Neu, Harrison, and Heilbrunn 1989; Steiner and Neu 1993; Blewett, Kane and Finch 1995; Bronskill, Normand, and McNeil 2002). Although the effects of these characteristics depend on the condition studied and the patient variables included in the analysis, more than one study found that discharge from teaching hospitals and hospitals with high-Medicare volume was associated with greater use of PAC.

Researchers have also identified a number of area-level predictors of PAC use. For example, researchers have found that higher-income communities have higher utilization rates of SNF and home health care (Neu, Harrison, and Heilbrunn 1989).

Finally, prior research has noted the influence of the supply of PAC on utilization, a finding consistent with research on use of other types of care

(Gatsonis et al. 1995; Kane et al. 1996; Pritchard et al. 1998; Fisher et al. 2000). A positive correlation was found between the home health use and the number of home health agencies in an area, and a negative correlation was found between home health use and the number of nursing home beds per capita in some studies (Swan and Benjamin 1990; Kenney and Dubay 1992; Liu, Wissoker, and Rimes 1998; MedPAC 2003). Characteristics of discharging hospitals that may affect the ease of referrals to PAC, including ownership of a PAC facility, can boost PAC use (Young 1997; MedPAC 2003).

Although research has noted the effects of PAC supply on use, relatively little attention has been paid to the measurement of PAC supply. Prior studies have relied on simple counts of PAC providers and/or counts of PAC beds within geopolitical boundaries, such as counties or metropolitan statistical areas (MSAs), which may not capture the variation in accessibility or availability of PAC within these areas. In this study, we developed a more detailed and comprehensive approach to measuring PAC supply, and we determined which factors most affected the use of PAC services by Medicare beneficiaries in 1999.

Conceptual Framework

We conceptualized the decision to use PAC as a joint decision made by a hospitalized patient, his/her family, and his/her physician(s), and influenced by discharge planners at the acute care hospital and admission staff at PAC sites. Clinicians involved in the decision consider medical and rehabilitation needs when referring some types of patients to PAC, but clinical evidence is not available for all patient types. For those patients falling into "gray areas" in which there are no clinical norms, patient preferences, local practice patterns, PAC availability, and psychosocial factors play stronger roles. Thus, patient and family preferences and circumstances—such as whether or not patients have caregivers at home or are eligible for Medicaid-covered custodial nursing home care—are likely to influence the decision. In addition, factors such as the experience of the discharge planning staff and the financial pressure on the hospital to discharge the patient quickly may affect PAC use.

Finally, the overall attractiveness of the PAC options in the area and the availability of facilities willing and able to accept the patient come into play.[2] Some areas have many IRFs competing to admit patients, while others have few. Similarly, there are areas in which SNF beds are rarely vacant and others in which SNFs actively market their services to discharge planners. Hospitals with IRF and/or SNF subproviders might find it easier to place their patients in

those related facilities. Patient and family preferences for receiving care close to home can also affect PAC use.

Drawing on this framework, our overall analytic approach was to define relatively clinically homogenous populations that had high rates of PAC use and then build models using the factors hypothesized to influence whether they used an institutional PAC and if so, of what type.

METHODS

Data Sources

We linked administrative data from a 100 percent sample of Medicare acute hospital, IRF, and SNF claims so we could observe choices of institutional PAC by our sample patients. We then drew on Medicare claims data, provider of services file data, enrollment file data, and data from the Area Resource File in generating predictors of site of PAC chosen.

Population Studied

We examined the use of PAC by three groups of Medicare patients discharged from acute care hospitals in 1999. We chose 1999 both because of data availability and because it is the only recent year during which no new PAC payment systems were implemented. We focused on the three largest patient groups using PAC: stroke patients; hip fracture patients; and lower extremity joint replacement patients. These conditions account for approximately 7 percent of Medicare acute discharges and one-quarter of discharges to PAC. Hip fracture was defined using an acute inpatient principal diagnosis of "fractures of the neck of the femur" (diagnosis codes 820.xx): hip fracture patients whose fractures could be because of bone metastases or who suffered major trauma to a site other than a lower extremity were excluded from the sample. Stroke was defined as intracerebral hemorrhage (431.xx), occlusion and sterosis of precerebral arteries with infarction (433.x1), occlusion of cerebral arteries with infarction (434.x1), and acute but ill-defined cerebrovascular disease (436.xx). Lower extremity joint replacement was defined using the Diagnosis Related Groups for joint replacement procedures (209, 471) excluding patients classified as hip fracture and those with reattachment procedures (84.26, 84.27, and 84.28).

We excluded certain groups of patients from our analyses. Patients who died in the hospital or within 30 days of discharge were dropped since their use of PAC was effectively truncated, as were patients for whom we did not have

complete claims data.[3] We restricted our sample of discharges to a beneficiary's first discharge for any given condition during 1999. Finally, we excluded patients who were residents of nursing homes at the time of their admission to acute care, since we hypothesized that these patients would most likely return to the nursing home after discharge from acute care without considering other PAC alternatives.[4]

Measures

Our dependent variable was the first PAC site used after discharge from an acute care hospital. We considered PAC use to be IRF or SNF care that began within 30 days of discharge from acute care and was covered by Medicare.[5] We focused on use of institutional PAC because we were unable to distinguish patients returning to their homes from those sent to receive custodial nursing home care—that is, we did not have data on nursing home stays not paid for by Medicare. We grouped care delivered in swing beds with SNF care. Each of these types of care was defined using Medicare provider numbers and/or claim types. Patients who were readmitted to the hospital during the 30-day window were kept in the sample but acute care was not counted as a PAC site. Although Medicare rules allow SNF patients to delay entry for more than 30 days after their acute discharge, this did not affect our analyses: 97.3 percent of SNF patients in our sample began SNF care within 30 days of discharge if they used it at all.

We assembled, and included as independent variables in our models, a wide array of indicators of clinical, individual, discharging hospital, and PAC supply factors that might affect PAC choices.

Individual Predictors. We identified a number of patient-level characteristics hypothesized to affect use of PAC care and type of PAC used. To allow for nonlinear effects of age on PAC use in our models we classified patients into 3-year age bands. We also included gender, race, and place of residence (defined as an MSA, an area adjacent to an MSA, or rural area/not adjacent to an MSA using the county classification developed by the U.S. Department of Agriculture) in our analyses. All of these patient-level predictors were created using fields on the inpatient claims. In addition, we used the Medicare Denominator file to create indicators for whether patients were receiving Medicaid at the time of their acute admission or within 4 months of discharge.

Clinical Predictors. To capture the complexity of patients at the time of hospital discharge, we included a large set of comorbidities and

complications tailored to our stroke, hip fracture, and joint replacement patients. The comorbidities used in our analyses were the chronic conditions identified by Iezzoni et al. (1994) as conditions that are nearly always present prior to hospital admission and hence are extremely unlikely to represent complications arising during the hospitalization. They included primary cancer with poor prognosis, metastatic cancer, chronic pulmonary disease, coronary artery disease, congestive heart failure, peripheral vascular disease, severe chronic liver disease, and diabetes mellitus with and without end-organ damage, chronic renal failure, nutritional deficiencies, dementia, and functional impairment.

The second type of case-mix variable was complications that were likely to have arisen during the hospital. To develop this list, we adapted the list of complications developed by Iezzoni et al. (1994), keeping only the complications that were likely to have a continued effect after hospital discharge, and therefore could influence the choice of PAC site (e.g., we excluded transient metabolic derangements and side effects of medications). In addition, we augmented the list to include some important complications for the Medicare population that had been omitted from Iezzoni's list. The resulting list of complications included postoperative pulmonary compromise; postoperative gastrointestinal hemorrhage; cellulitis or decubitus ulcer; septicemia; pneumonia; mechanical complications because of a device, implant, or graft; shock or arrest in the hospital; postoperative acute myocardial infarction (AMI); postoperative cardiac abnormalities other than AMI; procedure-related perforation or laceration; venous thrombosis and pulmonary embolism; acute renal failure; miscellaneous complications; delirium; dementia; stroke (for hip fracture and joint replacement patients only); and hip fracture (for stroke and joint replacement patients only).

We also created condition-specific clinical variables. For hip fracture and joint replacement patients we created indicators of the type of replacement the patient received. Hip fracture patients were classified as having surgery to pin their hip (i.e., no hip replacement), a total replacement, a partial replacement, and/or a revision of a previous joint replacement. We also coded the location of the fracture. For joint replacement patients, we coded the type of replacement (total, partial, revision), whether they were for knee or hip, and whether multiple replacements were conducted. For stroke patients we created indicators for the type of stroke. Finally, we created indicators for any use of an intensive care unit during the acute stay and the number of days spent in that unit.

Characteristics of Discharging Hospitals. Patterns of care and approaches to discharge planning in the acute care hospital can influence PAC use. Accordingly, we included a number of covariates to capture the orientation of acute care hospitals. They include size (average daily census or ADC), teaching status (resident to ADC ratio), ownership status (government, private nonprofit, or for-profit), Medicare patient percentage, case-mix index of the hospital, and low-income patient percentage. These measures were created using cost report and provider of service data available from the Centers for Medicare and Medicaid Services (CMS) website. In addition, we created variables that indicate whether the discharging hospital had a related SNF, IRF, or HHA subprovider listed on its cost report.

PAC Availability. We defined availability from a patient-specific perspective based on how close IRFs and SNFs were to patients' homes and how many of each type of facility were within reasonable distances of patients' homes. To construct our measures, we used patient and provider zip code information to measure the distance traveled from patients' residences to IRFs and SNFs. We used geocoding software to calculate distances from the midpoint of each beneficiary's zip code to the midpoint of the closest provider zip code. In addition, we considered the supply of formal substitutes and complements for formal SNF and IRF care. Specifically, we looked at the per-elderly supply of nursing home beds and the number of home health agencies in patients' areas of residence. Unfortunately, we had no data on patients' access to informal or family caregivers.

We created two measures of the availability of PAC. The first captures the distance from the patient to the closest provider (separate measures are created for closest IRF and closest SNF). Both the distance to the closest and the distance squared are included, since the effects of distance on PAC choice are likely diminishing.[6] These variables measure how accessible the provider type is in terms of proximity. The second measure includes the number of PAC providers of each type within a given radius around the patient's home. We calculated these radii by condition and area type, and defined the radii using the 90th percentile of the distance traveled to that type of provider by beneficiaries living in that type of area; the 90th percentile was chosen since it reflected a generous definition of the market area, but was not biased by the care patterns of patients who might be receiving care far from home because of holidays or other reasons. We also created indicators for areas without any of a given type of provider as the lack of providers would have a strong negative effect on the use of that type of PAC.

Our measures of the "supply" of HHA care differed from that used for other PAC locations because HHA markets cannot be defined by patient travel patterns. Instead, we used patient claims data to determine which areas were served by which agencies. HHAs serving five or more residents within a given county and located in the same state or an adjacent state as those beneficiaries were counted as serving that county.[7,8]

Statistical Analysis

We identified hospitalized hip fracture, stroke, and lower extremity joint replacement patients and examined how each group's sociodemographic and clinical characteristics varied by PAC site used. We also examined how PAC use varied by characteristics of the discharging acute hospital and the supply of PAC care. We then fit multinomial logistic regression models of the form:

$$\ln \Omega_{m|b}(X) = \ln \frac{\Pr(y = m|x)}{\Pr(y = b|x)} = x\beta_{m|b}$$

(where b was the comparison group, no Medicare-covered institutional care) to assess the patient characteristics that predicted use of SNF or IRF care after discharge from acute care in a multivariate framework.[9] We also fit "two-level" logistic regression models in which the first-level model predicted use of SNF or IRF care versus no Medicare-paid institutional care and the second-level model predicted use of IRF versus SNF care conditional on the use of institutional care. The fit and predictions from these models were virtually identical to those from the multinomial logit models, so we present only the multinomials.

Finally, we assessed the relative importance of clinical factors versus PAC supply factors in the choice of PAC site by simulating how much each set of factors changed the predicted probabilities of using IRF or SNF care. To look at the effect of supply factors on PAC use, we computed standardized predictions holding clinical factors constant at their means across all of our observations and predicting the probabilities of using IRF and SNF care for each observation (Lane and Nelder 1982). The resulting distributions of predicted rates of use demonstrate the extent to which supply factors shift patients across PAC sites when clinical factors are held constant. We then computed the same set of predictions holding the supply factors constant at their means but reflecting the effects of the full-observed range of values for the set of clinical variables. We compared the predicted distributions of probabilities of

using IRF care, SNF care, or neither under these two scenarios to see which factors most affected the variability in PAC site used.

RESULTS

Table 1 presents selected descriptive statistics for our three patient groups in 1999 overall and by type of PAC accessed. For all three conditions, SNF patients tend to be older and are more likely to be female than IRF patients. Patients not using Medicare-paid institutional care are, on average, younger. The hip fracture and stroke SNF patients have greater numbers of comorbidities and complications. In contrast, the hip fracture and stroke IRF patients have fewer comorbidities than the average patient in those groups, including lower rates of coronary artery disease, nutritional deficiencies, cellulitis or decubitis ulcer, and dementia (not shown in tables). Joint replacement patients, however, have similar levels of comorbidities in both IRFs and SNFs. The percentage of dual eligibles in IRFs is lower, and the proportion of Medicaid recipients who do not receive Medicare-paid institutional care is relatively high. There is a striking relationship between use of PAC and the availability of PAC, which is explored further below.

As seen in the mean distances to nearest provider in Table 1, patients frequently use PAC providers that are far from their homes. Table 2 describes the distribution of distances, in miles, to the nearest IRF provider by condition and area type. The median hip fracture, joint replacement, or stroke patient in an MSA lives approximately five miles from the nearest IRF. Patients must travel farther for IRF care when they live outside of a MSA. The median distance from patients' places of residence to the nearest SNF provider, across all areas and all conditions, is always equal to zero.[10] However, the distance to the nearest SNF provider does vary considerably: the top 10 percent of rural patients not living adjacent to an MSA have to travel over 12 miles to an SNF. The distances that some patients have to travel to reach the closest IRF are significantly greater, exceeding 70 miles for the most remote decile of patients, and even within MSAs patients regularly receive IRF care more than 20 miles from their homes. Table 2 also shows the distribution of the average number of providers within the radii defined by the 90th percentiles of distance traveled.

These relationships generally held when we fit multinominal logistic regressions for choices between PAC sites for the hip, stroke, and joint replacement samples, and additional use patterns emerged. Online-only Appendix 1 presents the results from these logistic regressions (please see http://www.

Table 1: Sample Means by Condition, First Site of PAC

	Hip Fracture				*Stroke*				*Lower Extremity Joint Replacement*			
	Overall Mean (SD)	*No Medicare Institutional Care*	*SNF*	*IRF*	*Overall Mean (SD)*	*No Medicare Institutional Care*	*SNF*	*IRF*	*Overall Mean (SD)*	*No Medicare Institutional Care*	*SNF*	*IRF*
Number of observations	106,570	5,898	67,476	25,407	149,091	45,845	46,998	33,059	151,168	22,300	51,650	44,650
Selected patient characteristics												
Age (years)	82.6	80.3	83.6	81.3	78.9	76.8	81.5	77.8	75.0	72.8	76.4	75.5
	(7.5)	(8.4)	(7.2)	(7.2)	(7.6)	(7.3)	(7.5)	(7.1)	(6.0)	(5.3)	(6.2)	(6.0)
Female (%)	77.8	69.9	78.6	78.1	58.9	52.0	64.5	57.2	64.9	50.1	71.8	70.2
Medicaid coverage (%)	16.1	18.5	16.6	14.1	18.1	13.8	21.6	16.6	7.9	3.6	9.6	9.1
Any complications (%) (of 17 included in models)	14.7	15.4	16.1	11.9	12.0	7.9	18.3	10.5	9.8	7.8	11.2	9.9
Any comorbidities (%) (of 13 included in models)	61.6	60.8	64.1	56.2	75.3	67.0	80.6	79.6	36.2	30.6	38.8	38.6
Supply measures												
Discharging acute has IRF subprovider	38.1%	39.1%	31.1%	58.4%	37.6%	37.1%	27.8%	55.5%	43.4%	46.4%	28.4%	61.7%
	(48.6)	(48.8)	(46.3)	(49.3)	(48.4)	(48.3)	(44.8)	(49.7)	(49.6)	(49.9)	(45.1)	(48.6)
Discharging acute has SNF subprovider	55.3%	54.1%	57.7%	52.8%	53.8%	53.2%	56.4%	54.0%	55.7%	49.3%	64.5%	53.4%
	(49.7)	(49.8)	(49.4)	(49.9)	(49.9)	(49.9)	(49.6)	(49.8)	(49.7)	(50.0)	(47.9)	(49.9)
Discharging acute has HHA subprovider	55.6%	57.1%	56.1%	53.8%	54.6%	54.7%	55.3%	53.4%	53.4%	49.9%	56.4%	52.4%
	(49.7)	(49.5)	(49.6)	(49.9)	(49.8)	(49.8)	(49.7)	(49.9)	(49.9)	(50.0)	(49.6)	(49.9)

continued

Table 1: *Continued*

	Hip Fracture				*Stroke*				*Lower Extremity Joint Replacement*			
	Overall Mean (SD)	*No Medicare Institutional Care*	*SNF*	*IRF*	*Overall Mean (SD)*	*No Medicare Institutional Care*	*SNF*	*IRF*	*Overall Mean (SD)*	*No Medicare Institutional Care*	*SNF*	*IRF*
Number of IRFs in radius around residence	8.8 (9.6)	7.8 (8.7)	8.5 (9.5)	10.0 (10.0)	9.9 (10.3)	9.6 (10.1)	9.7 (10.3)	10.2 (10.4)	10.8 (11.9)	9.5 (11.3)	10.7 (12.2)	11.8 (11.9)
Number of SNFs in radius around residence	34.5 (38.9)	29.0 (33.6)	34.1 (37.9)	37.7 (42.4)	31.7 (37.3)	30.0 (35.6)	31.1 (36.1)	33.2 (38.9)	43.0 (45.3)	39.4 (43.7)	45.7 (46.9)	43.3 (44.6)
Number of HHAs serving county of residence	57.3 (81.6)	44.5 (71.5)	54.6 (79.5)	70.3 (89.7)	59.4 (86.3)	56.7 (84.6)	54.6 (80.4)	67.1 (94.0)	52.2 (77.8)	33.2 (60.3)	52.6 (80.8)	63.6 (83.0)
Nearest rehab (miles)	15.5 (24.6)	19.2 (31.6)	17.0 (24.5)	9.9 (22.2)	15.6 (27.0)	16.8 (31.6)	17.5 (26.1)	11.5 (22.8)	16.7 (23.9)	20.2 (27.4)	19.0 (22.8)	11.7 (23.7)
Nearest SNF (miles)	2.0 (4.7)	2.6 (6.3)	2.0 (4.6)	1.8 (4.4)	2.1 (4.5)	2.2 (4.9)	2.0 (4.5)	2.0 (4.3)	2.3 (5.1)	2.8 (6.3)	2.1 (4.8)	1.9 (4.8)
Selected other characteristics												
Discharged from for-profit hospital (%)	13.3	10.8	11.9	17.7	13.2	13.1	12.8	14.1	12.2	9.6	11.2	15.8
Nursing home beds per 100 residents age 85+ in county	45.4	47.2	45.4	45.8	45.7	45.9	45.9	46.1	46.1	48.4	47.0	45.7

Note: Standard deviation for continuous variables are in parantheses.

SNF, skilled nursing facilities; IRF, inpatient rehabilitation facilities; HHA, home health agencies; SD, standard deviation.

Table 2: Distance to Nearest and Number of Providers in Radius around Patients' Residences by Condition and Area Type

	A. Distance in Miles to Nearest Provider						*B. Number of Providers within Radius*		
	Hip Fracture		*Joint Replacement*		*Stroke*		*Hip Fracture*	*Joint Replacement*	*Stroke*
	Median	*90th Percentile*	*Median*	*90th Percentile*	*Median*	*90th Percentile*	*Mean (SD)*	*Mean (SD)*	*Mean (SD)*
IRF									
MSA	4.5	19.3	5.0	20.3	4.4	19.6	6.4 (8.7)	7.0 (9.1)	6.5 (8.7)
MSA adjacent	25.9	43.8	25.9	44.8	26.0	43.8	6.9 (6.8)	6.9 (8.8)	8.6 (7.8)
Non-MSA	37.2	75.1	38.9	77.8	36.1	71.6	15.4 (16.4)	27.6 (23.6)	18.7 (18.3)
SNF									
MSA	0.0	4.5	0.0	5.2	0.0	4.7	28.8 (37.5)	28.3 (37.1)	26.3 (35.2)
MSA adjacent	0.0	10.4	0.0	10.6	0.0	10.5	23.3 (23.0)	40.4 (32.7)	21.2 (21.7)
Non-MSA	0.0	12.9	0.0	13.9	0.0	12.6	42.6 (51.6)	108.0 (97.3)	34.1 (45.7)

SNF, skilled nursing facilities; IRF, inpatient rehabilitation facilities; SD, standard deviation; MSA, metropolitan statistical area.

blackwellpublishing.com/products/journals/suppmat/HESR/HESR00366/HESR00366sm.htm).[10] The first column shows the predictors of hip fracture patients using IRF care. The second column shows the factors affecting patients' use of SNFs (versus no Medicare-paid institutional care). A positive coefficient in the IRF column here generally indicates that patients with that characteristic are more likely to be discharged to an IRF than a noninstitutional setting, and a positive coefficient in the second column indicates that patients with that characteristic are more likely to go to an SNF. However, because the signs and magnitudes of the effects are difficult to interpret from the multinomial logit regression output, and because virtually all of the effects are highly significant given our sample size, we provide estimates of the marginal effects of these factors below.

The effects of PAC supply factors are strong and similar across conditions. Patients discharged from hospitals with IRF or SNF subproviders are more likely to go to them and less likely to go without institutional care. If all the hip fracture patients in our sample were discharged from a hospital with a related IRF, 34 percent of them would be expected to get IRF care; if none of them were, we predict that only 17 percent would get IRF care. (The corresponding figures for stroke patients are 30 and 17, and 41 and 21 for joint replacement patients.) In addition, hip fracture and stroke patients are less likely to seek IRF care if their discharging hospital has a related SNF; for hip fracture patients having a related IRF reduces the probability of using an SNF by 16 percent. Hip fracture and stroke patients are also less likely to get IRF care if they are discharged from a hospital with a related HHA.

The supply of IRFs relative to SNFs and the distance to each type of care are major determinants of which PAC site is used. The greater the number of IRFs in a patient's area, the more likely s/he is to seek IRF care. Conversely, the greater the number of SNFs in a patient's area, the less likely s/he is to go to an IRF. A one standard deviation increase in the number of SNFs in an area increases the probability that a hip fracture patient will use an SNF by 8.8 percent, and reduces the probability of IRF use by 21.4 percent. Interestingly, for all three conditions, those patients without IRFs in their area are less likely to use institutional care of either type. Distance to the nearest provider of each type is also important for all three types of patients. As distance to the nearest IRF increases, patients are less likely to seek out IRF services and as the distance to the nearest SNF increases they are more likely to seek IRF care; a one standard deviation increase in the distance to an IRF reduces the predicted probability of IRF use in our hip fracture model by a third and increases the probability of SNF use by 11.5 percent. The more nursing home beds in

the county, normalized by the number of persons in the county over age 85, the more likely patients were to use IRFs or SNFs, although the significance of this relationship varied across the conditions.

Demographic, clinical, and other hospital and area characteristics remain important in the multivariate analyses. For example, all but two of the seventeen complications in the model were significant in either the IRF or the SNF branch. We have summarized the significance of these factors in Appendix 1.

Our simulations show the combined effects of the supply factors in the models. Table 3 shows the predicted proportion of patients not using Medicare institutional care, and the predicted proportions using IRFs and SNFs, under three different scenarios. The first sets of rows, labeled "A," under each condition show the effects of supply factors on the range of predicted probabilities of using each care type. As described above, these were computed fixing all of the nonsupply factors, i.e. the sociodemographic, clinical, and hospital characteristics (other than ownership of a PAC provider) at their averages and then re-predicting PAC use for each patient. The range of predicted probabilities in these rows thus reflects only the effects of variation in PAC supply across the country. It shows that a hip fracture patient with average sociodemographic, clinical, and discharging hospital characteristics who lives in an area that puts him/her in the bottom 10th percentile with respect to IRF use—e.g., an area where there are many SNFs nearby but few IRFs—would have an 8.5 percent chance of going to an IRF, whereas one living in an area at the 90th percentile would have a 42.4 percent chance of going to an IRF. Holding nonsupply factors fixed, the interquartile range of the probability of getting IRF care is 20.7 percent, of getting SNF care is 18.9 percent, and of getting no institutional PAC is 4.4 percent.

The second sets of rows, labeled "B" under each condition, present the opposite scenarios. In these simulations the clinical complications, comorbidities, and condition-specific covariates vary as they do in the sample, while the other factors in the model (sociodemographic, hospital, and supply) are fixed at their averages. Looking again at the IRF row for hip fracture patients, a patient at the 10th percentile of likelihood of going to an IRF based on his/her complications, comorbidities, and type of fracture would have an 8.8 percent chance of going to an IRF and a 30.5 percent chance at the 90th percentile. (Given the relationships between IRF use and clinical factors described above, hip fracture patients falling at the lower end of the distribution in terms of rates of IRF use include patients with Medicaid coverage and those with complications and/or comorbidities.)

Table 3: Predicted Rates of PAC Use by Site

	Mean	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	Interquartile Range
Hip							
A. Predictions allowing only supply factors to vary							
No Medicare-paid institutional PAC (%)	11.9	8.2	9.4	11.4	13.8	16.6	4.4
IRF (%)	23.0	8.5	12.9	19.4	33.6	42.4	20.7
SNF (%)	65.1	46.6	56.2	67.5	75.0	79.6	18.9
B. Predictions allowing only clinical factors to vary							
No Medicare-paid institutional PAC (%)	13.1	7.0	8.2	10.4	16.2	23.1	8.0
IRF (%)	21.3	8.8	16.7	22.7	27.1	30.5	10.5
SNF (%)	65.6	50.9	59.0	66.7	73.8	79.3	14.8
Stroke							
A. Predictions allowing only supply factors to vary							
No Medicare-paid institutional PAC (%)	47.2	43.0	44.6	46.8	49.7	52.0	5.1
IRF (%)	21.9	12.9	15.6	18.8	30.3	34.0	14.8
SNF (%)	30.8	20.3	25.3	30.9	36.8	40.8	11.6
B. Predictions allowing only clinical factors to vary							
No Medicare-paid institutional PAC (%)	47.7	25.5	35.3	50.0	60.6	68.3	25.3
IRF (%)	20.9	10.9	15.7	18.2	25.7	35.0	10.1
SNF (%)	31.4	14.0	19.6	28.7	39.9	53.1	20.3
Lower Extremity Joint Replacement							
A. Predictions allowing only supply factors to vary							
No Medicare-paid institutional PAC (%)	34.8	25.4	28.9	33.5	40.5	46.4	11.7
IRF (%)	30.5	13.5	19.0	27.1	43.4	50.4	24.4
SNF (%)	34.6	15.2	25.6	32.4	47.3	54.6	21.7
B. Predictions allowing only clinical factors to vary							
No Medicare-paid institutional PAC (%)	38.1	17.7	26.0	37.8	49.6	60.1	23.6
IRF (%)	28.0	19.3	24.2	28.4	31.5	34.2	7.3
SNF (%)	33.9	20.0	26.1	33.6	41.5	48.0	15.4

SNF, skilled nursing facilities; IRF, inpatient rehabilitation facilities; PAC, postacute care.

Comparison of the interquartile ranges of the predictions holding the nonsupply versus the nonclinical factors fixed shows the relative effects of those factors on the odds of use of each PAC location. These comparisons reveal that, for each condition, IRF use is the most affected by variation in factors related to the availability of PAC. Holding clinical factors constant, the probability of IRF use varies more than 20 percent from 12.9 percent at the 25th percentile to 33.6 percent at the 75th for hip fracture patients; the

interquartile range for stroke patients is nearly 15 percent. For joint replacement patients variation in supply factors shifts the probability of going to an IRF from 19 percent at the 25th percentile to 43.4 percent at the 75th percentile. This effect is more than three times as large as the 7.3 percent shift for joint replacement patients because of complications, comorbidities, and the type of replacement surgery performed. The probability of not using Medicare-covered IRF or SNF care, on the other hand, is more affected by variation in clinical factors for each condition (e.g., 25.3 percent versus 5.1 percent for stroke). SNF utilization shows more variation across conditions, with supply factors affecting the use of SNF care for hip fracture (18.9 percent versus 14.8 percent) and joint replacement (21.7 percent versus 15.4 percent) patients more than the clinical ones.

DISCUSSION

The availability of PAC is a major determinant of whether the three types of patients examined—those with hip fracture, stroke, or lower extremity joint replacement—use PAC care and which type of facility they use. The effects of distance to providers and supply of providers are particularly clear in the choice between IRF and SNF care. The farther away the nearest IRF is, the less likely a patient is to go to an IRF. The farther away the nearest SNF is, the more likely the patient is to go to an IRF. Similarly, the more IRFs there are in the patient's area the more likely the patient is to go to one and the more SNFs there are the less likely the patient is to go to an IRF. In addition, if the hospital from which the patient is discharged has a related IRF subprovider the patient is likely to go to an IRF; and if the discharging hospital has a related SNF subprovider the patient is more likely to go to SNF.

Our simulations demonstrate the importance of the clinical characteristics in the model relative to the PAC availability measures. While the clinical characteristics were generally more important determinants of *whether* a patient used an SNF or IRF, the availability measures were more important determinants of *which* PAC site was used. This suggests that clinical judgments about whether a patient will benefit from PAC play a role in the decision to use it, but that factors such as ease of referrals and accessibility of providers take precedence when choosing sites of care.

The major limitation of this study is that there could be other, unmeasured factors that are affecting the choice of PAC site. In particular, we are unable to observe whether patients used non-Medicare nursing home care

after their acute stay.[11] Thus, we are unable to distinguish those patients going to nursing homes (paid for by Medicaid or the patients themselves) from those patients returning to their homes. In addition, there may be other aspects of PAC supply—e.g., the number of unoccupied nursing home beds—that affect PAC use. Clinical factors than cannot be measured in discharge data, such as level of functioning, and sociodemographic factors, such as availability of caregivers, also affect PAC choices (Inouye et al. 2003). In addition, there could be important aspects of patient behavior or demand that affect the use of PAC, and that may even affect the supply of PAC in an area. Overall, our models did not explain much of the variation in PAC use. Nonetheless, they did include numerous patient and PAC supply factors that affected the choice of initial site of PAC.

The relationships we found were largely consistent across the three different conditions we examined, which were chosen to be representative of major types of PAC patients. Conditions that are treated predominantly with one type of PAC, however, would likely be less affected by PAC supply. It is also possible that these patterns could have changed since 1999 with the implementation of the home health and IRF prospective payment systems, but in other ongoing work we have not discovered major changes in the use of PAC for these three conditions.

While some might conclude that the evidence of higher utilization of services in areas with a greater supply of services is inefficient, there is little evidence-based research about PAC from which inferences can be drawn about the appropriate level of PAC. There is some evidence that aggressive postacute rehabilitation produces better functional outcomes for stroke but not for hip fracture, so it is noteworthy that PAC supply factors shifted use least for stroke patients (Kane et al. 1996, 1998, 2000; Kramer et al. 1997; Deutsch 2003). Still, predicted IRF use in our models varied tremendously across areas with different levels of PAC supply for all three conditions. More research is needed to evaluate whether these findings indicate that a greater supply of PAC leads to both greater use of institutional care and better outcomes, or whether it leads to unwarranted expenditures of resources and delays in returning patients to their homes.

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NOTES

1. Services provided in long-term care hospitals (LTCHs), outpatient departments, clinics, or physicians' offices can also be considered postacute care under some circumstances. Care provided in nursing homes can be delivered to patients when they leave the hospital, but it is generally considered long-term care rather than postacute care.
2. This framework emerged from our discussions with experts and practitioners familiar with the acute care discharge planning process and PAC admissions.
3. The patients without complete data included patients enrolled in HMOs at the time of their admission or within 4 months of their discharge or for whom Medicare was not the primary payer for their acute stay.
4. Patients were identified as being nursing home residents prior to admission using place of service and CPT codes on physician claims for services delivered to such residents. We developed and validated this identification method using residence histories recorded in the Medicare Current Beneficiary Survey and linked acute care and Part B claims. We found the indicator to have a sensitivity of 86.3 percent and a specificity of 95.2 percent in detecting patients who were in nursing homes immediately prior to their acute admission.
5. In addition, care delivered in LTCHs often qualifies as institutional PAC as well. We do not analyze LTCHs here, however, since there are relatively few of them. Less than 0.05% of Medicare patients discharged from acute care use these facilities, and the facilities do not all provide postacute care. Many LTCHs, for example, serve a primarily psychiatric population (Liu et al. 2001).
6. We also fit models in which we interacted distance measures with the area type measures in order to allow distances to have different effects across rural versus urban areas. These interaction variables did not appreciably affect the models, so we present the more parsimonious versions.
7. These requirements allowed us to correct for a "snowbird effect" that resulted from patients accessing home health services in a geographic location far from their zip code of record because of seasonal residence.
8. We calculated the correlation between our measures of PAC supply and more typical measures of supply that take into account only the number of providers within patients' counties. As expected, the measures of numbers of providers were positively correlated. However, they were strongly correlated only within MSAs. In addition, our radius-based measures had higher coefficients of variation, suggesting that they are more sensitive to variations in availability.

9. An alternative analytic strategy would have been to use nested logit models, because of the independence of irrelevant alternatives assumption required with the multinomial logit. We attempted to fit such models, however, we could not estimate them because the only choice-specific attributes of the PAC options available to include in the models were distances from the site to beneficiaries' homes.
10. There are approximately 15,000 SNFs and they are located in over half of the zip codes in the country. Median distance from patient to the nearest SNF provider is, therefore, consistently equal to zero.
11. Some would argue that we should include state dummies in these regressions because many within the PAC industry believe that Medicare's fiscal intermediaries, which operate largely within state borders, set policies that affect the use of PAC. However, it is our understanding that fiscal intermediaries are supposed to enforce practice standards within their areas rather than set them. If that were the case, then controlling for state would cause us to underestimate the effects of supply given that practice patterns and supply are simultaneously determined. Given the arguments on both sides, we did run our models with state dummies and while these dummies were jointly significant, they did not alter our main conclusions.
12. While our indicator of nursing home residence was precise enough to exclude patients likely residing in a nursing home prior to their admission to the hospital, it was not precise enough to pinpoint which patients went to nursing homes for stays not covered by Medicare after discharge from acute care.

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EXHIBIT 9

Draft Meeting Summary
MHCC Acute Rehabilitation Work Group
Third Meeting, June 12, 2012
MHCC, 4160 Patterson Avenue, Baltimore, MD 21215

Work Group Members Attending

Ingrid Black
Dr. Scott Brown
George Carlis
Cindy Kelleher
Kevin Platt
Barry Rosen
Cynthia Salorio
Walter Smith (by phone)
Jim Xinis

Commission Staff Attending

Eileen Fleck
Chris Daw
Paul Parker

Others Attending

Pat Cameron, MedStar Health
Chris Hall, Adventist Health Care (by phone)
Anne Hubbard, Maryland Hospital Association
Carolyn Jacobs, RLLS/HealthSouth

Introductions and Review of October Meeting Summary

The meeting adjourned at approximately 1:10pm. Members present introduced themselves. Eileen Fleck noted that Kevin Platt is a new member who will be replacing Jennifer Wilkerson. Ms. Fleck noted that she did not receive any proposed changes to the draft meeting summary for the previous meeting, October 2011, and asked if anyone had changes. She provided some time for members to review the meeting summary again. No one had comments, but she indicated that members could again review it before she would post it on the MHCC web site as a final document.

Staff's Goals for Draft State Health Plan

Ms. Fleck stated that in revising the SHP she tried to be responsive to the feedback that she had received from the workgroup. Previously, the workgroup expressed concern about access barriers resulting in low use rates. The group also wanted the SHP to provide more opportunities to propose new services. Ms. Fleck noted that it is important to balance those considerations with maintaining quality services. She also explained that staff made changes necessary to maintain consistency with other SHP Chapters that have recently been updated.

Meeting Structure

Ms. Fleck stated that she wanted to find out which issues work group members most wanted to discuss. She asked each person to note their primary concerns and stated that she would use the information to structure discussion of the draft SHP for the remaining time.

Concerns Raised by Work Group Members

Jim Xinis noted that geographic issues are area of concern for him, specifically access. He noted that at the October meeting the group spent a lot time discussing travel time. Kevin Platt mentioned alternatives to IRF care, such as SNFs. Mr. Platt also mentioned other markets, such as facilities located in the District of Columbia or other adjacent states. Cindy Kelleher mentioned the requirement for CARF accreditation. Other issues mentioned were research expectations, the District of Columbia, and the bed need methodology. George Carlis mentioned geographic access and how the standard would be implemented. He also noted that the age groups used in the need methodology may be unnecessarily complex; fewer age groups might be fine. Dr. Scott Brown noted that he shares many of the concerns raised, and he added that the definition of acute inpatient rehabilitation should be discussed.

Ms. Fleck suggested that the group begin by discussing access issues. Mr. Xinis mentioned that he disagrees with the decision to include all of Prince George's County in the Southern Region. He stated that people in Southern Maryland do not travel to Laurel, so expecting people to go there doesn't make sense from an access standpoint. He stated that dividing Prince George's County between the Southern Region and Montgomery County makes sense. He also mentioned that travel time was discussed at length at the last meeting, but the draft does not appear to reflect the discussion as he recalls.

Walter Smith of Health South joined the meeting by conference call. Ms. Fleck explained what had transpired before he joined the call. Paul Parker then suggested that many of the priority issues mentioned by members of the work group pertain to the bed need methodology and suggested that Ms. Fleck explain the bed need methodology to everyone before then discussing the relevant issues raised. Mr. Parker noted that the objective of the meeting was to receive feedback that inform further revision of the draft SHP, and he anticipates another meeting before then soliciting wider informal public feedback. With regard to the bed need methodology he explained that it is new approach to evaluating the demand for services. The current SHP just has a trigger mechanism; if occupancy rates reach a certain level, then CON applications for acute inpatient rehabilitation services will be accepted for review.

Need Methodology

Ms. Fleck explained the bed need methodology by stating that the health planning regions that she proposed are slightly different from the current definitions. Cecil County and Carroll County would be moved from the Eastern and Western Regions, respectively, to be part of the Central Region. She also noted that she had previously proposed including the District of Columbia as part of the Southern Region, but that idea was not well received. In response to Mr. Xinis's comment about splitting Prince George's County among two health planning regions, she stated that it would be difficult to use boundaries other than those of counties. Mr. Xinis again explained the access issues in Prince George's County. Ms. Fleck commented that the group could return to that issue, but first she wanted to finish explaining the need methodology.

She stated that for the need methodology the intent was to use the average discharge rate for five and ten year periods as well as the average length of stay for five and ten year periods. However, there are currently not ten years of data available for District of Columbia hospitals. She mentioned that MHCC may try to get some information directly from the relevant hospitals.

The tables with projections provided in a handout are based on five-year and seven-year averages. She explained that the simple average was used because she was concerned that using the change from year-to-year would result in projections that didn't make sense because of the wide variation for some groups from year-to-year. She then explained that in the proposed need methodology the average discharge rates are adjusted by the current utilization patterns and then multiplied by the ALOS and the projected population to get the projected number of days. She also noted that the bed need projection would be based on 80 percent occupancy, but the work group may want to consider whether different levels should be used based on the number of beds in a region. She also noted that the projection is for ten years into the future, and the workgroup may want to consider whether a shorter time frame should be used.

Ms. Fleck explained that she did not feel comfortable picking an adjustment to the use rates, such as assuming at a minimum the statewide average use rate would be achieved, even though she understands that there is concern that the low historic use rates in some jurisdictions reflects access barriers. However, she stated that the work group should feel free to discuss the issue. Mr Xinis brought up looking at use rates of other states to compare with Maryland. Ms. Fleck stated that she looked at the use rates of IRF care for states adjacent to Maryland (PA, DC, WVA, VA) , based on the Medicare fee-for-service data, for particular DRGs. She stated that the rates do vary, with the rates for Pennsylvania residents typically being much higher. She noted that Pennsylvania has many IRF beds per capita, and the development of acute inpatient rehabilitation capacity is not limited by CON. The use rates for DC residents were generally not that different compared to Maryland, as she recalls. With regard to using the rates from other states to make adjustments, she explained that it's difficult to determine whether higher use rates mean that patients are receiving higher quality care or whether higher rates stem from over-use in some cases.

Ms. Kelleher mentioned that she thought substitution of skilled nursing care for acute inpatient rehabilitation care was occurring in Southern Maryland. She thought that data had been discussed at the last meeting. Ms. Fleck responded that she also looked at referral rates to SNF care for the Medicare data. She looked at the data at the state-level though, not for Maryland jurisdictions.

Barry Rosen pointed out that on page 4 of the draft SHP the wide variation use of IRF care is described, and it states that research shows the variation is not tied to patient characteristics. However, the need methodology just perpetuates the problem of patients not being able to access care. He commented that using the statewide average could even out the variability and would be better to use for projections. He also mentioned that Shore Health System opened a new IRF facility in the Eastern Region and was able to fill it. Ms. Fleck again explained that she was not comfortable picking a specific adjustment to use-rates to address access barriers and decided to address the issue by allowing an applicant to demonstrate that access barriers were the reason for low use rate, instead of relying strictly on the need projection to evaluate the need for acute inpatient rehabilitation services.

Mr. Parker explained that Mr. Rosen's proposed approach, allowing the need projection to determine, solely or primarily, whether need exists, contrasts with Eileen's approach, which is one where the need projection carries less weight. Mr. Parker also noted that in contrast to the

current plan which has docketing rules, the proposed plan has a review schedule, so anyone is able to propose a project. He noted that on page 8 of the draft SHP there is a description of the need standard and the plan includes a minimum size requirement. He suggested that it would be useful for Eileen to make other projections with adjustments to the use-rates. He noted that if the approach proposed by Mr. Rosen were to be used, where the need forecast is more powerful in evaluating the need for proposed projects, then the draft SHP would need to be revised in other ways too. Ms. Kelleher asked for clarification on whether the need projection would be disregarded when an applicant proposes that access barriers exist. Ms. Fleck responded that the need projections would be disregarded if an applicant proposes access barriers exist.

Ms. Kelleher stated that she doesn't mind a simple need projection as long as there is an opportunity to make a case. Ms. Fleck stated that she thought that having a lot of flexibility and not having the need projection be the absolute determinant of whether need exists is a reasonable way to address the concerns raised. However, she would welcome ideas about how to refine the need projection, to make adjustments for appropriate use of inpatient rehab beds.

Mr. Rosen stated that he thinks the need projection is a problem because he thinks it will still be relied upon by Commissioners in making CON decisions. He also commented the minimum size standard mentions an occupancy rate that is not consistent with the need methodology. It appears 70 percent is the standard in one case and 80 percent in the other case. Ms. Fleck agreed that it would be appropriate to change the standard for consistency. Ms. Kelleher also noted that the period of time by which an applicant should achieve the expected occupancy should be stated. Ms. Fleck agreed. Mr. Parker stated that instead of referring to a minimum unit size of ten beds, average daily census should be referenced.

Mr. Xinis stated that he wanted to make a general comment about cost efficiency. He stated that a higher use rate for acute inpatient rehabilitation is not a negative. He thought the SHP should state that lower use rates are not necessarily good and may be bad. He expects that the projections will be an appendix to the SHP, and Commissioners will see those tables and use them to make their decision. That historic use rates cannot be relied upon need to be a key message throughout the document. He asked if anyone disagrees. Ms. Kelleher agreed with Mr. Xinis. She stated that she thinks data shows that there is high SNF use when IRF rates are low. She also noted that readmission rates are high for those in SNF care. Mr. Xinis mentioned that he recently had a two hour conversation regarding a patient at Walter Reed who was very sick and his family wanted him to be cared for at the SNF for Calvert Memorial Hospital, even though acute inpatient rehabilitation would be better. He stated that there are many patients in gray areas who may go to an SNF for care and then they wind up getting readmitted.

Ms. Fleck asked if sometimes patients go to SNF care because they cannot tolerate three hours of therapy and whether those patients might be more likely to be readmitted. Ms. Kelleher stated that it a family doesn't want to drive two hours for care, then the family will find a substitute. She doesn't know all of the reasons for readmissions, but if a physician is seeing a patient every day then there is less chance of a readmission.

Dr. Brown asked what purpose the SHP serves. He wanted to know whether it was intended to be a guide for applicant or a decision tool for the Commission. He wanted to know if

the need projections would be used to strictly make decisions. Mr. Parker and Ms. Fleck explained that the language in the SHP should guide decisions and so applicants use it as well to justify their proposals. Mr. Parker noted that in addition to the SHP Chapter, decisions are based on other criterion such as need, the cost-effectiveness of alternatives, impact, viability, and the applicant's track record on prior CONs. He also explained that the need methodology description is part of the SHP, but the projections are not part of the plan itself; the projections are a supplement.

Mr. Parker asked for feedback from those work group members that already provide acute rehabilitation services regarding whether they favor the current approach to need, which is a simple forecast based on historic trends and lots of flexibility for applicants to justify their projects, or whether they favor a more rigid adherence to need projections that have been adjusted to reflected some assumptions regarding appropriate utilization of acute rehabilitation services.

Ingrid Black, in response to Mr. Parker's question, stated that it's a tough choice. With changes in policy that sometimes occur, as Kevin Platt mentioned earlier, a whole class of patients might suddenly be regarded as inappropriate for acute rehabilitation. For that reason she thinks a model with more flexibility may be better.

Ms. Fleck mentioned that one thing she considered was including language that stated if occupancy rates were very low, then even if the need projections show a need for beds, it would be ignored. The problem though is that such language makes it seem like the need forecast is not valid. She asked if anyone had thoughts on that approach.
Mr. Carlis commented that he did not think it would be a good idea. He felt that as long as the need projection is a guideline, then that's adequate. Experts can then make a case. Mr. Platt added that occupancy is sometimes artificially low for reasons such as having several isolation cases in semi-private rooms. He favors a more flexible model as well.

Travel Time

Mr. Xinis commented that there is no discussion of travel time in the draft SHP. He suggested that there be a map depicting the locations of providers and travel time. Someone noted that the time of day could make a big difference in travel time. Mr. Xinis thought that could be incorporated. Mr. Parker noted that Commission staff does not have the ability to do sophisticated travel-time analyses that factor in the time of day. Commission staff relies on consultants and contractors for those analyses.

Dr. Brown stated that he is concerned about trying to define appropriate travel time in general for regions. Ms. Kelleher pointed out that sometimes people may be close, but just won't cross a bridge for example or cross a certain road. Mr. Platt also gave an example from when he worked in Hawaii. He noted that on an island that is 30 miles wide, you often couldn't get people from the one side of the island to visit their family on the other side in the hospital, especially if it was raining.

Mr. Xinis commented that maybe he should retract his comments about travel time. Ms. Fleck stated that the discussion today is similar to her recollection of the discussion at the last

work group meeting. There was not consensus on a definition of appropriate travel time or whether to include such a standard in the SHP. Some other states do have such standards for acute rehabilitation though, as was discussed at a prior work group meeting.

Geographic Barriers

Cynthia Salorio commented that she thought it was a good idea not to include too much detail on some things, like geographic barriers, even though it would not apply to her hospital. Mr. Carlis asked if geographic barriers were the only exception to the need methodology. Ms. Fleck stated that geographic barriers had to be one of the barriers. Someone asked whether there are other barriers that should be considered. Mr. Carlis mentioned other barriers could be quality or lack of funding.

Mr. Rosen stated that low use rates could be due to access barriers or for other reasons, such as quality. He again stated that he opposes relying on historic use rates. He also commented that Commission staff does not like competition. Ms. Fleck disagreed that she dislikes competition and noted that the number of facilities is limited in order to preserve quality of care. She also expressed that the requirement for CARF accreditation should insure that providers meet quality standards, and therefore, she is skeptical of allowing applicants to justify new services on that basis alone. Ms. Black stated that providers do have to publish outcomes to be accredited. Mr. Carlis noted that in Maryland all providers must be CARF accredited. Dr. Brown asked whether an applicant could cite other barriers in making the case for IRF services. Ms. Fleck explained that geographic barriers must be one of the factors, but it would not be the only basis an applicant could use. Mr. Carlis asked about lousy marketers and how that factor would be considered. Mr. Parker concluded the discussion by saying that it sounds like the proposed forecast model without adjustments is favored by the group, but there needs to be some re-working of the language related to geographic access barriers and the requirement to account for patients who are likely to be served at other locations due to their specialized needs. The group thinks that a range of different factors should be considered, not just geographic access.

Ms. Fleck asked that work group members provide more examples of barriers that they think should be considered. Mr. Rosen mentioned that he thinks there could be higher use by whites than blacks; race could be a key factor. He again stated that he thinks the current need methodology is not good. Ms. Kelleher stated that programmatic barrier can exist. People with brain injuries or other neurological problems may be more appropriately treated in a specialized program that is far away and even though an acute rehabilitation facility is nearby, it may not have services that best meet their needs. Ms. Black also mentioned that a patient with a ventilator may not be able to served at some locations. Ms. Fleck commented that in her view, both of the examples given still fit into the category of geographic barriers. Mr. Carlis expressed concern that the plan would be limited to geographic access barriers. Ms. Fleck asked work group members to email her with any other examples that they would like her to consider. Mr. Parker suggested that the work group move on to other issues. Ms. Fleck brought up that some of the other issues mentioned at the beginning of the meeting tie with the need methodology, such as market ties.

Health Planning Regions/Markets

Mr. Carlis asked why the District of Columbia had to be considered in looking at the need for the Southern region, but not for Montgomery County. Mr. Parker explained that the migration patterns of patients were evaluated for the current health planning regions and many of the patients in the Southern region receive services at facilities in the District of Columbia (DC). Ms. Fleck stated that about 50 percent of the residents in the Southern region who use acute inpatient rehabilitation services go to DC for those services.

Mr. Xinis commented that the reason patients go to National Rehabilitation Hospital (NRH) is lack of access to care in Maryland. He noted that NRH is a great facility that specialized patients will go to, but he thinks for Maryland residents access drives their decisions. Ms. Salorio asked for the rationale behind moving Cecil and Carroll Counties into the Central region. Ms. Fleck explained that residents in those jurisdictions appeared to use facilities in the Central region more often than facilities in their respective, current regions. Ms. Fleck added that the change doesn't influence the need forecast by much. Ms. Salorio commented that the changes to the regions could make it more difficult to set up acute rehabilitation services in either Cecil or Carroll Counties. Ms. Fleck responded by saying that the SHP includes language indicating that for proposed services in jurisdictions on the border of another region, the need in both regions will be considered. Mr. Carlis commented that he didn't get that from the SHP.

Ms. Kelleher commented that she thinks out-migration to areas other than the District of Columbia justifies looking at other states. She mentioned that in York, Pennsylvania there are lots of people from Maryland crossing the border for services there. Ms. Fleck commented that the District of Columbia should be considered because there is such a large number of Maryland residents using services in the District of Columbia. Other work group members agreed with Ms. Kelleher that the District of Columbia should not be singled out.

Mr. Carlis asked whether the impact on facilities outside of Maryland would be considered as a negative or a positive. Ms. Fleck stated that her own view is that the Commission should care if there is a large negative impact on such facilities because efficiency should be promoted. Mr. Xinis asked how Medicaid deals with the issue. He knows the states negotiate, but is it generally a gain or a loss? He stated that in the District of Columbia the charges are about 250 percent above Maryland in general. Ms. Black responded by saying the rate is negotiated each time, so it's not possible to answer his question. Mr. Xinis added that he thinks keeping people in Maryland makes sense due to drive-time considerations, costs, and efficiency. He thinks those issues go beyond acute inpatient rehabilitation services.

Impact

Mr. Parker stated that the impact section needs significant revision and requested additional feedback on it. He suggested that the reference to chronically underutilized facilities be deleted.

Other Comments

Mr. Rosen stated that use of the word "must" should be considered more carefully.

Definitions

Dr. Brown wanted to discuss the definition of acute inpatient rehabilitation. Commission staff noted that the definition included was from the current State Health Plan. Both Dr. Brown and Ms. Kelleher suggested that the CMS definition be used instead. The current definition implies that certain patients would be eligible for acute inpatient rehabilitation who are not eligible under the CMS definition. It was noted that the current definition also was not accurate at the time of the last update to the SHP on acute inpatient rehabilitation services.

Age Groups

Mr. Carlis suggested that using fewer age groups in the need methodology would be adequate. He suggested using an 18-64 age group rather than 18-44 and 45-64. Ms. Kelleher agreed that using fewer age groups would be fine.

CARF Accreditation

Ms. Kelleher asked about allowing Joint Commission accreditation instead of only CARF accreditation. She noted that it is expensive to go through two accreditation processes. Medicare requires Joint Commission accreditation. Dr. Brown and Mr. Platt both stated that they are opposed to getting rid of CARF because they feel it establishes high standards. Ms. Salorio also pointed out that for a facility/unit within a larger institution many standards may not be applicable. Carolyn Jacobs, an attorney attending the meeting, stated that the CARF requirement is in statute and cannot be changed through changing the SHP.

Research Policy

Ms. Fleck stated that the current SHP includes language pertaining research conducted by acute inpatient rehabilitation providers, and it seems like a good idea to include similar language in the revised draft SHP. Mr. Xinis expressed concern about an applicant proposing a small acute rehabilitation unit not being able to meet research requirements. Ms. Fleck responded that she did not see the research policy as something that could lead the Commission to turn down an applicant's proposal. Someone asked about the rationale for the language in the current plan. Ms. Salorio speculated that maybe it was the result of a historical view that research was being conducted without patient consent and instead research proposals should be evaluated by an IRB.

Stroke

Mr. Platt pointed out that on page 3 of the draft SHP there is a reference to subcategories of acute rehabilitation in the last sentence before section .03 Issues and Policies, and he thinks stroke should be mentioned too. Dr. Brown commented that comprehensive rehabilitation services includes everything not mentioned specifically. He also noted that the specific categories listed, such as brain injury and spinal cord injury are a small percentage of patients receiving acute inpatient rehabilitation services and more easily defined as a discrete categories of patients. He mentioned that he thought Mr. Platt might be trying to say that stroke patients are better served in an acute rehabilitation setting rather than a sub-acute setting. Mr. Platt confirmed that Dr. Brown understood his point.

Next Steps

Commission staff stated that it would revise the draft SHP again and bring it to the work group for discussion again in August possibly. Mr. Parker asked them work group members submit written comments on the draft discussed at the meeting. After the next work group meeting, Mr. Parker stated that hopefully the draft will be ready for circulation for informal comment. Commission staff would then propose publishing the rule for a formal comment period. Mr. Xinis commented that it wouldn't be until early 2013 that applications would be accepted. Mr. Parker noted that the review schedule would be published separately from the State Health Plan. The meeting adjourned at approximately 3:30pm

EXHIBIT 10

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CHS-5561

March 27, 2013

SENT VIA ELECTRONIC TRANSMISSION

Eileen Fleck
Acting Chief for Specialized Services
Maryland Health Care Commission
4160 Patterson Avenue
Baltimore, MD 21215

Re: Draft State Health Plan for Facilities and Services: Specialized Health Care Services – Acute Inpatient Rehabilitation Services, COMAR 10.24.09

Dear Ms. Fleck:

This letter is written to provide the comments of MedStar Health (MedStar) on the Draft State Health Plan for Facilities and Services: Specialized Health Care Services – Acute Inpatient Rehabilitation Services (the "Draft Chapter").

MedStar supports the update of this Plan chapter, and the use of a stakeholder workgroup to assist in answering some of staff's questions during the plan development process. However, as discussed below, MedStar objects to the Draft Chapter in its current form. Our objection to the Draft Chapter is as much a result of what it does not contain as what it does contain. The existing Chapter governing acute inpatient rehabilitation recognizes this service as a specialized health care service for which planning is regionalized, and, like other chapters of the State Health Plan that govern specialized health care services, contains policies and CON standards that enforce these core principles. Without even acknowledging that it is doing so, let alone providing support for doing so, the Draft Chapter retreats from these core principles and supporting standards. Instead, it would adopt what amounts to a preference for increasing access, at the expense of the principles underlying specialization and regionalization, without demonstrating that there is a problem with access currently. While the Draft Chapter pays lip service to acute inpatient rehabilitation as a specialized service and designates the same five planning regions as the existing Chapter, the Draft Chapter contains no standards that support the purposes of designating a service as specialized and regionalized. Indeed, it would adopt standards that undercut these purposes.

For these and the other reasons set forth below, we request that the Commission not move forward with the Draft Chapter and develop a new Chapter that retains and provides for enforcement through the CON process of the core principles of specialization and regionalization.

1. MedStar's Acute Inpatient Rehabilitation Programs

MedStar Good Samaritan Hospital (MGSH) operates 51 licensed rehabilitation beds, and provides inpatient rehabilitation services to over 1,500 patients annually. MGSH is accredited by CARF for Comprehensive Integrated Inpatient Rehabilitation. MGSH also has a CARF accredited specialty program for Stroke. MGSH has a long history and strong reputation as one of the largest, most experienced and successful medical providers of inpatient rehab services in the state. The Comprehensive Integrated Inpatient Rehabilitation Program (CIIRP) at MGSH was established in 1968 in partnership with the Johns Hopkins University School of Medicine and the Johns Hopkins Department of Physical Medicine and Rehabilitation. The CIIRP provides rehabilitation care for all types of patients including those with some with the most medically complex and disabling conditions i.e., stroke, spinal cord injury/dysfunction, heart surgery, amputation, and orthopedic injury and surgery. MGSH's CIIRP is also a leader in the treatment of rehabilitation patients who are ventilator-dependent and those requiring renal dialysis. The CIIRP has an experienced medical team that includes board-certified physiatrists, specialty therapists, rehabilitation nurses, neuropsychologists, case managers, and other professionals who manage these high acuity patients. Through its partnership with Johns Hopkins, MGSH is able to host a strong residency program that provides invaluable training in physical medicine and rehabilitation physiatry, rehabilitation psychology, and neuropsychology.

MedStar Union Memorial Hospital (MUMH) offers a Comprehensive Integrated Inpatient Rehabilitation Program with 18 licensed beds. As a member of MedStar Health, an integral part of the program is partnership with MedStar National Rehabilitation Network. MUMH provides rehabilitative care with integrated medical, nursing and therapy services to patients with medically complex and disabling conditions, including those caused by open heart surgery, cardiovascular disease, spine surgery, joint replacements, stroke, amputation and neurological disorders. MUMH's CIIRP was nationally ranked by the national outcome reporting agency Uniform Data System (UDS). The score of 79.3 places this rehabilitation program in the top 20% of 850 rehab facilities. This CIIRP is also accredited by the CARF.

MedStar National Rehabilitation Hospital (NRH) is a private, not-for-profit facility located in Northwest Washington, D.C. MedStar NRH is fully accredited by The Joint Commission and the Commission on Accreditation of Rehabilitation Facilities (CARF), and has CARF accredited specialty programs for Brain Injury, Spinal Cord Injury, and Stroke. NRH is licensed for 137 beds (128 for adults and 9 for children), with approximately 2,200 inpatient visits annually. Nearly 50% of these patients live in Maryland, making NRH one of the largest acute inpatient rehabilitation providers chosen by Maryland residents. The MedStar National Rehabilitation Network also includes 34 outpatient sites located in Washington, D.C., Maryland and Northern Virginia. NRH treats patients between the ages of 6 and 18 years of age on its 9

bed pediatric unit. The National Center for Children's Rehabilitation is a joint service of MedStar NRH and Children's National Medical Center. MedStar NRH's services are designed specifically for the rehabilitation of individuals with disabling injuries and illnesses such as stroke, brain injury, spinal cord injury and disease, arthritis, amputations, post-polio syndrome, chronic pain, back and neck pain, occupational injuries, cancer and cardiac disease that require medical rehabilitation, and other neurological and orthopedic conditions. MedStar NRH has appeared on the "Best Hospitals" list in U.S. News & World Report for 18 consecutive years and is currently ranked among the top hospitals for medical rehabilitation in America.

2. Acute Inpatient Rehabilitation: A Specialized Service In Name Only Under The Draft Chapter

The Draft Chapter continues to identify acute inpatient rehabilitation as a specialized service, but contains almost no definition or discussion of the concept of specialization. The Draft Chapter contains one paragraph regarding specialization (under .03—Cost-Effectiveness and Efficiency of Care). The Draft Chapter contains five policies for acute inpatient rehabilitation services (p. 5). None of those policies recognizes acute inpatient rehabilitation service as a specialized health care service, and several of them run contrary to specialization by prioritizing greater access. In contrast, the existing Chapter, like other specialized service chapters, contains an entire set of principles related to specialization (.03 –Principles for Planning Specialized Health Care Services). There is no explanation or support in the Draft Plan for this change in course. An added level of complexity that defines specialized services clearly applies to acute inpatient rehabilitation - not only specially trained nurses and physicians, a separate "special hospital" license category, and an accrediting body to assure high standards of quality, but also accreditation is required for licensure of acute inpatient rehabilitation programs in Maryland.

The absence of these principles has substantive consequences. As explained in the existing Chapter governing acute inpatient rehabilitation (.03A):

> *The rationale for identifying a set of principles for specialized health care service is to serve as a guide in developing strategies to achieve the Commission's mission. The principles build on that basic framework and relate to what the Commission considers to be its most important objectives. The principles encourage a consistent approach to planning the development of specialized health care services and contribute to setting priorities for the allocation of health resources in general.*

The same guiding principles are found in chapters governing other specialized health care services. The existing Chapter recognizes as a core principle of acute inpatient rehabilitation as a specialized health care service that "any expansion of the number or distribution of specialized health care services should allow the proposed and existing services within the region to achieve and sustain the volumes associated with optimal health outcomes and cost-efficiency." By failing to adopt this or the other guiding principles for specialized services, the Draft Chapter does not serve as guide for strategies to achieve any mission, nor encourage a consistent approach to planning.

Not only does the Draft Chapter fail to adopt any guiding principles of specialization applicable to other specialized health care services, it adopts standards that undercut those principles. Specifically, as will be discussed further below, it adopts standards to promote increased access to acute inpatient rehabilitation at the expense of specialization and quality of care, without any finding, let alone substantiating, that any access problem currently exists.

3. The Departure from Regionalization In The Draft Chapter

As little as the Draft Chapter contains in terms of policies supporting acute inpatient rehabilitation as a specialized service, the Draft Chapter is virtually silent regarding the complementary concept of regionalization. Regionalization means shared resources to avoid costly duplication and promote quality, efficiency and availability of essential services. While the concept is prominent in the existing Chapter, it is difficult to find any mention of regionalization in the Draft Chapter, let alone supporting standards. The existing Chapter explains (.02D):

> *The concept of health care regionalization refers to the appropriate distribution of services with regard to their geographic location and level of care. It implies an organized and integrated hierarchy of services with levels of care that are coordinated and mutually supportive. Within the health care delivery system, the population is directed to appropriate staffed and equipped services based on the nature and severity of illness.*

In contrast, while the Draft Chapter retains the five health planning regions for need projections, it never mentions regionalization or its purpose, and contains only a single, somewhat oblique reference to serving a "regional population base." The Draft Chapter contains no policies promoting, supporting or even defining the benefits of regionalization.

Further, the Draft Chapter adopts standards that undercut the concept of regionalization. As will be discussed further below it adopts an entirely new project review standard .04(B(1)) to promote increased access to acute inpatient rehabilitation at the expense of regionalization and specialization as well as quality of care.

The Draft Plan also departs from regionalization in failing to take into account acute inpatient rehabilitation capacity in neighboring jurisdictions like the District of Columbia. As in other areas of public policy, such as emergency preparedness, regionalization crosses the Washington/Maryland line. The existing Chapter recognizes (.03b(4)) that "[a] portion of the State's population achieves reasonable geographic access to specialized health care services by using out-of-state services...." There is no rational basis for the Draft Plan to ignore the utilization of regional resources outside of the State.

4. The Unsubstantiated Access Problem Underlying the Draft Chapter

The Draft Chapter largely abandons specialization and regionalization in favor of increased access. Specifically, it adopts a new review standard entitled "Access" which requires that a new unit "shall be located to optimize accessibility for its likely service area population." .04B(1). The need projections in the Draft Chapter demonstrate that there is *no net need* in any region except Montgomery County.[1] Yet the Draft Chapter also expressly permits projects not supported by projected net need in order to address "access barriers." .04B(2)(d).

While it creates a new pathway for projects unsupported by the need projections in order to address "access barriers," the Draft Chapter does not find, let alone substantiate, that an access problem exists. Indeed, it cites (in .03, p. 4) the Medicare Payment Advisory Commission's March 2012 annual report for the conclusion that "access to acute inpatient rehabilitation services is *not a problem* for the Medicare population, which comprised approximately 60 percent of discharges from acute rehabilitation providers in 2010, because of the relatively stable number of providers and available beds." (emphasis supplied). The Draft Chapter goes on, however, to state that there is a "wide variation in the use and availability of these services nationally and in Maryland...." It cites national data for this but cites *no data* for the statement that this "wide variation" exists in Maryland. It also cites non-Maryland research as "suggest[ing] that the distance to providers, relative to a patient's residence may be a more powerful predictor of the use of acute inpatient rehabilitation services than the clinical characteristics of patients." While this is no doubt an issue in the larger states where travel times are significant, it may not be relevant to such a small state as Maryland.

[1] As discussed below net need in Montgomery County appears to be inflated by the failure to account for National Rehab Hospital in the District of Columbia and the use of 2010 baseline data.

Even if this variation could be shown to exist in Maryland, it does not follow that Maryland has an "access barrier" let alone one that can only be addressed by adding new capacity. The Draft Chapter is silent about other more cost effective means to address access barriers, such as education and outreach.

Although improving "access" is a prominent part of the Draft Chapter, there is no data in the Draft Chapter to support the existence of an access problem. Moreover, readily available data demonstrates that there is no access problem in Maryland. According to Medicare data from the U.S. Health Indicators Data Warehouse, Medicare inpatient rehabilitation discharges in Maryland are among the highest in the country when discharges from Maryland hospitals (that do not report to Medicare) are taken into account. Consideration of discharges from out-of-State providers such as NRH (which the Draft Chapter fails to do) would demonstrate even greater access to this service on the part of Maryland residents. Approximately fifty percent of NRH's discharges last year were Maryland residents, making it one of the largest providers of acute inpatient rehabilitation services for Maryland residents, yet the Draft Chapter ignores the critical role of this regional resource.

The Draft Plan includes a new policy section entitled "Need for Capacity" that also refers to, but does not substantiate or define, "access barriers" to service. Referring to the longstanding approach of looking at historic data to project demand, this section refers to "recent and anticipated changes that may significantly alter the capacity required for acute inpatient utilization" as justification to consider "access barriers" in addition to historic patterns in determining whether additional capacity is needed. Nothing in the Draft Chapter identifies, let alone analyzes the impact of the "recent and anticipated changes" that call for this significant change in health planning policy. Yet this cryptic reference is the basis for allowing for projects that are inconsistent with the need methodology, the need for which will, under the Draft Chapter, be determined by unspecified standards of demonstrating an "access barrier."

Similarly, the Draft Chapter includes a new policy that this service will be "geographically accessible," and allows for the consideration of applications not supported by need in order to "credibly" address "barriers to access." Yet the Draft Chapter provides no guidance on how a project "credibly" addresses barriers to access, such as travel times, travel barriers, national comparisons, consideration of out-of-State providers, and similar matters. Moreover, as discussed above, the Draft Chapter fails to adequately recognize acute inpatient rehabilitation as a regional service intended to serve a larger population base in order to promote quality and efficiency, and avoid costly duplication. If the Draft Chapter is going to allow for new facilities not supported by the need projections, then it must clearly enunciate the policies and principles of regionalization and provide guidance on what an applicant must address in order to demonstrate that its project addresses a barrier to access.

Accordingly, MedStar Health requests that review standard .04B(1) be eliminated, and .04B(2)(d) be substantially revised to provide guidance as to the extent of an applicant's analysis that will be required for consideration of an access problem in the absence of an identified need.

5. The Weakening of Quality Standards Under The Draft Chapter

The Draft Chapter contains inadequate analysis of the skilled nursing facility (SNF) alternative to acute inpatient rehabilitation settings in terms of cost and quality. Many patients cannot be managed by SNFs because many SNFs lack 24-hour nursing availability with rehabilitation nurses, regular physician visits, more intensive, individualized daily therapy, and the capability to manage patients medically on site.

The Draft Chapter eliminates the requirement that specialized programs be accredited as such, only requiring that facilities serving pediatric patients and individuals with spinal cord or brain injuries should be "staffed and equipped to best meet their specific needs" and "should serve a sufficient number of patients with specialized or complex needs that a proficiency in care delivery can be developed." The existing Chapter (Policy 2.0) requires an inpatient brain injury program or spinal cord rehabilitation system of care to "demonstrate an adequate number of admissions to maintain accreditation as a specialized program or system." The accreditation requirement should be retained to ensure quality of care in these programs and be validated on an annual basis.

The Draft Chapter should state that CARF accreditation is a requirement of obtaining a special hospital license. It should also require an applicant to demonstrate that it has considered CARF requirements in its programmatic planning by outlining its plans for achieving CARF accreditation, and require a provider that is issued a CON to become accredited by CARF within a specified time frame or the MHCC may take action to revoke the CON.

Finally, the Draft Chapter fails to address the CMS quality measures to which freestanding facilities are now subject. Depending on the outcome of the Medicare waiver negotiations, Maryland hospitals not currently participating in the Inpatient Rehabilitation Facility prospective payment system may need to comply with these standards as well. These standards should be incorporated into the State Health Plan. Hospital-based rehab providers should be tracking their outcomes on these measures, even if they are not now required to report them.

6. Need Methodology Issues

The need methodology in the Draft Plan results in the overstatement of net need because it uses base year discharges and trend data prior to the full implementation in 2010 of the Medicare rule on admission criteria for admitting patients to inpatient rehabilitation. Starting in 2010, hospital admissions decreased and SNF utilization increased, particularly for orthopedic patients. The Commission should use a 2011 or 2012 base year to eliminate this anomaly.

The need projections fail to account for acute inpatient rehabilitation beds in the District of Columbia in the available inventory. As a result, there is a net positive bed need projection in Montgomery County. These beds are a regional resource and should be included in the inventory and the need projection recalculated on that basis. The MedStar National Rehabilitation Hospital in the District of Columbia (located approximately six miles from Montgomery County) has 128 adult rehab beds that are available to patients from D.C., Maryland and Virginia. Excluding these beds from the need methodology in Maryland understates available capacity and overstates need in Montgomery County. The Draft Chapter states (at .04B(2)(d)(iii) that it will consider cross-regional travel *as a reason to ignore its own need projections*, but fails to do so in calculating need.

The calculation of net bed need in the need methodology (.05F(5)(d)) is based on "physical capacity" rather than "licensed capacity." "Physical capacity" is inappropriate as a basis for calculating net bed need. The need methodology should be based on licensed capacity, which is a well-understood, official number. Further, using licensed capacity is consistent with the rest of the State Health Plan, including the occupancy rate definition and occupancy standards. A hospital has the right to use all of its licensed beds, even if it is not using all of them at any given point in time. Excluding licensed beds not actually being used at a given point of time could result in another applicant filing a CON application to seek those beds. That possibility does not exist in any other context in the State Health Plan.

7. Other Concerns

Underutilization. The Draft Chapter introduces a new policy against "underutilization" of acute inpatient rehabilitation services (Policy 4). Once again, there is no analysis or criteria to define underutilization. This policy should be eliminated unless supporting analysis and reasonable criteria defining underutilization are established.

Research. The Draft Chapter is silent on research. The existing Chapter recognizes the importance of research in this area and even requires providers of these acute inpatient rehabilitation services to participate in research projects. There is no discussion of why this requirement was eliminated and it should be retained.

Impact. The standard regarding impact (.04B(3)), does not require an analysis of the impact on the ability of an existing provider to maintain highly specialized medical staff necessary to provide this specialized health care service. This requirement should be included.

Subcategories of acute inpatient rehabilitation. The Draft Chapter states that it applies to all subcategories of acute inpatient rehabilitation services (including brain injury, spinal cord injury, and pediatric) (.02D), but is unclear as to whether a CON must be obtained for such specialized programs and what the applicable standards are. The Draft Chapter should address these issues.

For the above stated reasons, MedStar Health strongly urges the Commission not to move forward with this draft chapter, and instead develop a new chapter that retains, and provides for, enforcement through the CON process of the core principles of specialization and regionalization for acute inpatient rehabilitation services.

Thank you for the consideration of our comments.

Sincerely,

Marta D. Harting

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MDH:rlh

EXHIBIT 11

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4160 Patterson Avenue
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Re: Harford Memorial Hospital – Relocation of Inpatient Rehabilitation Beds
Docket No. 12-12-2335

Dear Mr. Steffen:

On behalf of Harford Memorial Hospital, I write to submit the enclosed Notice of Voluntary Withdrawal of Certificate of Need Application, Without Prejudice. At this time, our client has determined to withdraw its CON application from consideration.

Thank you for your consideration of this matter.

Sincerely,

Thomas C. Dame

TCD:blr
Enclosure
cc: Marta D. Harting, Esq.
William K. Meyer, Esq.
Paul Parker
Joel Riklin
Ruby Potter
Susan Kelly, Harford County Health Officer
Joy D. Hoover
Dean C. Kaster
Andrew Solberg
Jack C. Tranter, Esq.

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218 North Charles Street, Suite 400 Baltimore MD 21201 TEL: 410 727 7702 FAX: 410 468 2786 WEB: www.gejlaw.com

IN THE MATTER OF HARFORD	*	BEFORE THE
	*	
MEMORIAL HOSPITAL	*	MARYLAND HEALTH
	*	
RELOCATION OF INPATIENT	*	CARE COMMISSION
	*	
REHABILITATION BEDS	*	Docket No. 12-12-2335
	*	

* * * * * * * * * * * * *

NOTICE OF VOLUNTARY WITHDRAWAL OF CERTIFICATE OF NEED APPLICATION, WITHOUT PREJUDICE

Harford Memorial Hospital, Inc. ("HMH"), by its undersigned counsel and pursuant to COMAR 10.24.01.16, hereby voluntarily withdraws its Certificate of Need application, without prejudice.

Respectfully submitted,

Jack C. Tranter
Thomas C. Dame
Gallagher Evelius & Jones LLP
218 North Charles Street, Suite 400
Baltimore MD 21201
(410) 727-7702

Attorneys for Harford Memorial Hospital

Date: August 29, 2013

CERTIFICATE OF SERVICE

I hereby certify that on the 3rd day of September, 2013, a copy of Harford Memorial's Notice of Voluntary Withdrawal of Certificate of Need Application, Without Prejudice was sent via email and first-class mail to:

Marta D. Harting
Venable LLP
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Thomas C. Dame

STATE OF MARYLAND

MARYLAND HEALTH CARE COMMISSION
4160 PATTERSON AVENUE – BALTIMORE, MARYLAND 21215
TELEPHONE: 410-764-3460 FAX: 410-358-1236

September 4, 2013

Thomas C. Dame, Esquire
Gallagher, Evelius & Jones
218 North Charles Street
Suite 400
Baltimore, Maryland 21201

SEP 06 2013

Re: Withdrawal of Certificate of Need Application:
Harford Memorial Hospital
Docket No. 12-12-2335

Dear Mr. Dame:

Thank you for your letter of August 29, 2013, informing the Commission that Harford Memorial Hospital is withdrawing the above- referenced Certificate of Need application.

The Maryland Health Care Commission accepts the withdrawal of this application without prejudice. By copy of this letter all affected persons are notified of this action.

Thank you for your attention to the health care planning process.

Sincerely,

Ruby Potter
Health Facilities Coordinator

cc: Marta Harting, Esquire
William Meyer, Esquire
Susan Kelly, Harford County Health Department

EXHIBIT 12

STATE OF MARYLAND

Craig P. Tanio, M.D.
CHAIR

Ben Steffen
EXECUTIVE DIRECTOR

MARYLAND HEALTH CARE COMMISSION

4160 PATTERSON AVENUE – BALTIMORE, MARYLAND 21215
TELEPHONE: 410-764-3460 FAX: 410-358-1236

MEMORANDUM

TO: Commissioners

Dimensions Health Corporation
Mt. Washington Pediatric Hospital, Inc.
Anne Arundel Medical Center
Doctors Community Hospital
Prince George's County Health Department

FROM: Robert E. Moffit, Ph.D.
Commissioner/Reviewer

RE: Recommended Decision
Application for Certificate of Need
Dimensions Health Corporation
d/b/a Prince George's Hospital Center and
Mt. Washington Pediatric Hospital, Inc
Docket No. 13-16-2351

DATE: September 30, 2016

Enclosed is my Recommended Decision in my review of a Certificate of Need ("CON") application by Dimensions Health Corporation ("Dimensions"), d/b/a Prince George's Hospital Center ("PGHC") and Mt. Washington Pediatric Hospital, Inc. ("MWPH"). The application seeks CON approval to relocate PGHC and the MWPH unit at PGHC to a replacement general hospital to be known as Prince George's Regional Medical Center ("PGRMC"), at a site in Largo (Prince George's County), Maryland. Having conducted site visits at the existing hospital and the proposed site, and having considered the entire record in this review, I recommend that the Commission **APPROVE** the application, as modified by the applicants on August 31, 2016, and award a Certificate of Need for the replacement hospital. I find that the proposed project is consistent with Certificate of Need review criteria and applicable standards in the State Health Plan for Facilities and Services ("State Health Plan")

As an introductory observation, I note that a fundamental purpose of Maryland's Certificate of Need law is to restrain excess capacity, including the excess construction of hospitals and other regulated health care facilities. This statutory goal is based on an economic theory that health care markets are unique in that supply induces demand, and excess supply thus drives excessive health care costs. The law, therefore, is designed to restrain excessive supply, allow for coordinated

health planning to meet the needs of State residents, and thus to control or reduce Maryland's overall health care and medical costs. The Commission is to enforce the law and apply the regulatory standards to achieve this goal.

Interested Parties.

The interested parties in this review are Anne Arundel Medical Center, Doctors Community Hospital, and the Prince George's County Health Department.

Background.

The Certificate of Need ("CON") application that was docketed in this review was a replacement application filed by the applicants on January 16, 2015. It was then broadly understood that the University of Maryland Medical System Corporation ("UMMS") would undertake the management of the new hospital. The 2015 application, however, did not provide any clarity on that transition, and, specifically, did not contain crucial details concerning the hospital's future management and governance structure.

In their 2015 application, the applicants proposed an estimated total project cost of $651, 223,000. The proposed funding would be based on three major pillars: $206.7 million in debt; $208 million in funding from Prince George's County; and $208 million in funding from the State of Maryland. The Commission had never previously considered an application for a project with this amount of capital funding from Maryland taxpayers, nor such a large proportion of public funding as a component of total capital funding. Preceding the applicants' 2015 CON application, Maryland and/or Prince George's County taxpayers had been subsidizing Prince George's Hospital Center for more than a decade.

Based on my review of the 2015 replacement application, the extensive comments filed by interested parties, my site visit to the existing hospital and the proposed replacement hospital site, my review of a study of several professional profiles and analyses of prevailing health problems and care deficits in Prince George's County,[1] I concluded that there was a clear and compelling need for a replacement hospital, and that its proposed location in Largowas an excellent choice. That convenient location, astride main arteries and the Metro line, could attract a potentially strong patient base for the new hospital. This stronger patient base would not only include the residents of the County, but could also secure patient enrollment from surrounding areas, including the District of Columbia. I also determined that the most serious need in the County was the provision of a robust primary and ambulatory care network to serve the pressing needs of the people in the County and to improve the health status of those who were suffering from chronic illnesses.

Maryland law provides the Commission with broad authority to issue a Certificate of Need for the establishment, relocation, or expansion of hospitals and other health care facilities. Pursuant to law, the Commission's procedural regulations, COMAR 10.24.01, and various chapters of the State Health Plan set forth the criteria and standards for CON review. These requirements cover a range of areas, including adverse impact on geographically contiguous institutions; the cost effectiveness of the project; its compatibility with State rate setting; and its efficiency and viability.

[1] Detailed at the project status conference held on May 17, 2016 and in resulting documents. Docket Item ("DI") #92.

I reviewed the applicants' January 2015 submission to determine its compliance with over 50 regulatory standards, and found that the project was compliant with the vast majority of these requirements. However, the most significant problem was the financial feasibility of this historically large capital project, which I determined would jeopardize the proposed replacement hospital's financial future. I concluded, therefore, that the cost of the proposed project, as presented and based on a comparison of other regional hospitals, was unwarranted because of excessive space and service capacity. For this reason, I advised the parties that a project status conference was needed in this review, at which I would discuss areas of the project's non-compliance with regulatory requirements and recommend changes that would enable me to recommend that the Commission approve the project.

Project Status Conference.

At the May 17, 2016 project status conference, I made it clear to the parties that my recommendations did not entail substantive changes in the replacement hospital's service lines, but primarily involved reductions in cost and size. I explained that the project seemed out of proportion to the need, as well as my assessment of volume and discharge patterns and the Commission's bed need projections. I found that the project's relatively high cost, when compared with similar hospital projects, required a reconsideration of its size and scope.

I also concluded that the overall investment was too heavily weighted to hospital facilities and that more resources should be invested in primary care development. The strengthening of primary and ambulatory care in Prince George's County will not only meet the most crucial needs of its residents - who suffer disproportionately from chronic disease and health care disparities - but is also vital to the long-term viability of the new hospital through increased referrals from physicians and other medical professionals working in the hospital's service area. New and robust primary and ambulatory care networks, I determined, were essential to the overall long-term success of this major project.

The Proposed Project, as Modified on August 31, 2016.

In the modification to their application filed on August 31, 2016, the applicants complied with my specific recommendations concerning the cost and size of the project. The applicants thus reduced the total project costs from $639,055,000 (excluding the County's $12.3 million land donation) to $543,000,000; reduced the total construction costs from $284,744,090 to $225,000,000; and reduced the total square footage of the project by approximately 130,000 square feet.[2]

The applicants also complied with my recommendations to reduce finished operating rooms and treatment bays. In the category of medical/surgical/gynecological/addictions ("MSGA") beds, they reduced total beds from 216 to 205, a slight variation from my recommendation of 202. This was based on the applicants' updated review of their specific bed needs, including pediatric bed needs, which I found to be reasonable.

[2] Modification in Response to May 17, 2016 Project Status Conference, for Certificate of Need for Prince George's Regional Medical Center as a Replacement and relocation of Prince George's Hospital Center, from Co-Applicants Dimensions Health Corporation and Mt. Washington Pediatric Hospital (August 31, 2016) (DI #92)

Operational Efficiencies.

At the project status conference, I also requested that the applicants detail the measures that they would undertake to improve operational efficiency and reduce the staffing hours and cost per unit of services. I asked the applicants to quantify the financial impact of these operational efficiencies to the best of their ability. The applicants have complied with my request, and in their modification have outlined a detailed set of measures designed to increase operational efficiencies.[3] These include improvements in revenue collections through reductions in claim denials and net bad debt write-offs, implementation of pay-for-performance measures that will reward the hospital under the State's payment model, reductions in the length of hospital stays, reductions in staffing and labor costs, savings resulting from the replacement hospital's design and equipment efficiencies, and reductions in drug costs. In their September 21, 2016 memorandum to me, senior officials of the Health Services Cost Review Commission ("HSCRC") assessed the applicants' modified application, stating,

> In summary, we believe that the performance improvements identified by PGHC in their CON modification are achievable. *Furthermore, we believe that PGHC will exceed the savings estimated from performance improvements, which will have a positive impact on the projected income statements."* [4]

The Development of Ambulatory Care.

At the project status conference, I noted that the provision of a strong and robust primary and ambulatory care network is essential to the improvement of the health status of the residents of Prince George's County and crucial to the long-term financial success of the project, and I asked the applicants to provide a detailed account of how they were going to accomplish this objective.

The applicants have complied with my request, and have specified, in exhaustive detail, how they plan to expand and improve primary and ambulatory care.[5] Their proposed program includes a continuation of their cooperation with the Prince George's Health Department, an agency that has already undertaken an admirable and consequential effort to improve primary care for Prince George's County residents. It also includes building on the progress of the Health Enterprise Zone serving Capitol Heights, developing an aggressive population health program , conducting a community needs assessment, building and maintaining a strong primary and ambulatory care network (including "Family Health and Wellness Centers"), aggressively recruiting primary care and specialty medical professionals, and launching a targeted program to identify and monitor high utilizers of emergency care (and assigning physicians to those persons), as well as a broader use of telehealth to maintain communication and to secure care for these and other patients.

[3] August 31, 2016 Modifications (DI #92, pp. 17-30) (emphasis added).
[4] Donna Kinzer, Executive Director, and Gerard J. Schmith, Deputy Director, HSCRC, Memorandum to Robert E. Moffit, PhD, concerning "Modification of Application for Certificate of Need to Relocate Prince George's Hospital Center" (DI #97, p. 5) (hereafter cited as "HSCRC Memo on Modification").
[5] August 31, 2016 Modifications (DI #92, pp. 31-52).

Governance and Management.

It is common knowledge that the Prince George's Hospital Center has long endured serious financial and managerial problems. These problems have been well documented in various reports and have been publicized in the media. PGHC leadership's repeated attempts to resolve these problems over the years have fallen short of their expectations. From year to year, the financial shortfalls have been accompanied by continuous infusions of taxpayer subsidies from State and County officials.

The long-term financial viability of this project is dependent on appropriate management. Strong and effective management will help to secure the efficient delivery of high quality and cost effective care, establish the institution on a firm and permanent financial footing, and finally bring to an end the dependence of the institution on an expensive diet of taxpayer subsidies. Indeed, the applicants themselves, in presenting this project to the Commission, have declared their desire to be free of this historic and unhappy dependence.

At the project status conference, I requested that the applicants provide an account of the proposed management and governance of the new hospital. With the enactment of the Prince George's County Regional Medical Center Act of 2016,[6] the Maryland General Assembly provided additional funding for the new hospital, but conditioned those monies on the University of Maryland Medical System Corporation becoming the sole corporate member of Dimensions Health System and assuming responsibility for the project.

The applicants have complied with my request, and outlined their plans for the managerial transition from Dimensions to UMMS. Under an August 30, 2016 Memorandum of Understanding provided with the application modifications, UMMS will become the sole corporate member and assume governance of Dimensions shortly after the Commission's approval of the CON for the replacement and relocation of the hospital. Dimensions will remain the sponsor of the project and subject to oversight by UMMS. Over the period 2016 to 2018, Dimensions will be governed by an interim local board, but subject to the UMMS Board of Directors. In 2019, a 21-member permanent Board will govern Dimensions, but be subject to the ultimate authority of UMMS and its President and CEO.

Project Funding and Competitiveness.

In their application modifications, the applicants estimate a project cost of $555,350,000, including Prince George's County's $12.3 million donation of land. Of the total, $416 million is attributable to State and County grants. Unlike virtually every other CON application that the Commission considers, the funding of this project is largely a major public enterprise. In their assessment of the funding, HSCRC staff determined that the project's funding sources, including the large State and County grants and the authorized bond proceeds and interest income, "appear appropriate," but noted that the applicants will still need to resort to short-term borrowing for the hospital's early operations.[7]

Over the next few years the hospital's rates may still not be competitive. In an October 23, 2015 response to my initial inquiry on the 2015 application, HSCRC staff said that PGHC was

[6] Senate Bill 324 (Chapter 13 of 2016 Laws of Maryland).
[7] HSCRC Memo on Modifications (DI #97, p. 1).

more than 14 percent *above* the "average adjusted charges" of its peer group hospitals, and 10 percent above "adjusted" statewide hospital charges. HSCRC staff states that the hospital would need to achieve "significant productivity improvements" to improve its charge performance.[8] In their September 21, 2016 response to my inquiries, HSCRC staff notes that a review of current performance shows that PGHC per capita charges are still 12 percent higher than its peer hospitals. The HSCRC notes, of course, that its analysis incorporates the fact that PGHC serves a disproportionately larger share of high cost patients through its trauma center, as well as indigent patients, who contribute to its higher rates: "By 2023, PGHC's projected charges per case," writes the HSCRC, "would be approximately 20 percent higher than the peer group of hospitals after taking into account the redistributed system revenue and projected future volume changes at PGHC."[9] The HSCRC staff further said that, in the future, the hospital's rate structure would thus be subject to HSCRC prescribed efficiency measures. [10]

Commissioners know, of course, that health care rate projections, just like health care cost projections, are subject to numerous uncertainties, such as the payer mix, the ability to retain the hospital's traditional patient base, attract new patients and increase volume through primary and ambulatory care outreach, cost effective applications of technology, an improved reputation for delivering quality care. Competitive rates can also be achieved, as noted, by increasing hospital productivity and securing impressive savings, through economic efficiencies in care delivery, such as those that the applicants have already outlined in extended detail. I also believe the UMMS will provide the strong managerial leadership necessary to achieve these economic efficiencies and thus improve the hospital's competitive position.

Conclusion.

As I stated at the May 17, 2016 project status conference, the people of Prince George's County need and deserve a strong revitalized health care system, and a modern hospital is a "crucial variable in that equation." I also noted that, for the Commission, this decision takes on a special gravity because of the very large investment in this project that is being undertaken by Maryland taxpayers. For that reason, I issued recommendations that would reduce the overall size and cost of the project, bring it into line with comparable projects, and lay the groundwork for a strong, permanent financial basis for the new regional medical center. I also emphasized that the project's success would be reinforced by a strong and robust network of primary and ambulatory care services.

With these changes, the Commission, if it approves the application to establish the proposed new Prince George's Regional Medical Center, can help the people of Prince George's County secure the goals that the applicants have outlined in their recent modifications to their application, but at a lower cost than in the 2015 application. Concerning the recent modifications that they made, subsequent to the project status conference, the applicants stated that,

> *Dimensions and UMMS are confident that the Reviewer's recommendations compromise neither their ability to serve the health care needs of Prince George's County nor the transformational quality of the proposed project.*[11]

[8] HSCRC Memo on Modifications (DI #97, p. 2).
[9] HSCRC Memo on Modifications (DI #97, p. 4).
[10] Ibid.
[11] August 31, 2016 Modifications (DI #92, p. 3)(emphasis added).

Review Schedule and Further Proceedings.

This matter will be placed on the agenda for a meeting of the Maryland Health Care Commission on October 20, 2016, beginning at 1:00 p.m. at 4160 Patterson Avenue in Baltimore. The Commission will issue a final decision based on the record of the proceeding.

As provided under COMAR 10.24.01.09B, the applicant and interested parties may submit written exceptions to the enclosed Recommended Decision. As noted below, exceptions must be filed no later than 5:00 p.m. on Friday, October 7, 2016. Written exceptions must specifically identify those findings or conclusions to which exception is taken, citing the portions of the record on which each exception is based. Responses to exceptions must be filed no later than 5:00 p.m. on Wednesday, October 12, 2016. Copies of exceptions and responses must be sent by email to the MHCC and all parties by these deadlines. The applicant and interested parties must also file 30 copies of written exceptions and responses to exceptions by noon of the business day following the deadline.

Oral argument during the exceptions hearing before the Commission will be limited to 10 minutes per interested party and 15 minutes for the applicant, unless extended by the Chair or the Chair's designated presiding officer. The schedule for the submission of exceptions and responses is as follows:

Submission of exceptions	October 7, 2016 No later than 5:00 p.m.
Submission of responses	October 12, 2016 No later than 5:00 p.m.
Exceptions hearing	October 20, 2016 1:00 p.m.

CHAPTER 10

Inpatient rehabilitation facility services

Chapter summary

Inpatient rehabilitation facilities (IRFs) provide intensive rehabilitation services to patients after illness, injury, or surgery. Rehabilitation programs are supervised by rehabilitation physicians and include services such as physical and occupational therapy, rehabilitation nursing, speech–language pathology, and prosthetic and orthotic services. In 2017, Medicare spent $7.9 billion on IRF care provided to fee-for-service (FFS) beneficiaries in about 1,180 IRFs nationwide. About 340,000 beneficiaries had around 380,000 IRF stays. On average, the Medicare FFS program accounted for 58 percent of IRF discharges.

Assessment of payment adequacy

Our indicators of Medicare payment adequacy for IRFs are positive.

Beneficiaries' access to care—Our analysis of IRF supply and volume of services provided and of IRFs' marginal profit under Medicare's IRF prospective payment system suggest that access remains adequate.

- ***Capacity and supply of providers***—After declining for several years, the number of IRFs increased in 2014 and continued to grow through 2016, reaching 1,188 facilities nationwide. In 2017, however, the number of IRFs declined slightly, to 1,178 facilities. Over time, the number of hospital-based and nonprofit IRFs has declined, while the number

In this chapter

of freestanding and for-profit IRFs has increased. In 2017, the average IRF occupancy rate remained at 65 percent, indicating that capacity is more than adequate to meet demand for IRF services.

- ***Volume of services***—From 2016 to 2017, the number of Medicare FFS cases declined 2.7 percent, falling to about 380,000 cases after having experienced small annual growth every year since 2010.
- ***Marginal profit—***The marginal profit, an indicator of whether IRFs with excess capacity have an incentive to treat more Medicare beneficiaries, was 19.4 percent for hospital-based IRFs and 38.8 percent for freestanding IRFs—a very positive indicator of patient access.

Quality of care—The Commission tracks three broad categories of IRF quality indicators: risk-adjusted facility-level change in patients' functional and cognitive status during the IRF stay, rates of discharge to the community and to skilled nursing facilities, and rates of readmission to an acute care hospital. Most measures were steady or improved between 2012 and 2017.

Providers' access to capital—The parent institutions of hospital-based IRFs continue to have good access to capital. The major freestanding IRF chain, which accounted for almost half of freestanding IRFs in 2017 and about a quarter of all Medicare IRF discharges, also has good access to capital. This assessment is reflected in the chain's continued expansion. We were not able to determine the ability of other freestanding facilities to raise capital. IRFs' access to capital in large part depends on their total (all-payer) profitability, and in 2017, total margins for freestanding IRFs were 10.4 percent. Data on all-payer profitability are not available for hospital-based units, but we can examine the all-payer margins of hospitals with IRF units, which, in 2017, had an aggregate all-payer margin across all lines of business of 7.0 percent.

Medicare payments and providers' costs—The aggregate Medicare margin for IRFs has grown steadily since 2009. In the three-year period between 2015 and 2017, the aggregate IRF Medicare margin remained above 13 percent and in 2017 stood at 13.8 percent. Also in 2017, Medicare margins in freestanding IRFs were 25.5 percent, down slightly from their peak in 2015 of 26.7 percent. In 2017, hospital-based IRF margins were comparatively low at 1.5 percent, but one-quarter of hospital-based IRFs had Medicare margins greater than 11 percent, indicating that many hospitals can manage their IRF units profitably. Lower margins in hospital-based IRFs were driven largely by higher unit costs. In addition, there are notable differences in hospital-based and freestanding IRFs' mix of cases, which may indicate differences in profitability across case types. Finally, while

not definitive, evidence indicates that IRFs' assessments of patients' motor and cognitive function are not reliably consistent across providers. To the extent that hospital-based IRFs routinely assess their patients as less disabled than do their freestanding counterparts, their payments—and margins—will be systematically lower.

Growth in IRFs' costs historically has been low. From 2009 to 2015, the cumulative growth in cost per discharge was 8.4 percent, well below the 13.5 percent increase in the market basket for IRFs over the period. In 2016, per case cost growth (3.6 percent in aggregate) exceeded payment growth (2.9 percent in aggregate) for the first time since 2008. In 2017, however, per case payments again grew faster than costs (3.4 percent compared with 2.8 percent), resulting in an aggregate IRF margin of 13.8 percent. In 2018 to 2019, we anticipate costs in IRFs will grow faster than payments since updates in those years were constrained to 1.0 percent and 1.35 percent, respectively. For 2019, we project an aggregate Medicare margin of 11.6 percent.

This year, the Commission for the first time examined the financial performance of relatively efficient IRFs. Our analysis found that relatively efficient IRFs performed better on quality metrics and had costs 18 percent lower than other IRFs. Relatively efficient IRFs were on average larger and had higher occupancy rates, contributing to greater economies of scale and lower costs. Freestanding and for-profit facilities were more likely to be in the relatively efficient group.

On the basis of these factors, the Commission recommends a 5 percent reduction to the IRF payment rate for fiscal year 2020. In addition, the Commission reiterates its March 2016 recommendations that (1) the high-cost outlier pool be expanded to further redistribute payments in the IRF payment system and reduce the impact of misalignments between IRF payments and costs and (2) the Secretary conduct focused medical record review of IRFs that have unusual patterns of case mix and coding and conduct other research necessary to improve the accuracy of payments and protect program integrity. ■

Background

After illness, injury, or surgery, some patients need intensive, inpatient rehabilitative care, including physical, occupational, and speech therapy. Such services can be provided in inpatient rehabilitation facilities (IRFs).[1] IRFs must be primarily focused on treating conditions that typically require intensive rehabilitation, among other requirements. IRFs can be freestanding facilities or specialized units within acute care hospitals. To qualify for a covered IRF stay, a beneficiary must be able to tolerate and benefit from intensive therapy and must have a condition that requires frequent and face-to-face supervision by a rehabilitation physician. Other patient admission criteria also apply. In 2017, Medicare spent $7.9 billion on IRF care provided in about 1,180 IRFs nationwide. About 340,000 beneficiaries had almost 380,000 IRF stays. On average, Medicare fee-for-service (FFS) beneficiaries accounted for about 58 percent of IRF discharges.

Since January 2002, Medicare has paid IRFs under a per discharge prospective payment system (PPS).[2] Under the IRF PPS, Medicare patients are assigned to case-mix groups (CMGs) based on the patient's primary reason for inpatient rehabilitation, age, and level of motor and cognitive function. Within each of these CMGs, patients are further categorized into one of four tiers based on the presence of certain comorbidities that have been found to increase the cost of care. Each CMG tier has a designated weight that reflects the group's average relative costliness of cases compared with that of the average Medicare IRF case.[3] The CMG weight is multiplied by a base payment rate and then adjusted to reflect geographic differences in the wages IRFs pay. The payment is further adjusted based on the IRF's share of low-income patients. Additional adjustments are made for IRFs that are teaching facilities and for IRFs located in rural areas. The IRF PPS also has outlier payments for patients who are extraordinarily costly. Starting in fiscal year 2020, CMS is changing the patient assessment instrument used to help classify patients for payment, shifting from IRF-specific measures of motor and cognitive function to measures that are standardized across post-acute care (PAC) settings. The changes to the assessment instruments will necessitate minor adjustments of the CMG definitions (see text box, pp. 256–257).

Medicare facility requirements for IRFs

To qualify as an IRF for Medicare payment, facilities must meet the Medicare conditions of participation for acute care hospitals. They must also:

- have a preadmission screening process to determine that each prospective patient is likely to benefit significantly from an intensive inpatient rehabilitation program;
- ensure that the patient receives close medical supervision and provide—through qualified personnel—rehabilitation nursing, physical therapy, occupational therapy, and, as needed, speech–language pathology and psychological (including neuropsychological) services, social services, and orthotic and prosthetic services;
- have a medical director of rehabilitation with training or experience in rehabilitation who provides services in the facility on a full-time basis for freestanding IRFs or at least 20 hours per week for hospital-based IRF units;
- use a coordinated interdisciplinary team led by a rehabilitation physician that includes a rehabilitation nurse, a social worker or case manager, and a licensed therapist from each therapy discipline involved in the patient's treatment;
- have a plan of treatment for each patient that is established, reviewed, and revised as needed by a physician in consultation with other professional personnel who provide services to the patient; and
- meet the compliance threshold, which requires that no less than 60 percent of patients admitted to an IRF have as a primary diagnosis or comorbidity at least 1 of 13 conditions specified by CMS.[4] The intent of the compliance threshold is to distinguish IRFs from acute care hospitals. If an IRF does not meet the compliance threshold, Medicare pays for all its cases on the basis of the inpatient hospital PPS rather than the IRF PPS.

Medicare coverage criteria for beneficiaries

Medicare applies additional criteria that govern whether IRF services are covered for an individual Medicare beneficiary.[5] For an IRF claim to be considered reasonable and necessary, the patient must be reasonably expected to meet the following requirements at admission:

Changes to the IRF assessment instrument and case-mix groups in fiscal year 2020

Under the inpatient rehabilitation facility (IRF) prospective payment system (PPS), for purposes of payment, patients are assigned to rehabilitation impairment categories (RICs) based on the principal diagnosis or primary reason for inpatient rehabilitation. Within each RIC, patients are sorted into case-mix groups (CMGs) based on the patient's level of motor and cognitive function at admission and then further categorized into one of four tiers based on the presence of specific comorbidities that have been found to increase the cost of care.

To determine the appropriate CMG, IRFs assess and score each patient's motor and cognitive function using the IRF–Patient Assessment Instrument (IRF–PAI). The IRF–PAI is based on a modified version of the Uniform Data System for Medical Rehabilitation patient assessment instrument, commonly referred to as the Functional Independence Measure™, or FIM™. The IRF–PAI's 18 FIM data elements and associated modifiers, along with the FIM measurement scale, are used to measure a patient's level of disability and the burden of care for a patient's caregivers. (All else equal, a greater level of disability generally results in a higher payment.)

The IRF–PAI also includes items that are standardized across post-acute care (PAC) settings and are used to collect information on a patient's motor and cognitive function for the IRF Quality Reporting Program (QRP). As shown in Table 10-1, the QRP items are very similar to the FIM elements and associated modifiers. Because the QRP elements overlap the FIM data elements, CMS believes that the collection of FIM elements and associated modifiers is no longer necessary and places undue burden on providers. Accordingly, in fiscal year 2020, CMS will remove the FIM elements and associated modifiers from the IRF–PAI and will rely on QRP items to assign cases to CMGs.

Because the QRP items are defined differently from the FIM elements and use a different scale of measurement, using QRP items for CMG assignment will require some revisions to the CMG classification system. However, CMS anticipates the similarity between and overlap of the FIM and QRP items mean that CMS can replace FIM elements with QRP items without materially changing the case-mix classification system. All other aspects of the classification system will be unchanged, including the RIC structure, the assignment of comorbidity tiers, and the methodology for calculating the payment weights. The CMG classification system will continue to have 21 RICs (plus 2 for patients who have very short stays or who die in the IRF). However, the revisions will result in some consolidation of CMGs so that, instead of 92 CMGs, there will be 88. At the RIC level, the changes to the payment weights will be relatively small.

CMS plans to implement these revisions in a budget-neutral manner. CMS's initial analysis indicates that the change will redistribute payments across providers, resulting in increased aggregate payments for hospital-based and nonprofit IRFs as well as for smaller IRFs. This projected shift in payments suggests that assessments of patients' motor and cognitive function are not completely consistent across the two sets of data elements; that is, a patient's FIM function scores are not entirely predictive of the patient's QRP function scores.

One potential reason for these differences is that the FIM score is intended to reflect the patient's "lowest" level of function during the time of assessment, whereas the QRP score is intended to measure the patient's "usual" functional level during the period of assessment. In addition, functional status data are generally obtained by observation of the patient and are somewhat subjective. Moreover, the FIM scores are used to determine payment to IRFs, while the QRP scores have had no effect on payment to date. Because payment is materially affected by patients' FIM scores at admission—with higher payments associated with lower functional status—providers have a financial incentive when scoring the FIM elements to minimize patients' assessed levels of function at admission. No such incentive has existed for QRP scoring. However, that situation will change when CMS begins to use QRP scores to determine payment.

(continued next page)

Changes to the IRF assessment instrument and case-mix groups in fiscal year 2020 (cont.)

In a comment letter to the Secretary, the Commission supported replacing FIM items and modifiers with QRP items because doing so would relieve providers of having to report this information on functional status twice, using different definitions and measurement scales (Medicare Payment Advisory Commission 2018). Further, Section 1899(b)(3) of the Improving Medicare Post-Acute Care Transformation Act of 2014 requires the Secretary to replace existing setting-specific patient assessment data that duplicate or overlap the required PAC-standardized data "as soon as practicable." At the same time, moving toward an IRF classification system that adjusts payments using data elements that are standardized across all PAC settings is a necessary step toward a unified PAC PPS. The Commission noted, however, that once the QRP scores are used to determine payment, providers likely will respond quickly, devoting resources to improving the coding of the QRP functional measures, altering their QRP scoring practices, or both. ■

TABLE 10–1

Selected FIM™ elements and QRP counterparts on the IRF–PAI

	FIM	QRP
Self-care: Eating	*FIM item A*—The use of suitable utensils to bring food to the mouth, chewing and swallowing, once the meal is presented in the customary manner on a table or tray.	*GG130–A*—The ability to use suitable utensils to bring food to the mouth and swallow food once the meal is placed before the patient.
Self-care: Bathing	*FIM item C*—Washing, rinsing, and drying the body from the neck down (excluding the back) in either a tub, shower, or sponge/ bed bath.	*GG130–E*—The ability to bathe self in shower or tub, including washing, rinsing, and drying self.
Self-care: Dressing upper body	*FIM item D*—Dressing and undressing above the waist, as well as applying and removing a prosthesis or orthosis when applicable.	*GG130–F*—The ability to put on and remove shirt or pajama top; includes buttoning, if applicable.
Self-care: Toileting	*FIM item F*—Maintaining perineal hygiene and adjusting clothing before and after using a toilet, commode, bedpan, or urinal.	*GG130–C*—The ability to maintain perineal hygiene, adjust clothes before and after using the toilet, commode, bedpan, or urinal.
Transfers: Bed, chair, wheelchair	*FIM item I*—All aspects of transferring from bed to a chair, or wheelchair, or coming to a standing position, if walking is the typical mode of locomotion.	*GG170–D*—The ability to come to a standing position from sitting in a chair, or on the side of the bed. *GG170–E*—The ability to safely transfer to and from a bed to a chair (or wheelchair).
Transfers: Toilet	*FIM item J*—Includes safely getting on and off a standard toilet.	*GG170–F*—The ability to safely get on and off a toilet or commode.
Locomotion: Walk	*FIM item L*—Ability to/level of assistance needed to walk 150 feet.	*GG170–K*—Once standing, the ability to walk at least 150 feet in a corridor or similar space.

Note: FIM™ (Functional Independence Measure™), QRP (Quality Reporting Program), IRF–PAI (Inpatient Rehabilitation Facility–Patient Assessment Instrument).

Source: CMS, Inpatient Rehabilitation Facility–Patient Assessment Instrument, Version 1.5.

TABLE 10–2

The number and share of FFS IRF cases with neurological conditions and brain injury continued to grow, 2004–2017

Condition	Share of IRF Medicare FFS cases				Meets compliance threshold[a]	Percentage point change		
	2004	2008	2016	2017		2004–2008	2008–2016	2016–2017
Stroke	16.6%	20.4%	20.2%	20.5%	yes	3.8	–0.2	0.2
Other neurological conditions	5.2	8.0	13.6	15.0	yes	2.9	5.6	1.3
Fracture of the lower extremity	13.1	16.0	10.9	10.4	yes	3.0	–5.2	–0.4
Debility	6.2	9.1	10.6	10.6	no	2.9	1.5	0.0
Brain injury	3.9	7.0	9.9	10.7	yes	3.0	2.9	0.8
Other orthopedic conditions	5.2	6.1	8.2	7.9	no	0.9	2.1	–0.2
Cardiac conditions	5.3	4.6	6.0	5.5	no	–0.6	1.4	–0.3
Major joint replacement of lower extremity	24.1	13.1	5.4	4.4	[b]	–11.0	–7.7	–1.1
Spinal cord injury	4.2	4.3	4.9	4.9	yes	0.1	0.6	0.0
All other	16.3	11.3	10.1	9.8	[c]	–5.0	–1.1	–0.3

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility). "Other neurological conditions" includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders. "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. Patients with debility have generalized deconditioning not attributable to other conditions. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur, and hip and knee replacements. "All other" includes conditions such as amputations, arthritis, and pain syndrome. All Medicare FFS IRF cases with valid patient assessment information were included in this analysis. Yearly figures presented in the table are rounded, but figures in the percentage point change columns were calculated using unrounded data.
[a]The compliance threshold requires that at least 60 percent of an IRF's patients have 1 of 13 specified diagnoses or have a comorbidity that could cause significant decline in functional ability such that the patient requires intensive rehabilitation. Some FFS cases with conditions that do not meet the compliance threshold could thus be counted toward the threshold if they had certain comorbidities.
[b]Cases admitted for rehabilitation after major joint replacement of the lower extremity count toward the compliance threshold if joint replacement was bilateral, if the patient had a body mass index of 50 or greater, or if the patient was age 85 or older.
[c]Conditions in the "all other" category that meet the compliance threshold include congenital deformity, lower-limb amputations, major multiple trauma, burns, and certain arthritis cases.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

- The patient requires active and ongoing therapy in at least two modalities, one of which must be physical or occupational therapy.
- The patient can actively participate in and benefit from intensive therapy that most typically consists of three hours of therapy a day at least five days a week.
- The patient is sufficiently stable at the time of admission to actively participate in the intensive rehabilitation program.
- The patient requires supervision by a rehabilitation physician. This requirement is satisfied by face-to-face physician visits with a patient at least three days a week.

Patterns of use in IRFs

In 2004, CMS began to consistently enforce the IRF compliance threshold and enacted revisions to some of the qualifying conditions.[6] The combination of renewed enforcement of the threshold and additional restrictions resulted—as intended—in a substantial decline in the volume of Medicare patients treated in IRFs. By 2008, the number of IRF discharges had fallen 26 percent, with the biggest declines seen in the number of medically complex (–73 percent), arthritis (–68 percent), and hip and knee replacement (–60 percent) cases. Average case-mix severity and cost per case increased as IRFs shifted their mix of cases to conditions that count toward the threshold, such as stroke, brain injury, and other neurological conditions (Table 10-2). IRF volume stabilized after 2008, but increases in certain neurological

TABLE 10–3 **Mix of Medicare FFS IRF cases differed by provider type, selected conditions, 2017**

	Freestanding		Hospital based	
Condition	**For profit**	**Nonprofit**	**For profit**	**Nonprofit**
Stroke	16%	26%	20%	26%
Other neurological conditions	21	8	13	10
Fracture of the lower extremity	9	8	13	11
Debility	11	8	12	10
Brain injury	10	12	11	11
Other orthopedic conditions	10	7	6	6

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility). "Other neurological conditions" includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders. "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. Patients with debility have generalized deconditioning not attributable to other conditions. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur, and hip and knee replacements. All Medicare FFS IRF cases with valid patient assessment information were included in this analysis.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

conditions—Parkinson's disease and neuromuscular disorders—continued. Between 2008 and 2017, the number of IRF discharges with other neurological conditions almost doubled, climbing 99 percent, and the number of discharges with brain injuries (traumatic and nontraumatic combined) rose 63 percent, while the total number of Medicare IRF discharges increased 6 percent (data not shown). Notably, the number of cases with other orthopedic conditions, cardiac conditions, and debility also rose, though a sizable share of these cases do not count toward the compliance threshold.[7] The number of hip and knee replacement cases going to IRFs continued their downward trajectory, declining an additional 55 percent from 2008 to 2016. IRFs also saw a large decline in cases for fractures of the lower extremity, falling 26 percent over the same period, even though they count toward the compliance threshold.

The distribution of case types differs by type of IRF (Table 10-3). For example, in 2017, only 16 percent of cases in freestanding for-profit IRFs were admitted for rehabilitation following a stroke, compared with 26 percent of cases in hospital-based nonprofit IRFs. Likewise, 21 percent of cases in freestanding for-profit IRFs were admitted with other neurological conditions, more than twice the share admitted to hospital-based nonprofit IRFs. Cases with other orthopedic conditions also made up a higher share of cases in freestanding for-profit facilities than in all other IRFs. By contrast, the share of cases with brain injury or debility was similar across IRF types.

In 2017, 8.5 percent of IRF cases received high-cost outlier payments, although the share varied by case type. For example, high-cost outlier cases accounted for 12.6 percent of spinal cord injury cases, 10.7 percent of stroke cases, 6.3 percent of cases with other neurological conditions, and 5.2 percent of other orthopedic conditions. Outlier cases were also distributed unevenly among IRFs. High-cost outliers accounted for almost 15 percent of hospital-based IRF cases compared with 2.6 percent of freestanding IRF cases. On average, high-cost outliers had an average length of stay that was 7.3 days longer than non-outlier cases (19.4 days vs. 12.1 days). Outlier cases were also more likely to have comorbidities that increased case mix (65.6 percent of outlier cases vs. 55.1 percent for non-outlier cases).

High-margin IRFs have a different mix of cases

A previous Commission analysis of differences in the mix of cases across IRFs suggested that patient selection contributes to provider profitability (Medicare Payment Advisory Commission 2016). We found that IRFs with the highest margins in 2013 had a higher share of other neurological cases and a lower share of stroke cases.[8] Further, we observed differences in the types of stroke

and other neurological conditions admitted to high-margin and low-margin IRFs. Stroke cases in the highest margin IRFs were two-and-a-half times more likely than those in the lowest margin IRFs to have no paralysis. Likewise, other neurological cases in the highest margin IRFs were almost three times more likely than those in the lowest margin IRFs to have a neuromuscular disorder (such as amyotrophic lateral sclerosis or muscular dystrophy) as opposed to neurological conditions like multiple sclerosis or Parkinson's disease.

As noted in our March 2016 report to the Congress, these findings suggest that, under the IRF PPS, some case types are more profitable than others. The Commission plans to assess variation in costs among the IRF CMGs and differences in relative profitability across CMGs in future analyses. It is necessary to identify and reduce variation in costs among CMGs and properly calibrate payments with costs for each group to avoid overpayments and reduce financial incentives for providers to admit certain types of cases and avoid others. In the short term, the Commission has recommended that the Secretary effect changes to reduce potential misalignments between IRF payments and costs by redistributing payments within the IRF PPS through the high-cost outlier pool (see text box on March 2016 recommendations). Expanding the outlier pool would increase outlier payments for the most costly cases, easing the financial burden for IRFs that have a relatively high share of these cases.

Data suggest patients not assessed uniformly across IRFs

A previous Commission analysis of acute care hospital claims data and data from the Inpatient Rehabilitation Facility–Patient Assessment Instrument (IRF–PAI), while not definitive, strongly suggests that IRFs differ in their assessment of patients' motor and cognitive function, raising more generalized concerns about patient assessment data (Medicare Payment Advisory Commission 2016).

Overall, when we compared patients in high-margin and low-margin IRFs, we found that patients in high-margin IRFs were less severely ill and resource intensive during the acute care hospitalization that preceded the IRF stay:

- Patients in high-margin IRFs had, on average, a lower case-mix index in the acute care hospital as well as a lower level of severity of illness and a shorter length of stay.
- Patients in high-margin IRFs were less likely to have been high-cost outliers in the acute care hospital or to have spent four or more days in the hospital intensive care or coronary care unit.

But once patients were admitted to and assessed by the IRF, the average patient profile changed, with patients treated in high-margin IRFs appearing to be more disabled than those in low-margin IRFs (as measured by motor impairment scores assigned by IRFs). This pattern persisted across case types.

As noted in our March 2016 report to the Congress, the consistent finding that high-margin IRFs have patients who are, on average, less severely ill in the acute care hospital but appear more functionally disabled upon assessment in the IRF suggests that assessment and scoring practices contribute to greater profitability in some IRFs, especially given the comparatively low level of costs and cost growth observed in high-margin facilities. If providers differ in their assessment and scoring of patients' motor and cognitive function, payments will not be properly aligned with the resource needs of patients. Some IRFs will receive payments that are too high relative to the costs incurred in treating their patients, while other IRFs will receive payments that are too low.

These findings led the Commission to recommend that CMS ensure payment accuracy and help improve program integrity by reviewing medical records and conducting other research as necessary (see text box on March 2016 recommendations). More recently, the Commission has begun to explore data integrity issues related to post-acute care (PAC) patient assessment data more broadly, and we expect to evaluate whether such data can continue to be used in Medicare's payment systems or quality incentive programs.

Are Medicare payments adequate in 2019?

To assess whether payments for fiscal year 2019 are adequate to cover the costs providers incur and how much providers' costs are expected to change in the coming year (2020), we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access to care by examining the capacity and supply of IRFs and changes over time in the volume of services provided, quality of care, providers' access to capital, and the relationship between Medicare payments and providers' costs.

The Commission reiterates its March 2016 recommendations on the IRF prospective payment system

Recommendation 9-2

The Secretary should conduct focused medical record review of inpatient rehabilitation facilities that have unusual patterns of case mix and coding.

Rationale 9-2

The Commission's finding that high-margin inpatient rehabilitation facilities (IRFs) have patients who are, on average, less severely ill in the acute care hospital but appear more functionally disabled in the IRF suggests the possibility that coding practices contribute to greater profitability in some IRFs. Providers may differ in their assessment of patients' motor and cognitive function, resulting in payments for some IRFs that are too high relative to the costs incurred in treating their patients. To improve the accuracy of payments and protect program integrity, CMS should review medical records merged with IRF patient assessment data, reassess inter-rater reliability across IRFs, and conduct other research as necessary. Because medical record review is resource intensive, CMS should begin by focusing on providers that have an atypical mix of cases, such as a high concentration of neuromuscular disorders and stroke cases without paralysis, and on providers that have anomalous patterns of coding, such as wide discrepancies in their patients' levels of severity as coded in the acute care hospital compared with that coded in the IRF. However, system-wide assessment of payment accuracy is also needed.

Implications 9-2

Spending

- Implementing this recommendation could result in changes to the payment system that would be budget neutral but could also reduce Medicare's spending on IRF services if CMS were to make payment adjustments to account for assessment and coding differences across providers or for coding changes that do not reflect real case-mix change. CMS would incur some administrative expenses to conduct these activities.

Beneficiary and provider

- We do not expect this recommendation to have adverse effects on Medicare beneficiaries with respect to access to care or out-of-pocket spending or on providers' willingness and ability to care for Medicare beneficiaries.

Recommendation 9-3

The Secretary should expand the inpatient rehabilitation facility outlier pool to redistribute payments more equitably across cases and providers.

Rationale 9-3

The Commission's finding that high-margin IRFs may be selecting certain types of cases suggests that some case-mix groups (CMGs) may be more profitable than others. At the same time, our finding that IRFs may differ in their assessments of patients' motor and cognitive function suggests that the IRF CMGs may not be adequately capturing differences in patient acuity and costs across cases and providers. The potential for financial loss may therefore be greater for some providers than for others. Expanding the outlier pool would increase outlier payments for the most costly cases, easing the financial burden for IRFs that have a relatively high share of these cases.

Implications 9-3

Spending

- This recommendation would be implemented in a budget-neutral manner and should not have an overall impact on spending.

Beneficiary and provider

- We do not expect this recommendation to have adverse effects on Medicare beneficiaries with respect to access to care or out-of-pocket spending. This recommendation may relieve the financial pressure on some providers and may improve equity among providers by diminishing the effects of inaccurate coding. ■

TABLE 10–4 **The number of for-profit and freestanding IRFs continued to grow in 2017**

Type of IRF	Share of Medicare FFS discharges 2017	Number of IRFs						Average annual change		
		2009	2013	2014	2015	2016	2017	2009–2013	2013–2016	2016–2017
All IRFs	100%	1,196	1,161	1,177	1,182	1,188	1,178	–0.7%	0.8%	–0.8%
Urban	93	992	977	1,013	1,020	1,026	1,019	–0.4	1.6	–0.7
Rural	7	204	184	164	162	162	159	–2.5	–4.2	–1.9
Freestanding	52	225	243	251	262	273	279	0.8	4.0	2.2
Hospital based	48	971	918	926	920	915	899	–1.4	–0.1	–1.7
Nonprofit	39	732	677	681	681	676	655	–1.9	0.0	–3.1
For profit	54	295	322	338	352	370	392	2.2	4.7	5.9
Government	7	169	155	149	138	133	125	–2.1	–5.0	–6.0

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). The number of facilities are for the calendar year. The large decline in the number of rural IRFs between 2013 and 2014 was due primarily to changes in the core-based statistical areas, as defined by the Office of Management and Budget, which determine whether geographic areas are considered urban or rural. Because of these changes, 19 IRFs that were previously considered rural are now designated urban. Components may not sum to totals due to missing data.

Source: MedPAC analysis of Provider of Services data and Medicare Provider Analysis and Review data from CMS.

Beneficiaries' access to care: IRF supply and service volume suggest sufficient access

We have no direct indicator of beneficiaries' access to IRF care. Although there are criteria for admission to an IRF, it is not clear when IRF care is necessary or beneficial for a given patient or when another, potentially lower cost PAC provider (such as a skilled nursing facility (SNF)) could provide appropriate care. The absence of IRFs in some areas of the country makes it particularly difficult to assess the need for IRF care since beneficiaries in areas without IRFs presumably receive similar services in other settings. Nevertheless, our analysis of IRF supply and volume of services provided suggests that capacity remains adequate to meet demand. Moreover, the marginal profit, an indicator of whether IRFs with excess capacity have an incentive to treat more Medicare beneficiaries, was robust for both freestanding and hospital-based IRFs, thus providing a very positive indicator of patient access.

Number of IRFs and occupancy rates suggest adequate capacity and supply

After declining from a peak of 1,235 facilities in 2005 (data not shown) to 1,161 facilities in 2013, the number of IRFs increased in 2014 and continued to grow through 2016 to 1,188 facilities nationwide (Table 10-4). But in 2017, the number of IRFs fell 0.8 percent to 1,178 facilities. IRFs are not the sole provider of rehabilitation services in communities; SNFs also provide rehabilitation services in an institutional setting, and home health agencies, comprehensive outpatient rehabilitation facilities, and independent therapy providers furnish care at home or on an outpatient basis. Given the number and distribution of these other rehabilitation therapy providers, it is unlikely that areas exist where IRFs are the only provider of rehabilitation therapy services available to Medicare beneficiaries.

In 2017, about 76 percent of IRFs were distinct units in acute care hospitals; the rest were freestanding facilities. However, because hospital-based units have, on average, fewer beds and a lower share of Medicare discharges, they accounted for only 48 percent of Medicare discharges. Overall, 33 percent of IRFs were for-profit entities. Freestanding IRFs were far more likely to be for profit than were hospital-based IRFs (78 percent vs. 19 percent; data not shown). In 2017, 54 percent of Medicare discharges were from for-profit facilities. Over time, the number of hospital-based and nonprofit IRFs has declined,

TABLE 10–5

The number of IRF cases per FFS beneficiary decreased in 2017

	2004	2006	2008	2010	2012	2014	2016	2017	Average annual change 2004–2008	Average annual change 2008–2016	Average annual change 2016–2017
Number of cases	495,349	404,633	356,312	359,307	373,284	375,590	390,514	379,885	–7.9%	1.2%	–2.7%
Cases per 10,000 FFS beneficiaries	135.6	111.9	100.4	99.7	100.1	99.2	100.9	98.5	–7.2	0.1	–2.4
Payment per case	$13,290	$15,380	$16,646	$17,085	$17,795	$18,632	$19,714	$20,322	5.8	2.1	3.1
ALOS (in days)	12.7	13.0	13.3	13.1	12.9	12.8	12.7	12.7	1.3	–0.6	0.0
Users	449,362	369,269	323,897	325,506	339,087	338,887	350,353	340,175	–7.9	1.0	–2.9

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service), ALOS (average length of stay).

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

while the number of freestanding and for-profit IRFs has increased. Between 2009 and 2017, the number of hospital-based IRFs fell by 7 percent and the number of nonprofit IRFs fell by 10 percent, while the number of freestanding IRFs and for-profit IRFs rose by 19 percent and 33 percent, respectively.

In 2017, 28 IRFs closed; most were hospital-based units. At the same time, 19 new IRFs opened. Slightly more than half of the new IRFs were hospital-based units. Of the new hospital-based units, about a third were for profit; of the new freestanding facilities, half were for profit. Acute care hospitals find that IRF units can help reduce inpatient lengths of stay. Previous Commission analyses have found that hospitals with IRF units have higher inpatient margins than hospitals without such units (Medicare Payment Advisory Commission 2015).

In 2017, the average IRF occupancy rate remained at 65 percent, the same level as in 2016. Occupancy rates were higher in freestanding IRFs (69 percent) than in hospital-based IRFs (61 percent). These rates suggest that capacity is more than adequate to meet demand for IRF services.

IRF Medicare volume decreased in 2017

The number of Medicare FFS IRF cases grew rapidly throughout the 1990s and the early years of the IRF PPS, reaching a peak of about 495,000 in 2004. After CMS renewed its enforcement of the compliance threshold in 2004, IRF volume declined substantially, as expected, falling almost 8 percent per year from 2004 to 2008 (Table 10-5). At that point, volume began to increase slowly, rising an average of 1.2 percent per year from 2008 to 2016. Between 2016 and 2017, however, the number of FFS IRF cases fell 2.7 percent, to a little less than 380,000 cases.

In 2017, the number of IRF cases per 10,000 FFS beneficiaries fell to 98.5, down 2.4 percent from the previous year. Relatively few Medicare beneficiaries use IRF services because, to qualify for Medicare coverage, IRF patients must be able to tolerate and benefit from rehabilitation therapy that is intensive, which is usually interpreted to mean at least three hours of therapy a day for at least five days a week. Yet, compared with all Medicare beneficiaries, those admitted to IRFs in 2017 were disproportionately over age 85.

With the decline in the number of IRF cases per FFS beneficiary, FFS Medicare's share of IRF discharges fell to 58 percent of total discharges as the volume of IRF cases across all payers rose slightly in 2017 (data not shown).

Marginal profit provides incentive to treat more Medicare beneficiaries

Another measure of access is whether providers have a financial incentive to expand the number of Medicare beneficiaries they serve. In considering whether to treat a patient, a provider with excess capacity compares the marginal revenue it will receive (i.e., the Medicare payment) with its marginal costs—that is, the costs that vary with volume. If Medicare payments are larger than the marginal costs of treating an additional beneficiary, a provider has a financial incentive to increase its volume of Medicare patients. In contrast, if payments do not cover the marginal costs, the provider may have a disincentive to care for Medicare beneficiaries. Given the difference in financial performance across IRFs, we examined freestanding and hospital-based IRFs' marginal profit to assess whether both types of providers have a financial incentive to increase the number of Medicare beneficiaries they serve.[9] We found that Medicare payments exceed marginal costs by a substantial amount—19.4 percent for hospital-based IRFs and 38.8 percent for freestanding IRFs—suggesting that IRFs with available beds have a strong incentive to admit Medicare patients. This finding is a very positive indicator of patient access, even in IRFs with lower overall Medicare margins.

Quality of care: Steady or improved for most measures

Between 2012 and 2017, the Commission has tracked three broad categories of IRF quality indicators: risk-adjusted facility-level change in functional and cognitive status during the IRF stay, rates of discharge to the community and to SNFs, and rates of readmission to an acute care hospital (see text box on measures of quality). During this period, most measures were steady or improved.

Risk-adjusted rates of potentially avoidable rehospitalization, discharge to the community, and discharge to SNF

Avoidable rehospitalizations expose beneficiaries to hospital-acquired infections, increase the number of transitions between settings (which are disruptive to patients), and can result in medical errors (such as medication errors). In addition, they unnecessarily increase Medicare spending. There has been relatively little research on rehospitalization of IRF patients in aggregate, though some studies have focused on one or more rehabilitation impairment categories (Dejong et al. 2009, Galloway et al. 2013, Ottenbacher et al. 2014, Schneider et al. 2013, Schneider et al. 2012). However, research regarding rehospitalization of SNF and nursing home patients has identified several contributing factors that may be within a PAC provider's control. These factors include staffing level, skill mix, and frequency of staff turnover; drug management; and adherence to transitional care protocols such as discharge counseling, medication reconciliation, patient education regarding self-care, and communication among providers, staff, and the patient's family (Grabowski et al. 2008, Kane et al. 2003, Konetzka et al. 2008a, Konetzka et al. 2008b, Lau et al. 2005, Mustard and Mayer 1997).

The Commission's rates of rehospitalization during the IRF stay and during the 30 days after discharge are risk adjusted and reflect those readmissions that are potentially avoidable with adequate care in the IRF setting (Kramer et al. 2015).[10] The measure of rehospitalization in the 30 days after discharge reflects in part how well facilities prepare beneficiaries and their caregivers for safe and appropriate transitions to the home or the next health care setting. Since 2013, the national average rate of risk-adjusted potentially avoidable rehospitalizations during the IRF stay has been about 2.6 percent (Table 10-6, p. 266). (Lower rates are better.) Meanwhile, between 2012 and 2017, the rate of risk-adjusted potentially avoidable rehospitalization within 30 days after discharge from an IRF declined from 4.8 percent to 4.3 percent in 2015, then rose to 4.7 percent in 2016 and 2017.

We also examined rates of discharge to the community and to SNFs. We found that between 2012 and 2017, the national average for the risk-adjusted community discharge rate increased from 74.2 percent to 76.0 percent.[11] (Higher rates are better.) Between 2012 and 2014, the national average for the risk-adjusted rate of discharge to SNFs increased from 6.9 percent to 7.1 percent, but subsequently declined to 6.8 percent in 2017 (lower rates are better).

The Commission also considers functional status at admission and discharge, measured using the motor and cognitive scores on the IRF–PAI. This instrument incorporates the 18-item Functional Independence Measure™ (FIM™) scale to assess the level of disability in motor and cognitive functioning and the burden of

Measures of inpatient rehabilitation facility quality

In its assessment of the quality of care in inpatient rehabilitation facilities (IRFs), the Commission has historically examined risk-adjusted rates of readmission to the hospital, discharge to the community and to skilled nursing facilities (SNFs), and change in functional status during the IRF stay.

Two readmission measures are calculated: one that occurs during the IRF stay and one that occurs within 30 days after discharge from the IRF (Kramer et al. 2015). Individuals who died in the IRF or during the 30 days after discharge from the IRF were excluded from the facilities' readmission rates. The readmission measures count patients whose primary diagnosis for rehospitalization was considered potentially avoidable; that is, the condition typically could have been managed in the IRF. The potentially avoidable readmissions are respiratory-related illness (pneumonia, influenza, bronchitis, chronic obstructive pulmonary disease, and asthma); sepsis; congestive heart failure; fractures or fall with a major injury; urinary tract or kidney infection; blood pressure management; electrolyte imbalance; anticoagulant therapy complications; diabetes-related complications; cellulitis or wound infection; pressure ulcer; medication error or adverse drug reaction; and delirium. For the measure of potentially avoidable readmission during the IRF stay, delirium could be a primary or a secondary rehospitalization diagnosis.

To account for beneficiaries who are discharged from the IRF to a SNF, a measure of discharge to SNF is calculated. This measure reflects the share of stays in which the patient was discharged directly from the IRF for additional rehabilitation in a SNF that was financed under Medicare Part A's skilled nursing benefit. Patients who were discharged from the IRF to a nursing home for a non-SNF episode are not considered discharged to a SNF.

The community discharge measure reflects the share of stays in which the patient was not discharged directly from the IRF to a hospital or a SNF. Individuals who were discharged from the IRF to a nursing home as a non-SNF resident (that is, for long-term care financed by payers other than Medicare) are included in the measure of community discharge. Patients who were discharged from the IRF to the community but were admitted to a hospital within one day of discharge are not considered discharged to the community.

The change in the Functional Independence Measure™ from admission to discharge is calculated for both motor function and cognition. The measures represent the average change among patients for 13 motor items and 5 cognitive items on the IRF–Patient Assessment Instrument. Patients with missing information for any of the items are not included when calculating average change.

The observed rates of readmission to the hospital, discharge to the community and to SNFs, and change in functional status during the IRF stay are risk adjusted for medical comorbidities, functional status at IRF admission, rehabilitation impairment category, and demographic characteristics. The data sources used for risk adjustment were Part A hospital and IRF claims. Risk-adjusted rates compare a facility's observed rates with its expected rates based on the mix of patients. The rates reported are the average risk-adjusted rates for Medicare fee-for-service beneficiaries in all IRFs with 25 or more stays during the year. ■

care for a patient's caregivers (Deutsch et al. 2005). Scores for each of the 18 FIM items can be summed to calculate a motor score (based on 13 FIM items) and a cognitive score (based on 5 FIM items). The motor score at discharge can range from 13 to 91, while the cognitive score can range from 5 to 35, with higher scores indicating greater functional independence. To measure observed improvement in motor function and cognition, we subtracted the respective FIM scores at admission from the FIM scores at discharge to calculate FIM motor and cognitive gains (Kramer et al. 2015). A larger number indicates more improvement in functional independence

TABLE 10–6

Risk-adjusted quality indicators for IRFs held steady or improved slightly from 2012 to 2017

Measure	2012	2013	2014	2015	2016	2017	Percent change 2012–2017
Potentially avoidable rehospitalizations during IRF stay	2.8%	2.6%	2.7%	2.6%	2.7%	2.6%	–7.1%
Discharged to a SNF	6.9%	6.9%	7.1%	7.0%	6.8%	6.8%	–1.4
Discharged to the community	74.2%	74.9%	75.2%	75.0%	75.9%	76.0%	2.4
Potentially avoidable rehospitalizations during 30 days after discharge from IRF	4.8%	4.8%	4.7%	4.3%	4.7%	4.7%	–2.1
Motor FIM™ gain	22.1	22.4	22.9	23.1	23.7	24.0	8.6
Cognitive FIM™ gain	3.5	3.7	3.7	3.7	3.8	3.9	10.3

Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility), FIM™ (Functional Independence Measure™). High rates of discharge to the community indicate better quality. High rates of rehospitalization and discharge to SNF indicate worse quality. Rates are the average of facility rates and calculated for all facilities with 25 or more Medicare fee-for-service stays. The motor FIM measures the level of disability in motor functioning on a 91-point scale. The cognitive FIM measures the level of cognitive impairment on a 35-point scale. FIM gain is calculated as the FIM score at discharge minus the FIM score at admission. Higher FIM gain indicates more improvement. Mean FIM gain averages the change of all facilities with 25 or more Medicare fee-for-service stays.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

and cognition between admission and discharge. Each risk-adjusted rate was calculated by comparing a facility's observed rate with its expected rate and multiplying this ratio by the national rate.

In 2017, the mean gain (positive change) in the motor FIM score during an IRF stay was 24.0, while the mean gain for the cognitive FIM score was 3.9 (Table 10-6). (Bigger gains are better.) From 2012 to 2017, the average risk-adjusted gain in IRF patients' motor and cognitive FIM scores (as assigned by IRFs) increased about 9 percent and 10 percent, respectively. However, changes in motor function and cognition must be interpreted with caution. Functional status data are generally obtained by observation of the patient and are somewhat subjective. Because payment is based in part on patients' functional status at admission—with higher payments associated with lower functional status—providers have a financial incentive to minimize their assessments of patients' levels of function at admission. If IRFs minimize patients' functional status at admission, gains in function during the patients' stays will be overstated.

Overall, the Commission finds that most quality measures have been stable or improved slightly over the past five years. However, improvements in the functional status measures should be viewed with some caution given that they are self-reported rather than claims-based measures. The Commission is evaluating the reliability of patient assessment data and the appropriateness of using these data for payment on quality assessment of PAC providers.

Variation in quality measures across IRFs

IRFs varied widely in their performance on Medicare's quality measures (Table 10-7). In 2017, the lowest performing quartile of IRFs had a risk-adjusted rate of discharge to a SNF that was 8.7 percent or higher, compared with 4.2 percent or lower for the best performing quartile of providers. (A lower rate of discharge to a SNF is better.) Risk-adjusted rates of discharge to the community varied as well: The worst performing quartile of IRFs had a community discharge rate of 73.1 percent or lower, compared with 79.2 percent or higher for the best performing quartile of providers. (A higher rate of discharge to the community is better.) Rehospitalization rates also varied: The worst performing quartile had risk-adjusted rates of potentially avoidable rehospitalization during the IRF stay that were at or above 3.5 percent, compared with 1.7 percent or below for the

TABLE 10–7 **Performance on risk-adjusted quality measures varied across IRFs in 2017**

Measure	Risk-adjusted rate			Ratio of best to worst performing quartile
	Mean	Worst performing quartile	Best performing quartile	
Potentially avoidable rehospitalizations during IRF stay	2.6%	3.5%	1.7%	0.49
Discharged to a SNF	6.8%	8.7%	4.2%	0.48
Discharged to the community	76.0%	73.1%	79.2%	1.08
Potentially avoidable rehospitalizations during 30 days after discharge from IRF	4.7%	5.8%	3.4%	0.59
Motor FIM™ gain	24.0	21.2	26.4	1.25
Cognitive FIM gain	3.9	3.0	4.7	1.34

Note: IRF (inpatient rehabilitation facility), FIM™ (Functional Independence Measure™), SNF (skilled nursing facility). High rates of discharge to the community indicate better quality. High rates of rehospitalization and discharge to SNF indicate worse quality. Mean rates are calculated for all facilities with 25 or more Medicare fee-for-service stays. The motor FIM measures the level of disability in motor functioning on a 91-point scale. The cognitive FIM measures the level of cognitive impairment on a 35-point scale. FIM gain is calculated as the FIM score at discharge minus the FIM score at admission. Higher FIM gain indicates more improvement.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

best performing quartile. (A lower rate of readmissions is better.) Variation was also observed in the two FIM gain measures, but because these measures are self-reported, they could reflect reporting differences more than performance differences.

Providers' access to capital: IRFs appear to have adequate access to capital

More than three-quarters of IRF providers are hospital-based units that would access any necessary capital through their parent institutions. Overall, as detailed in the hospital chapter, hospitals' access to capital remained strong in 2017 with a continued high level of bond issuances. New construction spending has declined and has shifted more to outpatient than inpatient capacity (Conn 2017). Large hospital systems in recent years have invested significantly in the ambulatory setting, as opposed to the acute inpatient setting, in an effort to access faster growing markets and offer access to lower cost settings in a business environment shifting toward value-based care (Barclays 2018).

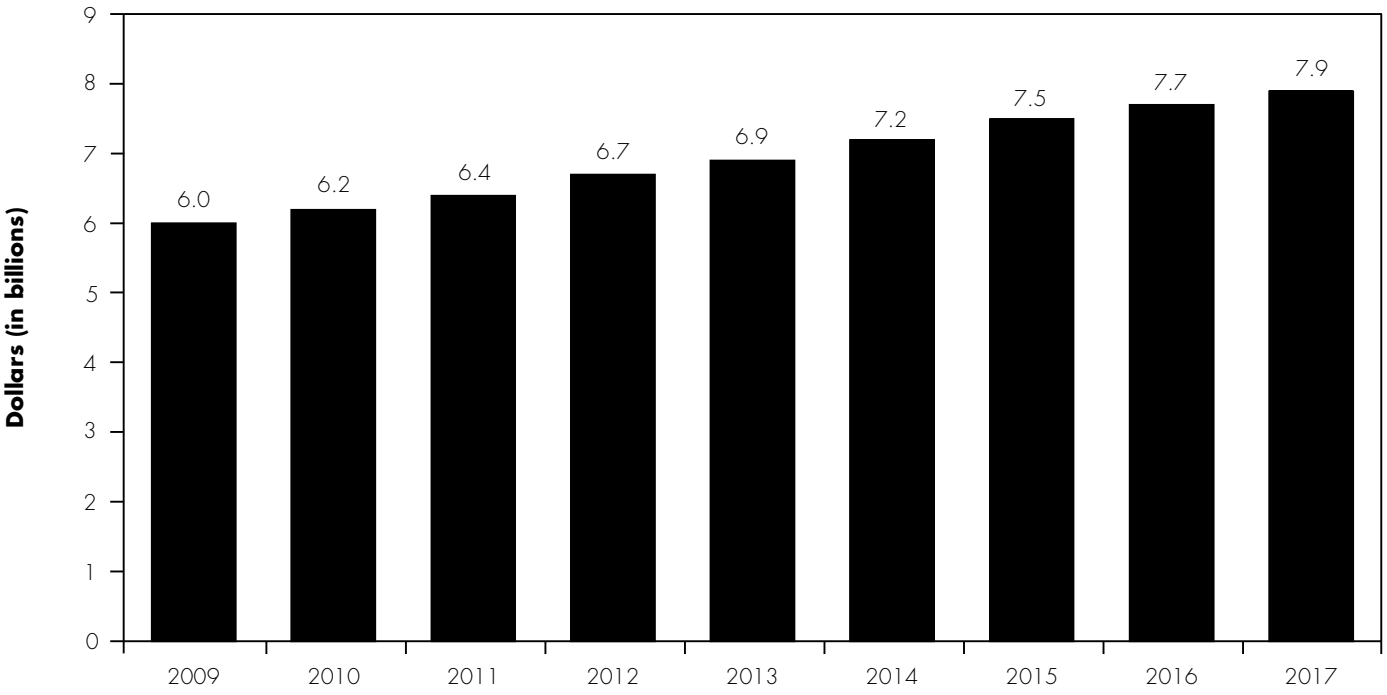
Market analysts indicate that the IRF industry's largest chain, Encompass Health (formerly HealthSouth)—which owned almost half of freestanding IRFs in 2017 and accounted for about a quarter of all Medicare IRF discharges—has good access to capital. This assessment is reflected in the chain's continued expansion. Analysts note that Encompass Health traditionally has prioritized building new facilities over acquiring existing facilities, which allows the company to maintain control over facility size, layout, and amenities. In 2017, the company opened four new facilities and two more in 2018, with two additional facilities scheduled to open in 2019. The new facilities are frequently joint ventures with acute care hospitals (HealthSouth Corporation 2018). As part of a vertical integration strategy, the company has acquired home health agencies and hospice providers to expand its PAC business and drive more effective collaboration between its rehabilitation facilities and home health agencies.

Most other freestanding IRFs are independent or local chains with a limited number of facilities. The extent to which these providers have access to capital is less clear.

IRFs' access to capital depends in large part on their total (all-payer) profitability. In 2017, total margins for freestanding IRFs remained healthy, with an aggregate

FIGURE 10–1

Program spending for IRF services has grown steadily since 2009



Note: IRF (inpatient rehabilitation facility).

Source: Office of the Actuary 2018.

margin of 10.4 percent, up 0.8 percentage point from 2016. Profitability varied by ownership. In 2017, for-profit IRFs had an aggregate total margin of 12.5 percent compared with 5.6 percent for nonprofit IRFs. Data are not available to calculate total margins for hospital-based IRFs. However, in 2017, hospitals' aggregate total margins across all lines of service for hospitals with and without IRF units were similar, at 7.0 percent and 7.2 percent, respectively.

Medicare payments and providers' costs: Medicare margins remained high in 2017

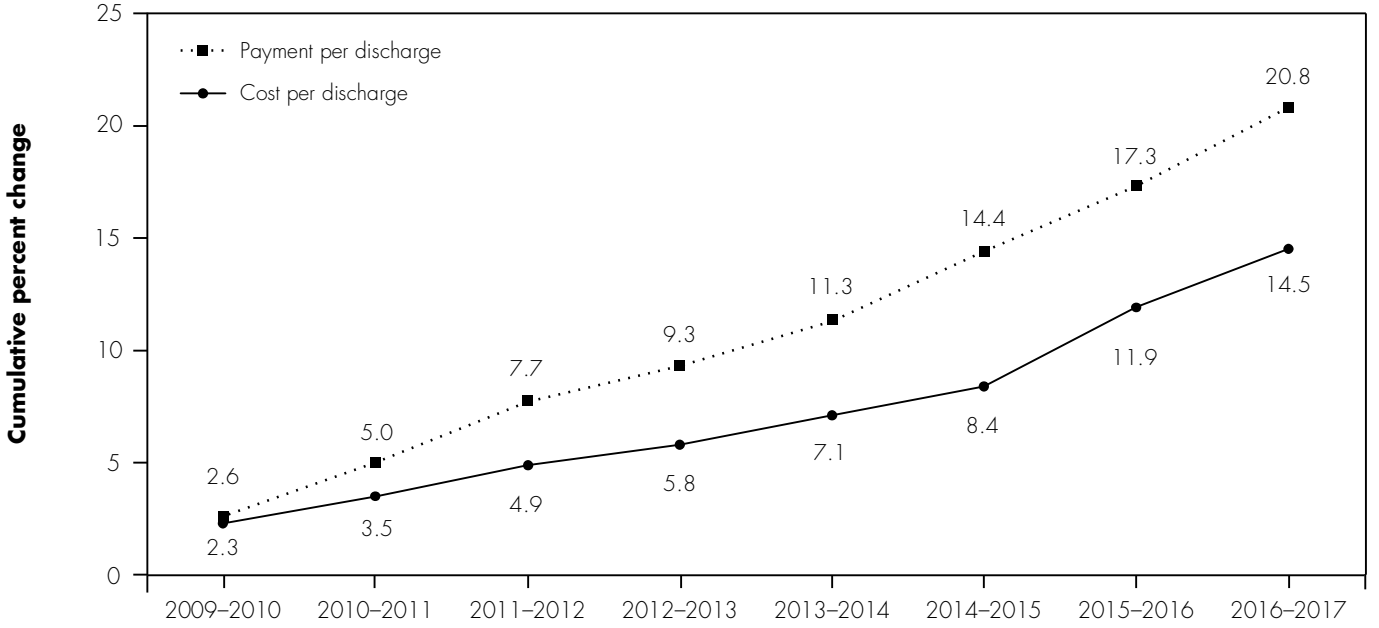
Aggregate Medicare margins grew steadily between 2009 and 2015 and increased again in 2017 to 13.8 percent (Table 10-8, p. 270). Medicare margins in freestanding IRFs were 25.5 percent in 2017, down slightly from a peak of 26.7 percent in 2015. Hospital-based IRF margins were comparatively low at 1.5 percent in 2017, but one-quarter of hospital-based IRFs had Medicare margins greater than 11 percent, indicating that many hospitals can manage their IRF units profitably. Lower margins in hospital-based IRFs were driven largely by higher unit costs.

Trends in spending and cost growth

The Office of the Actuary estimates that Medicare FFS spending for IRF services in fiscal year 2017 was $7.9 billion (Figure 10-1). Program spending has been growing, on average, more than 3 percent per year since 2009. A combination of increases in the number of Medicare beneficiaries receiving care in IRFs (average growth of 0.5 percent per year) and payment increases averaging 2.6 percent contributed to this growth in spending.

Since 2009, payments have been growing faster than costs (Figure 10-2). From 2009 to 2015, the cumulative growth in cost per discharge was 8.4 percent, an average of just 1.4 percent per year. The cumulative growth in cost per discharge for freestanding for-profit IRFs was especially

FIGURE 10–2 **IRFs' payments per discharge increased cumulatively more than costs, 2009–2017**



Note: IRF (inpatient rehabilitation facility). Percent changes are calculated based on consistent two-year cohorts.

Source: MedPAC analysis of Medicare cost report data from CMS.

slow over this period, at just 2.2 percent (data not shown). In contrast, payments per discharge grew more rapidly than costs, climbing a cumulative 14.4 percent over this period (an average of 2.2 percent per year) and 15.1 percent for freestanding for-profit IRFs (latter figure not shown). These differences in per case cost and payment growth led to a steady rise between 2009 and 2015 in aggregate Medicare margins, which climbed from 8.4 percent to 13.9 percent (Table 10-8, p. 270; 2009 data not shown).

Between 2015 and 2016, cost growth outpaced payment growth for the first time since 2009, climbing 3.6 percent, the fastest rate of cost growth since 2008. However, from 2016 to 2017, payments per discharge again increased faster than costs, growing by 3.4 percent compared with 2.6 percent for costs, contributing to an increase in the 2017 Medicare margin to 13.8 percent. From 2015 through 2017, aggregate Medicare margins for IRFs remained above 13 percent (Table 10-8, p. 270).

Margins vary widely

Financial performance varied across IRFs. In 2017, the aggregate margin for freestanding IRFs (which accounted for 53 percent of Medicare discharges from IRFs) was 25.5 percent; hospital-based IRFs had an aggregate margin of 1.5 percent (Table 10-8, p. 270). Margins varied by ownership as well, with for-profit IRFs having a substantially higher aggregate Medicare margin in 2017 than nonprofit IRFs (23.8 percent vs. 2.2 percent). (Hospital-based IRFs are far more likely than freestanding IRFs to be nonprofit.) Among freestanding IRFs, nonprofit facilities (which accounted for 7 percent of Medicare discharges from IRFs) had an aggregate margin of 12.0 percent (data not shown). Freestanding for-profit IRFs (which accounted for 45 percent of Medicare discharges from IRFs) had an aggregate margin of 27.8 percent (data not shown). Among hospital-based IRFs, the aggregate margin for nonprofit units (which accounted for 32 percent of Medicare discharges from IRFs) was 0.1 percent, compared with 6.6 percent for for-profit units (which

TABLE 10–8

Aggregate FFS Medicare IRF margins remained high in 2017

Type of IRF	Share of Medicare discharges, 2017	Margins								
		2004	2006	2008	2010	2012	2014	2015	2016	2017
All IRFs	100%	16.7%	12.5%	9.4%	8.6%	11.2%	12.2%	13.9%	13.3%	13.8%
Hospital based	47	12.2	9.9	3.8	–0.6	0.7	0.7	2.2	0.9	1.5
Freestanding	53	24.7	17.5	18.2	21.4	23.9	25.2	26.7	25.8	25.5
Nonprofit	38	12.8	10.9	5.3	2.1	2.1	1.7	3.5	1.6	2.2
For profit	55	24.4	16.3	16.8	19.6	22.9	23.6	24.9	24.2	23.8
Government	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Urban	93	17.0	12.8	9.6	9.0	11.6	12.6	14.3	13.6	14.2
Rural	7	13.2	9.0	7.2	4.7	6.3	6.4	8.6	9.4	8.4
Number of beds										
1 to 10	2	3.7	–3.6	–4.9	–10.3	–6.9	–10.9	–7.5	–9.9	–10.5
11 to 24	21	10.5	7.3	1.2	–3.3	–1.2	–0.3	–0.4	–0.2	0.6
25 to 64	48	18.3	13.7	10.0	10.6	12.3	14.0	16.0	15.0	15.8
65 or more	29	21.5	17.8	17.4	17.5	21.0	20.6	23.1	22.4	21.9
Medicare share										
<50%	19	12.9	11.1	5.1	0.4	2.4	2.3	3.7	2.9	3.0
50% to 75%	56	17.1	12.6	9.5	9.6	12.5	14.1	16.1	15.4	15.8
>75%	25	19.6	13.9	13.5	13.6	20.5	20.2	20.8	20.2	21.1

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility), N/A (not applicable). Government-owned facilities operate in a different financial context from other facilities, so their margins are not necessarily comparable. Their margins are not presented separately here, although they are included in the margins for other groups (e.g., "all IRFs"), where applicable. Percentages may not sum to 100 due to rounding.

Source: MedPAC analysis of cost report data from CMS.

accounted for 10 percent of Medicare discharges from IRFs; data not shown).

Higher unit costs were the primary driver of differences in financial performance between freestanding and hospital-based IRFs. Freestanding IRFs had a median standardized cost per discharge that was 27 percent lower than that of hospital-based IRFs ($12,069 vs. $16,645, respectively). Hospital-based IRFs are far more likely than freestanding IRFs to be nonprofit, which could contribute to the disparity in unit costs. But even nonprofit freestanding IRFs had a median standardized cost per discharge that was 15 percent lower than that of hospital-based IRFs (data not shown). Previous Commission analysis of underlying cost components found that hospital-based IRFs had higher costs than freestanding IRFs across all cost categories, with the biggest difference manifesting in routine costs (Medicare Payment Advisory Commission 2015).

Nevertheless, one-quarter of hospital-based IRFs had Medicare margins greater than 11 percent, indicating that many hospitals can manage their IRF units profitably. Further, despite comparatively low average margins in hospital-based IRFs, evidence suggests that these units make a positive financial contribution to their parent hospitals. For example, aggregate inpatient Medicare margins for hospitals are consistently higher for hospitals with IRF units versus hospitals without (0.8 percentage

point higher in 2017). Aggregate overall Medicare margins for hospitals with IRF units were 2.0 percentage points higher in 2017.

Margins also varied by facility size. In 2017, the aggregate Medicare margin for IRFs with 10 or fewer beds was –10.5 percent, compared with 21.9 percent for IRFs with 65 or more beds (Table 10-8). These differences are in large measure due to differences in economies of scale leading to higher costs in smaller facilities. The median standardized cost for IRFs with fewer than 10 beds was 53 percent higher than for IRFs with 65 or more beds ($18,636 compared with $12,200; data not shown). Smaller facilities also tend to have lower occupancy rates than large facilities (54 percent compared with 68 percent in 2017), also contributing to differences in costs.

Medicare margins tended to rise as the share of Medicare patients increased. The aggregate Medicare margin was 3.0 percent for IRFs in which fewer than half of discharges were covered by FFS Medicare, compared with 21.1 percent for IRFs in which more than three-quarters of discharges were covered by FFS Medicare (Table 10-8).

Numerous factors contribute to lower margins in hospital-based IRFs

Several factors account for the disparity in margins between hospital-based and freestanding IRFs, including differences in economies of scale, stringency of cost control, service mix, and patient mix. Differences in IRFs' assessment of patients' motor function and cognition likely play a role as well.

Hospital-based IRFs may be less stringent in cost control Hospital-based IRFs appear to be less stringent in their cost control. Between 2009 and 2017, costs per case for hospital-based IRFs grew 21.1 percent, compared with 10.3 percent for freestanding IRFs. Notably, hospital-based IRFs are far less likely than freestanding IRFs to be for profit and therefore are likely to be less focused on controlling costs to maximize returns to investors. We see this effect among freestanding IRFs, where the cumulative increase in costs per case from 2009 to 2017 for nonprofits (26.5 percent) far outstripped that of for-profit facilities (8.2 percent).

Hospital-based IRFs have a different mix of patients There are marked differences in hospital-based and freestanding IRFs' mix of cases. Between 2009 and 2015, freestanding IRFs compared with hospital-based IRFs admitted a larger share of patients with stroke as the primary reason for rehabilitation (24 percent vs. 17 percent). Similarly, freestanding IRFs compared with hospital-based IRFs admitted larger shares of cases with other neurological conditions (19 percent vs. 10 percent) and other orthopedic conditions (10 percent vs. 6 percent). Notably, the impairment groups of other neurological and other orthopedic conditions encompass a broader range of conditions than do other impairment groups. This clinical heterogeneity can allow favorable selection of patients within these groups based on their likely costs of care. Cases with other neurological conditions also count toward the compliance threshold, so IRFs with higher shares of these cases can more easily meet the requirements of the 60 percent rule while keeping down costs. Further, some case types are more profitable than others, resulting in higher margins for facilities that admit larger shares of those cases. The Commission plans to examine the relative profitability of the IRF case-mix groups in a future analysis.

In general, hospital-based IRFs also have a much larger share of cases with extraordinarily high costs. In 2017, 15 percent of hospital-based IRF cases qualified for high-cost outlier payments, compared with 3 percent of freestanding IRF cases. Indeed, 85 percent of Medicare's IRF outlier payments were made to hospital-based facilities. Though these payments diminish losses per case for such outliers, they do not completely cover the costs. It is not clear whether the large number of outlier cases in hospital-based IRFs stems from differences in efficiency, unmeasured case complexity, or both.

Hospital-based IRFs appear to assess their patients differently Historically, evidence suggests that assessments of patients' motor and cognitive function are not reliably consistent across IRFs. Some in the industry have postulated that hospital-based IRFs devote less time to training assessment staff and verifying the accuracy of assessments, resulting in less reliable measures of patients' motor and cognitive function in hospital-based IRFs. Others assert that some freestanding IRFs aggressively assess their patients in a way that maximizes payment. To the extent that hospital-based IRFs consistently assess their patients as less disabled than do their freestanding counterparts, for whatever reason, their payments—and margins—will be systematically lower.

Efficient provider analysis

The Commission is required by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 to

Identifying relatively efficient inpatient rehabilitation facilities

The Commission is required by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 to consider the costs associated with an efficient provider. This year, we attempted to identify and examine the financial performance of inpatient rehabilitation facilities (IRFs) that had consistently low costs per discharge and high quality. We calculated the cost per discharge using cost report and claims data and adjusted for differences in area wages; mix of cases; and prevalence of high-cost outliers, short-stay outliers, and transfer cases. For quality measures, we used risk-adjusted rates of potentially avoidable rehospitalizations during the IRF stay and risk-adjusted rates of discharge to a skilled nursing facility. To be included in the group of IRFs that furnished relatively low-cost, high-quality care, an IRF had to be (1) in the best performing third of the distribution of adjusted cost per discharge or of one of the quality measures for three consecutive years (2014 through 2016) and (2) not in the worst performing third of the distribution of adjusted cost per discharge or either of the quality measures for three consecutive years. Only IRFs with at least 25 Medicare fee-for-service discharges were included in the analysis.

The method we used to assess performance attempts to limit drawing incorrect conclusions about performance based on poor data. Using three years to categorize IRFs as efficient (rather than just one year) avoids categorizing providers based on random variation or on one "unusual" year. After determining whether an IRF was relatively efficient based on having relatively low costs and good quality care for three years in a row, we calculated performance on several quality and cost measures in 2017. By first assigning an IRF to a group (relatively efficient or other) and then examining the group's performance in the next year, we avoid having a facility's poor data affect both its own categorization and the assessment of the group's performance. Thus, an IRF's erroneous data in 2014, 2015, or 2016 could result in its inaccurate assignment to a group, but because the group's performance is assessed with data from 2017, these "bad" data would not directly affect the assessment of the group's performance. ■

consider the costs associated with efficient providers. The Commission follows two principles when selecting a set of efficient providers. First, the providers must do relatively well on both cost and quality metrics. Second, the performance has to be consistent, meaning that the provider cannot have poor performance on any metric in any of three consecutive years preceding the year under evaluation. The Commission's approach is to develop a set of criteria and then examine how many providers meet them. It does not establish a set share (for example, 10 percent) of providers to be considered efficient and then define criteria to meet that pool size.

This year is the first one in which the Commission has examined the financial performance of relatively efficient IRFs. The text box explains how we identified relatively efficient IRFs. Our analysis finds that relatively efficient IRFs had lower rehospitalization rates and discharge to SNFs than other IRFs. While payment rates to all IRFs were similar, standardized costs per discharge for this group were 18 percent lower, leading to a large difference in the median Medicare margin, which was 16.5 percent for the relatively efficient group compared with 1.0 percent for other IRFs (Table 10-9).

Relatively efficient IRFs were on average larger and had higher occupancy rates compared with other IRFs, leading to greater economies of scale. The mix of cases also differed somewhat between the relatively efficient and other IRFs. Relatively efficient IRFs had a higher average case-mix index, more cases with other neurological conditions, but smaller shares of stroke cases compared with other IRFs.

Although all types of facilities were represented in the relatively efficient group of IRFs, they were much more likely to be freestanding and/or for profit. In fact, over half of Encompass Health facilities (formerly HealthSouth) were in the relatively efficient IRF group. Hospital-based nonprofit IRFs were less likely to be in the relatively efficient group, although they accounted for over a third (37.2 percent) of this group.

TABLE 10–9

Characteristics of relatively efficient providers, 2017

Performance in 2017	Type of IRF: Relatively efficient IRFs	Type of IRF: Other IRFs	Ratio of relatively efficient to other IRFs
Median:			
Rehospitalization rate	2.4%	2.6%	0.91
Discharge to SNF rate	4.6%	7.0%	0.65
Payment per discharge	$20,624	$20,569	1.00
Standardized cost per discharge	$13,385	$16,390	0.82
Medicare margin	16.5%	1.0%	N/A
Facility case-mix index	1.34	1.28	1.05
Length of stay (in days)	12.7	12.7	1.00
Occupancy rate	69%	61%	1.21
Number of beds	30	23	1.30
Share of discharges that were for:			
Stroke	19.5%	23.2%	0.84
Other neurological conditions	10.3%	6.9%	1.49
Share of facilities that were:			
Freestanding	40.5%	20.7%	N/A
For profit	51.2%	34.3%	N/A
Hospital-based nonprofit	37.2%	52.5%	N/A

Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility). IRFs were identified as "relatively efficient" based on a cost measure (costs per discharge) and two quality measures (rates of readmission and discharge to SNFs) between 2014 and 2016. Relatively efficient IRFs were those in the best third of the distribution for one measure and not in the worst third for any measure in each of the three years. Costs per discharge were standardized for differences in area wages; mix of cases; and prevalence of high-cost outliers, short-stay outliers, and transfer cases. Quality measures were calculated for all facilities with 25 or more fee-for-service stays. "Rehospitalization rate" refers to potentially avoidable rehospitalizations during the IRF stay. High rates of rehospitalization and discharge to SNF indicate worse quality. "Other neurological conditions" includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders.

Source: MedPAC analysis of Medicare cost report data, Medicare Provider Analysis and Review data, and Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS for 2013 to 2016.

How should Medicare payments change in 2020?

To estimate 2019 payments, costs, and margins with 2017 data, the Commission considers policy changes effective in 2018 and 2019, including those in the Patient Protection and Affordable Care Act of 2010 (PPACA) and the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). Those changes that affect our estimate of the 2019 margin include:

- an update of 1.0 percent for fiscal year 2018, as required by MACRA[12]; and
- an update of 1.35 percent in 2019 based on an IRF market basket increase of 2.9 percent with offsetting productivity adjustment and PPACA adjustments of 0.8 percent and 0.75 percent, and changes to the high-cost outlier fixed loss amount in 2019, which will lower payments.

Historically, cost growth in this sector has been at or below market basket levels, though between 2015 and 2016, cost

growth exceeded the market basket. We use a three-year historical average to estimate cost growth in 2018 and 2019.

Considering these assumptions, we project an aggregate Medicare margin of 11.6 percent for IRFs in 2019.

For fiscal years 2009 through 2017, the Commission recommended a 0 percent update to the IRF payment rate. In its calculations for fiscal year 2019, however, as the aggregate margin neared historic highs, the Commission recommended in its March 2017 and March 2018 reports that the Congress reduce IRF payment rates by 5 percent. Because such action was not taken and because, in the absence of legislative action, CMS is required by statute to apply an adjusted market basket increase, payments have continued to rise: From 2009 to 2015, the cumulative growth in payments per discharge was 14.4 percent, while cost growth was 8.4 percent—well below market basket levels. In 2016, the gap between payments and costs narrowed somewhat as per case cost growth (3.6 percent in aggregate) exceeded payment growth (2.9 percent in aggregate) for the first time since 2008. As a result, the aggregate margin in 2016 declined but remained high at 13.3 percent. In 2017, payments again increased faster than costs, raising margins to 13.8 percent. This high aggregate margin indicates that aggregate Medicare payments continue to substantially exceed the costs of caring for beneficiaries in IRFs. Absent congressional action, payments to IRFs will continue to increase in fiscal year 2020 by an estimated 2.7 percent, the largest payment rate update in the past decade.

Reducing the payment rate for IRFs would better align Medicare payments with the costs of IRF care. The Commission continues to believe that the high-cost outlier pool should be expanded, as previously recommended in 2016, to further redistribute payments within the IRF PPS and reduce the impact of potential misalignments between IRF payments and costs. Currently, the outlier pool is set at 3 percent of total IRF payments. Expanding the outlier pool would increase outlier payments for the most costly cases, ameliorating the financial burden for IRFs that have a relatively high share of these cases. The expanded outlier pool would be funded by an offset to the national base payment amount, which would further reduce all CMG payment rates by the same percentage across the board. As noted in our March 2016 and March 2017 reports to the Congress, expanding the outlier pool could increase payments for providers who are less efficient as well as for providers whose patients' acuity is not well captured by the case-mix system. Nevertheless, because of concerns about the accuracy of Medicare's payments for resource-intensive cases, the Commission continues to believe that an expanded outlier pool is warranted in the near term. Over the longer term, however, CMS must ensure the accuracy of Medicare's payments by determining that IRFs' assessment and scoring consistently reflects patients' level of disability. Research is also needed to assess variation in costs within the IRF CMGs and differences in relative profitability across CMGs. In the future, CMS could enact payment system reforms that necessitate reassessment of IRF outlier payments and adjustments to the outlier pool, including a return to a smaller pool.

The Commission also reiterates its March 2016 recommendation that the Secretary conduct focused medical record review of IRFs that have unusual patterns of case mix and coding and conduct other research necessary to improve the accuracy of payments and protect program integrity. With the shift to using the QRP functional measures in 2020 to classify cases into CMGs, it is important that CMS conduct focused medical reviews to ensure consistency in reporting across providers using the new measures.

The Commission estimates that reducing the payment rate for IRFs by 5 percent and expanding the outlier pool from 3 percent to 5 percent would decrease total payments to IRFs by 5 percent. We estimate the combined effect of reducing the payment rate for IRFs by 5 percent and expanding the outlier pool would decrease aggregate payments to freestanding IRFs by 6.2 percent; to hospital-based IRFs by 3.8 percent; to for-profit IRFs by 6.0 percent; and to nonprofit IRFs by 4.2 percent. Changes being made by the Secretary to the CMGs by using the QRP functional measures in place of the FIM, though budget neutral, may result in some small shift in payments toward hospital-based and nonprofit facilities in the short term.

RECOMMENDATION 10

For 2020, the Congress should reduce the fiscal year 2019 Medicare base payment rate for inpatient rehabilitation facilities by 5 percent.

RATIONALE 10

The combination of low historical cost growth and increasing average payments has resulted in overpayments to IRFs. The high aggregate margin in 2017 and our

projected margin for 2019 indicate that Medicare payments substantially exceed the costs of caring for beneficiaries. This excess contributes to Medicare's long-run sustainability challenges. For every fiscal year since 2009, the Commission has recommended that the update to the IRF payment rate be eliminated or that the payment rate be reduced. However, CMS has been required by statute to apply an adjusted market basket increase each year. Between 2009 and 2017, the cumulative increase in payments per case for all IRFs was 20.8 percent, while costs per case rose 14.5 percent, a difference of more than 6 percentage points. Reducing the payment rate for IRFs by 5 percent would better align Medicare payments with the costs of IRF care.

IMPLICATIONS 10

Spending

- The payment update for IRFs in fiscal year 2020 consists of a forecasted 3.2 percent market basket update and a forecasted –0.5 percent productivity adjustment of the market basket update.[13] Relative to current law, this recommendation would decrease Medicare spending by between $250 million and $750 million in 2019 and by between $5 billion and $10 billion over five years.

Beneficiary and provider

- We do not expect this combination of recommendations to have an adverse effect on either Medicare beneficiaries' access to care or out-of-pocket spending. This recommendation could increase the financial pressure on some providers. We expect relatively efficient providers will continue to be willing and able to care for Medicare beneficiaries. ■

Endnotes

1 More frequently, Medicare beneficiaries receive inpatient rehabilitation services in skilled nursing facilities (SNFs), in part because there are many more SNFs than IRFs nationwide.

2 More information about the prospective payment system for IRFs is available at http://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_18_irf_final_sec.pdf?sfvrsn=0.

3 Patients with a length of stay of fewer than four days are assigned to a single CMG, regardless of diagnosis, age, level of motor or cognitive function, or presence of comorbidities.

4 The 13 conditions are stroke; spinal cord injury; congenital deformity; amputation of a lower limb; major multiple trauma; hip fracture; brain injury; certain other neurological conditions (multiple sclerosis, Parkinson's disease, cerebral palsy, and neuromuscular disorders); burns; 3 arthritis conditions for which appropriate, aggressive, and sustained outpatient therapy has failed; and hip or knee replacement when it is bilateral, the patient's body mass index is greater than or equal to 50, or the patient is age 85 or older.

5 In September 2018, the Office of Inspector General (OIG) released a report indicating that many inpatient rehabilitation stays did not comply with all Medicare coverage and documentation requirements for reasonable and necessary care. OIG's analysis found that only 45 of 220 sampled stays met the requirements (Office of Inspector General 2018).

6 CMS's major revisions to the compliance threshold policy in 2004 were to (1) increase the number of conditions that count toward the threshold from 10 to 13 and (2) revise the qualifying criteria of major joint replacement—a condition that was commonly treated in IRFs at that time—such that only a certain subset of patients with that condition would count toward the compliance threshold.

7 Other orthopedic conditions, cardiac conditions, and debility are not among the 13 conditions that count toward the compliance threshold, but such cases may count if they have specified comorbidities. Prior Commission analysis of 2013 data showed that less than a third of these cases met the compliance threshold.

8 This analysis of FFS IRF claims and assessment data from 2013 excluded cases that were not preceded by an acute care hospital stay within 30 days of the IRF admission.

9 If we approximate marginal cost as total Medicare cost minus fixed building and equipment cost, then:

Marginal profit = (payments for Medicare services – (total Medicare costs – fixed building and equipment costs)) / Medicare payments

The result is a lower bound on the marginal profit because we ignore any potential labor costs that are fixed.

10 The potentially avoidable readmissions we measure are respiratory-related illness (pneumonia, influenza, bronchitis, chronic obstructive pulmonary disease, and asthma); sepsis; congestive heart failure; fractures or fall with a major injury; urinary tract or kidney infection; blood pressure management; electrolyte imbalance; anticoagulant therapy complications; diabetes-related complications; cellulitis or wound infection; pressure ulcer; medication error or adverse drug reaction; and delirium.

11 Our measure of community discharge does not give IRFs credit for discharging a Medicare beneficiary to the community if the beneficiary is subsequently readmitted to an acute care hospital within 30 days of the IRF discharge.

12 The market basket increase for fiscal year 2018 was 2.6 percent. That update would have been offset by PPACA-required reductions totaling 1.35 percentage points, for a net update of 1.25 percent. However, Section 411(b) of MACRA requires that the increase factor for fiscal year 2018 be 1.0 percent.

13 This market basket forecast was made in the third quarter of 2018. When setting the update for fiscal year 2020, CMS will use the most recent forecast available at that time, which may differ from the number we report here.

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