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March 30, 2015

VIA EMAIL & HAND DELIVERY

Ms. Ruby Potter
Health Facilities Coordination Officer
Maryland Health Care Commission
4160 Patterson Avenue
Baltimore, Maryland 21215

Re: Certificate of Need Application
Baltimore Washington Medical Center, Inc.
t/a University of Maryland Baltimore Washington Medical Center
Cardiac Surgery, Research, and Training Program at
The University of Maryland Baltimore Washington Medical Center
As Part of The University of Maryland Division of Cardiac Surgery

Dear Ms. Potter:

Enclosed are ten copies of the "Responses to Completeness Questions Dated March 10, 2015" with respect to the CON Application of Baltimore Washington Medical Center, Inc. *t/a* University of Maryland Baltimore Washington Medical for a Center Cardiac Surgery, Research, and Training Program. Also enclosed are two CDs containing searchable PDF files of the responses and exhibits and a Word version of the responses.

Please sign and return to our waiting messenger the enclosed acknowledgment of receipt. Thank you for your assistance.

Sincerely,

Thomas C. Dame

TCD:blr
Enclosures
cc: Kevin McDonald, Chief, Certificate of Need (w/ CD)
Paul Parker, Director, Center for Health Care Facilities Planning & Development, MHCC
Suellen Wideman, Esq., Assistant Attorney General, MHCC
Jinlene Chan, M.D., Acting Health Officer, Anne Arundel County (w/ enclosures)
Leana S. Wen, M.D., Health Commissioner, Baltimore City (w/ enclosures)
Leland D. Spencer, M.D, Health Officer, Caroline County (w/ enclosures)

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Laurie Fetterman, Planning & Business Development Analyst, UMBWMC
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Ella R. Aiken, Esq.
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University of Maryland Baltimore Washington Medical Center
Proposal to Change the Type and Scope of
Health Care Services Offered to Include Cardiac Surgery
Matter No. 15-02-2361

Responses to Additional Information Questions Received 3/10/2015

PART I - PROJECT IDENTIFICATION AND GENERAL INFORMATION

1. **Please provide the following information and clarifications of the comprehensive project description:**

   a. **On page 21 the application states that one operating room ("OR") will be available for emergency procedures at all times. Will a back-up OR be needed?**

Applicant Response

UM BWMC will have two operating rooms outfitted for cardiac surgery. When one of these ORs is scheduled for a cardiac surgery, the other OR will remain open to accommodate emergent cardiac cases, including post-operative patients who require a prompt return to the OR. These ORs will also be available for other types of complex surgical cases as the cardiac surgery schedule permits. At least one OR will be available at all times for emergent cardiac cases.

   b. **The project description cites a January 14, 2015 determination that a CON is not required for the fit out of shell space for 3 ORs to replace 3 existing ORs at an estimated cost of $5,157,915 (page 23). Will the ORs to be used for the cardiac surgery service be one of these ORs?**

Applicant Response

UM BWMC will not use one of the soon-to-be replaced ORs for cardiac surgery. Rather, UM BWMC plans to use two large, state-of-the art ORs that were constructed pursuant to a Certificate of Need granted on December 17, 2009 (Docket No. 09-02-2299). As a result of that project, UM BWMC renovated the surgical suite and expanded the number of operating rooms from 14 to 16. This $31 million project was completed in 2011. A site visit and gap analysis from the UM Division of Cardiac Surgery team confirmed that these ORs are well-equipped to accommodate cardiac surgery with only some modification of moveable equipment needed. The project drawings provided in response to completeness question 3 depict the ORs to be utilized for the proposed cardiac surgery program.

c. Quantify the impact of the cardiac surgery services on the utilization of Hospital's other ORs?

Applicant Response

The addition of the proposed cardiac surgery services will not adversely affect the utilization of the hospital's other ORs. As shown in Table 18 below, UM BWMC will have sufficient surgical capacity even with the projected number of cardiac surgery cases being performed in dedicated ORs.

The table shows the need for OR capacity assuming that 1.5 ORs are dedicated to cardiac surgery cases (at least one OR will be dedicated to cardiac surgery cases at all times, and two ORs will be dedicated when a cardiac case is scheduled in one of the ORs). To analyze the impact on the other ORs, UM BWMC removed: (a) the projected cardiac surgery cases from the "Total OR Cases" line; and (b) the minutes for 1.5 existing ORs from the "Current Optimal Capacity" line. UM BWMC projects no need for additional OR capacity as a result of the proposed cardiac surgery program.

Table 18
Analysis of UM BWMC Operating Room Capacity
After Addition of Cardiac Surgery Services

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Total OR Cases	11,356	11,438	11,499	10,723	10,852	10,982	11,114	11,247	11,382
Annual % Change	-2.9%	0.7%	0.5%	-6.7%	1.2%	1.2%	1.2%	1.2%	1.2%
Minutes/Case	102.4	106.8	110.0	108.4	108.4	108.4	108.4	108.4	108.4
Minutes	1,162,526	1,221,703	1,264,755	1,162,710	1,176,662	1,190,782	1,205,071	1,219,532	1,234,166
TAT Min/Case	25	25	25	25	25	25	25	25	25
TAT Minutes	283,900	285,950	287,475	268,080	271,297	274,552	277,847	281,181	284,555
Total Minutes	1,446,426	1,507,653	1,552,230	1,430,789	1,447,959	1,465,334	1,482,918	1,500,713	1,518,721
Current Optimal Capacity	1,653,000	1,653,000	1,653,000	1,653,000	1,653,000	1,653,000	1,653,000	1,653,000	1,653,000
Difference	(206,574)	(145,347)	(100,770)	(222,211)	(205,041)	(187,666)	(170,082)	(152,287)	(134,279)
Optimal Capacity/OR	114,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000
Needed ORs	(1.81)	(1.27)	(0.88)	(1.95)	(1.80)	(1.65)	(1.49)	(1.34)	(1.18)

d. On page 22 the application states that following cardiac surgery a patient will be transported to the Cardiovascular Recovery Room. Does this room currently exist? If yes, how is it currently used and how will it be able to accommodate the additional volume? If no, what will be the cost of creating the room?

Applicant Response

The proposed Cardiovascular Recovery Room is a carve-out of UM BWMC's existing surgery center and will require no construction costs. The proposed area consists of four private rooms with technology to support the monitoring of cardiac surgery patients and glass

entry doors for infection prevention. There is a central nurses' station allowing the skilled staff to care for and monitor patients. This area is immediately adjacent to the OR suite in the event the patient needs to be taken back to the OR. There is a comfortable waiting room and café nearby for the patient's family and friends.

This planned space for the cardiovascular recovery area is currently used for outpatient surgery patients. There is sufficient capacity in this area to support the conversion of a portion of the space for dedicated use by cardiac surgery patients.

e. On page 24 the application states that the Emergency Department at UM BWMC serves as primary receiver for Anne Arundel County ambulances covering the north, central and western sections of the County. Please provide a more specific identification of the areas included in the north, central and western sections of the County, preferably by zip code.

Applicant Response

As shown in Table 19 below, in CY2014 UM BWMC received 55.5% of the total Anne Arundel County EMS transports.

Table 19
Anne Arundel County EMS Transports
CY 2014

Facility Name	**Transports**	**Percentage**
University of Maryland Baltimore Washington Medical Center	*23,143*	*55.50*
Anne Arundel Medical Center	12,508	29.99
MedStar Harbor Hospital	3,147	7.55
Other Acute Care Facility	2,903	6.96

Source: Anne Arundel County EMS

UM BWMC received 62% of the Anne Arundel County EMS ambulance traffic originating in the northern, central, and western portions of Anne Arundel County.[1] Additionally, UM BWMC received 738 transports from Thurgood Marshall BWI Airport EMS (zip code of 21240), accounting for 88% of total transports for CY14.

A breakdown of Anne Arundel zip codes by region appears in Table 20 below:

[1] UM BWMC used the Anne Arundel County Department of Health definitions of Northern, Central, Western and Southern Arundel County.

Table 20
Anne Arundel County Zip Codes by Region

Zip Code	Area	Region
21012	Arnold	Central
21032	Crownsville	Central
21108	Millersville	Central
21146	Severna Park	Central
21401	Annapolis	Central
21402	Naval Academy	Central
21403	Eastport	Central
21405	Sherwood Forest	Central
21409	Annapolis	Central
21056	Gibson Island	Northern
21060	Glen Burnie (East)	Northern
21061	Glen Burnie (West)	Northern
21122	Pasadena	Northern
21225	Brooklyn	Northern
21226	Curtis Bay	Northern
20711	Lothian	Southern
20714	North Beach	Southern
20733	Churchton	Southern
20736	Owings	Southern
20751	Deale	Southern
20754	Dunkirk	Southern
20758	Friendship	Southern
20764	Shady Side	Southern
20765	Galesville	Southern
20776	Harwood	Southern
20778	West River	Southern
20779	Tracys Landing	Southern
21035	Davidsonville	Southern
21037	Edgewater	Southern
21140	Riva	Southern
20701	Annapolis Junction	Western
20724	Laurel	Western
20755	Ft. Meade	Western
20794	Jessup	Western

Zip Code	Area	Region
21054	Gambrills	Western
21076	Hanover	Western
21077	Harmans	Western
21090	Linthicum Heights	Western
21113	Odenton	Western
21114	Crofton	Western
21144	Severn	Western
21240	BWI Airport	

f. It also states that ambulances are received from Eastern Howard County. Please define Eastern Howard County, preferably by zip code.

In CY14, UM BWMC received ambulance transfers from the following eastern Howard County zip codes: 21076 (Hanover – also part of Anne Arundel County), 21075 (Elkridge), 20794 (Jessup – also part of Anne Arundel County), and 21046 (Columbia). The source of data is Howard County EMS.

g. On page 28, the application states that the establishment of an operating room satellite pharmacy is an effective way to recover lost revenue. Please explain how.

Applicant Response

The discussion of the benefits of an operating room satellite pharmacy on page 28 of the application is supported by the article referenced in footnote 6: Stroup JW, Iglar AM, *Implementation and Financial Analysis of an Operating Room Satellite Pharmacy*, Am J Hosp Pharm. 1992 Sep; 49(9): 2198-202. As to the recovery of revenue, UM BWMC believes that an operating room satellite pharmacy will not likely enable a Maryland hospital to recover lost revenue under the Global Budget Revenue method of hospital reimbursement. However, as explained in the article, a satellite pharmacy can help reduce cost, improve efficiency, control inventory, and ensure that all appropriate patient charges occur. For convenience, a copy of the article is attached as Exhibit 34.

2. Table A submitted in response to question 9 reports 36 ICU/CCU beds but annual survey reports 30 such beds. Please correct or explain this apparent discrepancy.

Applicant Response

See the attached Revised Exhibit 1, which includes a revised Table A. UM BWMC currently has a licensed operating capacity of 30 ICU/CCU beds. *See* Exhibit 35. However, it has a 36 bed physical ICU/CCU capacity. UM BWMC was approved to have 36 physical critical care beds pursuant to Certificate of Need Application Docket # 04-02-2154.

Although Table A shows changes in bed configurations before and after the project, none of these changes is part of the project. Rather, the changes are part of a separate project to build out shell space on the seventh floor of the hospital, convert semi-private rooms to private rooms on other floors, and convert some rooms to non-patient functions. This project was approved by the Commission by letter dated January 15, 2015.

3. **In response to question 12, Project Drawings, please submit drawing of the Surgery Department as it currently exists and functions and how it would look following implementation of a cardiac surgery program, if approved. This drawing should show what spaces would be used for the cardiac surgery program and any spaces that would be used for cardiac surgery.**

Applicant Response

See the project drawings attached as Exhibit 36.

PART II - PROJECT BUDGET

4. **Please describe the $1,042,217 in equipment that will be purchased.**

Applicant Response

Exhibit 37 includes the detailed list of equipment and associated costs.

These are all considered by Marshall Valuation Service to be moveable equipment. On March 28, 2003, Mr. Alberto J. Negron, Technical Support Representative, Marshall & Swift Company (publisher of the Marshall Valuation Service), faxed to Mr. Andrew Solberg the definitions of Fixed (Group I) Equipment. The fax is included as Exhibit 38.

The Marshall and Swift fax definitions of Group II (not Fixed) equipment is quoted below:

> Group II equipment is often installed and becomes part of the real property, but typically not part of the general contract, and not included in our costs. This group would generally include permanent surgical, imaging, and/or kitchen equipment, i.e., autoclaves, permanent surgical lighting and laminar flow filtering systems. The rough-in work for these items is normally performed under the general contract, but the equipment is usually purchased and installed by the manufacturer or his representative. This group would relate closely to what is normally considered trade fixtures in a commercial occupancy such as a retail store.

Note that only the wiring and rough-in work to accommodate permanent surgical lighting is considered Fixed Equipment, but not the lighting itself. UM BWMC does not have to change the wiring or rough-in work, but only has to modify the lighting boom. Hence, UM BWMC listed the equipment as Moveable Equipment.

PART IV – CONSISTENCY WITH GENERAL REVIEW CRITERIA

THE STATE HEALTH PLAN STANDARDS

Acute Care Hospital Standards – General Standards

Information Regarding Charges

5. **According to the definition of representative charges, COMAR 10.24.10.06(29)(b), the charge list should be updated at least quarterly. While the list on the UM BWMC website is current (January 2015), there is no provision in the written policy (Exhibit 14) for maintenance of the lists. Please submit a revised policy that makes it clear that the lists of charges will be updated at least quarterly.**

Applicant Response

UM BWMC has revised its policy to clarify that the list of charges will be updated at least quarterly. See Exhibit 39.

6. **Regarding the representative list of services and charges, the list submitted and available on the website does not comply fully with the definition of representative list of services and charges as specified in the Definitions section of the Acute Care Hospital Services chapter (COMAR 10.24.10.06(29)(b)). The definition is "at a minimum, a list containing:**

   a. **The average charge per case for the ten most frequently occurring inpatient diagnoses (determined by DRG) for discharged medical/surgical patients, and also for discharged obstetric patients, discharged pediatric patients, and discharged acute psychiatric patients, if the hospital operates an inpatient unit for any of these latter three services; and**

   b. **The average charge per procedure for the ten most frequently occurring outpatient procedures (defined by CPT codes) in three clinical areas: diagnostic imaging; outpatient surgery; and laboratory services. This list should be updated, with respect to DRGs, CPT codes, and charges, at least quarterly."**

   Therefore please update the web listing of charges to reflect the charges per case to include at a minimum for inpatients the average charge per case for the 10 most frequently occurring diagnoses for discharged medical/surgical patients, the 10 most frequently occurring diagnosis for discharged obstetric patients, the 10 most frequently occurring diagnosis for discharged pediatric patients, and the 10 most frequently occurring diagnosis for discharged psychiatric patients all as determined by DRG. Pages submitted as Exhibit 15 and website pages include outpatient charges for laboratory and radiology as required and a list for outpatients that may or may not be limited to outpatient surgery as required. Please ensure that these lists include at least the 10 most common outpatient surgery procedures.

Applicant Response

An updated list of representative services and charges is attached as Exhibit 40, also available at http://www.mybwmc.org/sites/default/files/related_uploads/EstimatedCharges.pdf.

Cardiac Surgery State Health Plan Chapter Standards

(1) Minimum Volume Standard

7. The FY 2016 column of Table 2 (page 44) totals 84 not 81 and the 84 total matches the total shown in Exhibit 23. Please correct this apparent discrepancy.

Applicant Response

The corrected Table 2 appears below:

Revised Table 2
Summary of Projections of Volume of
Cardiac Surgery Cases at UM BWMC (FY 2016 – FY 2021)

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Shift from UMMC	64	145	151	157	154	150
Shift from Other Maryland Hospitals	12	36	47	57	67	74
Shift from D.C. Hospitals	8	23	30	36	43	46
TOTAL	84	204	228	250	264	270

Source: Detailed volume projections contained in Exhibit 23.

8. On page 44 the application states that patients with extreme severity were excluded from the projections. Explain how extreme severity is identified in patients prior to cardiac surgery and how it is identified from the Maryland MSA Database?

Applicant Response

Severity of illness was obtained for actual FY2014 cardiac cases in the market (*i.e.*, those cases for patients residing in the proposed UM BWMC cardiac surgery services service area) and an assumption was made in the volume projections that the percentage of extreme cases in the market in FY2014 would be similar in the future years FY2016 through FY2021. Severity of illness is assigned by the 3M Grouper for each APR DRG and represents the extent of physiological decompensation or organ system loss of function. It is one of the data elements submitted to the HSCRC each quarter by Maryland hospitals and is a data element that can be queried in the MSA database.

9. With respect to Exhibit 23, please provide the following clarifications:

a. Since MHCC's projected adult cardiac surgery cases covers the years 2014 through 2019, what is the basis for the projected 2.3% decline in cases from FY19 to FY20 and the 2.0% decline from FY20 to FY21 as shown on the first page of the exhibit?

Applicant Response

The MHCC projected case volume through 2019. For the years 2016 through 2019, the MHCC projections predicted declining cases with a decreasing rate of decline over those years. Based on this projected trend, for the years outside of the MHCC projections (i.e., 2020 and 2021), UM BWMC also used a volume projection model with a declining volume rate. Specifically, UM BWMC assumed that the rate of decline would continue to decrease after FY19, conservatively at 0.30% between 2019 and 2020 (from 2.55% to 2.25%), and 0.25% between 2020 and 2021 (from 2.25% to 2.00%).

b. Please explain the market share shift numbers at the top of the pages beginning with the third page of Exhibit 23. What is the basis for each year's market share shift for UMMS and for the other hospitals?

Applicant Response

UM BWMC determined that, when the program is mature, its overall cardiac surgery market share in its projected cardiac surgery service area would approximate UM BWMC's current cardiology market share percentage in its HSCRC service area, approximately 50 percent.

As described in the application, UM BWMC projects that the majority of its patients will be patients from its projected cardiac surgery service area who are currently being referred to UMMC. Hence, much of the cardiac surgery volume will be shifted from UMMC. This is consistent with the "three programs, one location" model, whereby patients will be able to have surgery at the program location that meets patient preference and clinical acuity. This is also consistent with the documented cardiologist referrals that would be shifted from UMMC to UM BWMC.[2] When the UM BWMC cardiac surgery program is mature in 2019, UM BWMC projects that this shift will equal 80% of the non-severe cases currently referred to UMMC. UM BWMC assumed that 20% of the non-severe cases would continue to be performed at UMMC.

The remainder of the UM BWMC cases would be shifted from other cardiac surgery providers serving UM BWMC's projected cardiac surgery service area. These cases were distributed based on their relative cardiac surgery market shares in FY 2014.

The market shifts were assumed to build through the years. UM BWMC projects that as the UM BWMC cardiac surgery site becomes established, it will draw an increasing volume. For example, in the first year of operation, the market shift from UMMC was assumed to be 30% and the shift from all other hospitals was assumed to be 5%. In 2021, shift from UMMC was

[2] This volume shift of lower acuity patients from an academic medical center to a community medical center will also help lower health care costs.

assumed to be 80% and the shift from all other hospitals was assumed to be 34% (33% from Washington, DC hospitals). As the program becomes established to cardiologists and patients, UM BWMC expects to experience increased volume from both cardiologist referrals and patient preference. UM BWMC also expects to experience increased market share due to insurance provider and patient preference for lower cost of care settings.

The market shifts shown in Exhibit 23, beginning on page 3, reflect the expected shifts from the identified hospitals. The example below is from the top of the third page of Exhibit 23. It shows that the expected shift from UMMC in 2016 is 30% and that the expected shift from each of the other hospitals is 5% for each hospital. Pages 4-6 of Exhibit 23 simply show the market shift assumptions for each of the years 2017-2021.

MHCC PROJECTED DECREASE	*-5.1%*	*-5.1%*	*-5.1%*	*-5.1%*	*-5.1%*	*-5.1%*	*-5.1%*	*-5.1%*	
MARKET SHARE SHIFT	*30.0%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*	
CARDIAC SURGERY MARKET PROJECTED VOLUME	*213*	*113*	*58*	*9*	*18*	*10*	*38*	*157*	***616***

SURGERY MARKET VOLUME					FY16 SHIFT TO BWMC								
PRMC	WASH ADV	UM SJMC	DC HOSP	TOTAL	UMMC	JHH	UNION MEM	SINAI	PRMC	WASH ADV	UM SJMC	DC HOSP	BWMC SHIFT
-	-	2	-	33	6	-	-	-	-	-	-	-	6
-	-	2	2	43	8	-	-	-	-	-	-	-	8

UM BWMC had no basis for projecting that it would draw a different percentage from any specific hospital except UMMC, so it applied the same percentage to each of the other hospitals in each year. As the percentage was multiplied by the number of projected cases that occurred at that hospital (adjusted for the projected annual declines, which were spread evenly among all hospitals), the projected number of cases shifted from each hospital was affected by that hospital's 2014 market share.

(2) Impact

10. **Subpart (a) of the impact standard requires an applicant that is projecting a shift in volume from existing cardiac surgery hospitals to quantify the shift and estimate the financial impact on the cardiac surgery program of each such hospital. While UM BWMC has quantified the expected shift in volume, the estimated financial impact on hospitals outside the University of Maryland Medical System was not submitted. Please submit estimates of the financial impact of the shift in volume from existing programs as required by subpart (a) and demonstrate that the shift will not compromise the financial viability of the cardiac services at the affected hospitals as required by subpart (b)(i).**

Applicant Response

The rate payment methodology established by the HSCRC under the Global Budget Agreements with hospitals operates so that the impact of incremental shifts in volume is expected to be net neutral to the affected hospital. Utilizing the 50% Variable Cost Factor, the expectation is that increases or decreases in revenue should offset variable cost increases and decreases. Therefore UM BWMC expects that existing cardiac surgery programs should not experience significant financial impact due to the Commission's approval of UM BWMC's application.

In the absence of actual service line data from other hospitals, UM BWMC extrapolated using the experience of UMMC and the proposal of UM BWMC to estimate the costs on other facilities. Using the UMMC cost accounting system, the direct variable cost as a percentage of total costs for the proposed volumes is 49.5%. For its location, UM BWMC estimates a variable cost factor estimate of 55%.

As shown in Table 21 below, using year two of the proposed program (FY2017), when the expected impact would be the largest based on the estimated amount of volume shift, there will be no adverse financial impact on the hospitals that are expected to experience shifts in volume.

Table 21
Estimated Financial Impact on Other Hospitals in
FY 2017as a Result of Cardiac Surgery Program at UM BWMC

Cases shifted (1)	JHH	Union	Sinai	Peninsula	WAH	UMSJMC
2017	11	5	1	2	1	4

Financial Impact Year 2	JHH	Union	Sinai	Peninsula	WAH	UMSJMC
Est. Revenue Impact (2)	$315,033	$152,689	$31,812	$76,828	$25,543	$111,376
Est. Cost Impact (3)	$311,163	$167,958	$34,993	$84,511	$28,097	$122,513
Est. Net Impact	($3,150)	$15,269	$3,181	$7,683	$2,554	$11,138

(1) From Exhibit 23 of the application
(2) Based on the rate order schedule in Exhibit 26 of the application
(3) Based on the above assumptions of 49.5% variable cost factor at JHH and 55.0% at the non-academic medical center hospitals

(3) Quality

11. What are the indications for surgery that would lead to the surgery being performed at UMMC instead of UM BWMC?

Applicant Response

Elective cardiac surgery patients are evaluated preoperatively to assess patient disease state, symptoms and comorbidities. The Society of Thoracic Surgeons has created a Risk Calculator tool to assist in pre-operative assessment, available at: http://www.sts.org/quality-research-patient-safety/quality/risk-calculator-and-models/risk-calculator. The preliminary assessment of the patient helps accurately determine the pre-operative APR-DRG and the associated level of severity as outlined by the MSA Database as the following levels: 1 = Minor; 2 = Major; 3 = Moderate; 4 = Extreme.

Elective extreme cases would be performed at UMMC if the care team agreed that for overall patient care the environment of a quaternary facility would be the best location. Examples include heart and lung transplantation, extracorporeal membrane oxygenation (ECMO), apico-aortic conduit, transcatheter aortic and mitral valve interventions, ventricular assist device implantation, multiple valve replacements, and extreme risk by STS and MSA guidelines. The UM Division of Cardiac Surgery is uniquely structured to provide care in the community and university setting. The Division functions as one program in multiple locations providing opportunity for team specialization of complex procedures increasing quality with experience.

12. **Regarding the mechanism for monitoring long-term outcomes of discharged patients, has UMMC established a more specific mechanism or policy that would or could be adopted by UM BWMC? If yes, please describe it and submit the policy, if it exists.**

Applicant Response

The UM Division of Cardiac Surgery is a referral-based practice and works collaboratively with the referring cardiologist in providing surgical interventions. Care usually begins with an outpatient or inpatient consult, followed by preparation for operative intervention, surgery and inpatient care. Patients who are discharged to home receive care from home health nurses during the first three days after discharge.

All patients are seen in follow--up approximately one month after discharge by the cardiac surgeon or his or her nurse practitioner. Thereafter, the patient's primary cardiologist assumes responsibility for ongoing care. Patients are referred back to the surgical team by the referring cardiologist at any point deemed medically necessary. Certain patient populations will continue to have longitudinal follow up evaluation by the UM Division of Cardiac Surgery, including heart and lung transplant patients, patients on mechanical circulatory support, patients undergoing catheter based valvular interventions, and patients in the aortic clinic with dissection or aneurysm. Any patient who is enrolled in a research trial is followed up according to protocol. As part of the UM Division of Cardiac Surgery, the proposed cardiac surgery program at UM BWMC will use the same monitoring protocols.

13. **Explain why benchmarking to the University Hospitals Consortium described as large urban, medical teaching hospitals with greater than 500 beds, as referenced on page 53, would be reasonable for the proposed service at UM BWMC?**

Applicant Response

The University HealthSystem Consortium (UHC) has developed a risk-adjustment model for community hospitals to accommodate academic health systems with affiliations or partnerships with community hospitals. A description of the model may be accessed at: https://www.uhc.edu/24858. This model will serve as an appropriate benchmarking tool for UM BWMC.

(4) Cost Effectiveness

14. The response to this standard on pages 54 and 55 compares UM BWMC's FY14 charges to the FY14 charges at Maryland hospitals from which most of its cardiac surgery cases will transfer. The description of this comparison states that the data is case mix adjusted to only include the types of cases that are expected to transfer and exclude the types of cases that would likely remain at UMMC. Please provide the following additional information:

a. What is the source of the data used in the analysis as detailed in Exhibit 26?

Applicant Response

Data sources include HSCRC abstract data and FY15 published statewide rate file.

b. Submit a detailed description of how this analysis was prepared including a clear statement of all assumptions made in its preparation.

Applicant Response

Cardiac surgery cases were identified from UMMC's confidential inpatient abstract data for FY 2014 (July 1, 2013 – June 30, 2014) using MHCC's procedural definition of cardiac surgery as outlined in COMAR 10.24.17. Patients were sub-categorized between CABG, Valve, or Valve & CABG based on the ICD-9 procedure codes present for each case. Pediatric patients (patients of age 14 or less) were excluded from the analysis as well as cases which grouped to an APR SOI level of 4 (extreme) as they were considered the most complex and would continue to require the level of care provided by an academic medical center (UMMC). Patients were then classified to service areas based on the patient's zip code. Only those patients living in UM BWMC's defined cardiac surgery service area were retained. Each of the remaining patient's charges and volume (RVUs) by HSCRC defined rate center were accumulated and a patient profile was created (total RVUs by rate center / # of admissions) to determine the average RVUs per rate center of an admission in the 3 categories (Valve, CABG or Valve & CABG).

The number of cases expected to come from UMMC was derived from the volume projections described in Exhibit 23 to the application. Statewide cases meeting the above criteria (ICD-9 code, age, service area) were segregated to a service area based on the patient's zip code and product line (Valve, CABG or Valve & CABG) based on the FY14 distribution of actual cases. The projected cases within each category and product line were calculated annually based on the expected market share for that year and overall cardiac surgery decrease (consistent with the MHCC's projections).

The volume profiles of each category were then multiplied by the expected number of cases per year in each category from UMMC and the calculated RVUs were then multiplied by each hospital's approved HSCRC rates for FY 2015 (effective July 1, 2015). For supplies and drugs, only the markup in rates was used (no overhead amounts were included in the analysis). The resulting calculated revenue was compared between UM BWMC and each of the other hospitals to determine which facility had a lower cost per case for this targeted population.

15. The analysis of how the cost cardiac surgery services would change as result of the establishment of a new service at UM BWMC focuses on the impact on charges. Please address the impact on costs especially the cost of staffing and operating the new service and any reductions in the costs of operating the service at the hospitals, which will lose volume, particularly at UMMC.

Applicant Response

The impact on costs was addressed in Exhibit 1, Tables G through L in the application, with Table L focusing especially on staffing. The reduction in costs of operating the other services is addressed in completeness question 10 at other hospitals. Exhibit 28 addresses the projected cost reductions at UMMC**.**

16. What will be the impact on the utilization of operating rooms at UMMC?

Applicant Response

Table 22 below demonstrates the likely impact on the utilization of the UMMC operating rooms caused by the projected shift of cardiac surgery cases to UM BWMC. If UM BWMC provided cardiac surgery services in FY14, the expected shift of approximately 157 cases (which is projected to occur in FY19; *see* Exhibit 23) would have represented approximately 1.28% of the total operating room minutes for all surgical cases.

Table 22
Impact of Proposed Project on UMMC Operating Room Utilization
(Based on FY14 Surgery Cases and Minutes)

	# OF ROOMS	CASES	MINUTES	AVG MIN
	36	**23,707**	**4,402,233**	
Inpatient		*16,678*		
Outpatient		*7,029*		
PROPOSED BWMC SHIFT		157	56,335	358.82
REDUCTION % TO UMMC OR			**1.28%**	

Source: Surginet based on procedure date
Time calculated by Patient in and Out of Room Time
Does not include turnaround time

17. The response to subpart (c) describes UMMS's initiatives to improve quality performance and how it will be measured. The response does not address how the availability of cardiac surgery at UM BWMC will alter the effectiveness of cardiac surgery services for cardiac surgery patients in the proposed service area with respect to the quality of care and care outcomes especially compared to the current delivery system. Please respond to this part of the standard.

Applicant Response

Cardiac surgery patients from the proposed UM BWMC cardiac surgery service area will benefit from a patient/family focused system of discharge planning and follow-up care. Also, remaining closer to their home and communities allows patients to have access to their own community supports and resources. Although UMMC care managers have successfully assisted cardiac surgery patients in their discharge planning, UM BWMC care managers have stronger connections to local resources to assist patients throughout the continuum of care. Additionally, referring cardiologists will be able to more readily visit hospitalized patients if they choose to do so.

The community setting of UM BWMC helps to promote a patient and family centered approach to health care, which is generally accepted to promote improved health outcomes. Also, the proposed network of convenient outpatient clinic locations (Glen Burnie, Queenstown, and Baltimore) will increase patient satisfaction with the experience of care and will help increase patient compliance with recommended post-surgical care.

In addition, surgeries performed at UM BWMC will cost less than the same procedure at UMMC. This will impact patient financial responsibility by decreasing the percentage of costs contributed by the insured, thereby relieving some of the financial hardships of patients and families and allowing them to redirect focus on wellness and improved lifestyle choices.

Cardiac surgery patients requiring urgent surgery will have the benefit of a local cardiac surgery program at UM BWMC, and will not require transfers to other sites. A component of access is timely and readily available services. If a patient presents to UM BWMC's Cardiac Catheterization Laboratory and is determined to need a lower-acuity cardiac surgery they will not need to go through the transfer process. The transfer process causes inevitable delays due to the need to transfer and transport patients that could be eliminated if the patient were to remain at UM BWMC. Additionally, reducing the need for transfers also decreases the need for care transitions, a risk factor for medical errors.

Eliminating the need for transfer will also help improve patient and family satisfaction. As noted in letters of support discussed on page 117 of the application and included in Exhibit 33, the need to transfer critically ill patients elsewhere often creates burdens for both patients and their families even when they are impressed by the quality of care provided to them by the UM Division of Cardiac Surgery.

(5) Access

18. In addressing how the establishment of the new service at UM BWMC will alter the effectiveness with respect to access, the response focuses on the primary service area population that does not have access to a vehicle and compares such data to AAMC's primary service area population. Please: a) quantify to the extent possible the percentage of UMMC's cardiac surgery patients whose immediate family member's visits relied on public transportation and on taxis; and b) compare the accessibility of the proposed service using public transportation to the access to existing providers. Compare the time and cost of such trips to UMMC with the cost of such trips to UM BWMC.

Applicant Response

Neither UM BWMC nor UMMC has any data on the number or percentage of UMMC's cardiac surgery patients whose immediate family member's visits relied on public transportation or taxis. Calculating the comparable times of travel on public transportation to UM BWMC, UMMC, and other OHS providers from the subject Zip Codes is difficult because the travel times vary greatly depending on the time of day, bus schedules, and the exact location within a subject Zip Code. As for cost, according to the Maryland Transit Administration's website (mta.maryland.gov), most transit trips on Light Rail or local buses currently cost $1.60 each way, regardless of distance.

However, travel time and cost of public transportation is not the only measure of convenience and access for the many people without vehicles in UM BWMC's primary service area (PSA). For example, UM BWMC analyzed the estimated cost of a taxi ride for people residing in the five Zip Codes within UM BWMC's PSA. Table 23 below shows the expected cost of taxi trips originating from and returning to the five Zip Codes in the UM BWMC PSA and UM BWMC, UMMC, other area hospitals with cardiac surgery services lines, and Anne Arundel Medical Center. The last line in the table shows the weighted average cost (*i.e.*, the total of the average cost in each Zip Code multiplied by the number of housing units without a vehicle in that Zip Code, divided by the total number of houses without vehicles across the PSA).

As shown, the average roundtrip cost of taxi rides to UM BWMC from the Zip Codes in the PSA is less costly than rides to all existing OHS providers and Anne Arundel Medical Center.

Table 23
Estimated Roundtrip Cost Taxi Trip from UM BWMC PSA to Selected Hospitals

Zip Code	Total Housing Units - No Vehicle	BWMC	UMMC	Johns Hopkins	Union Memorial	Sinai	St. Joseph Med. Ctr	Wash. Adventist	Prince George's Hosp. Center	Suburban	AAMC
21061	1,777	$11.50	$79.83	$130.79	$99.83	$121.45	$170.87	$165.40	$176.44	$230.23	$97.18
21122	559	$60.95	$131.58	$187.43	$151.29	$173.78	$220.05	$207.14	$209.53	$249.90	$102.93
21060	699	$67.28	$75.23	$132.51	$95.23	$117.43	$167.08	$188.92	$179.86	$205.68	$108.68
21144	588	$29.33	$86.16	$142.00	$116.16	$127.78	$176.81	$147.37	$144.87	$184.17	$95.16
21225 (Brooklyn)	1,347	$55.61	$28.47	$42.64	$42.64	$62.63	$77.13	$170.89	$174.33	$208.67	$134.09
21225 (Brooklyn Park)	2,333	$59.23	$32.17	$64.54	$49.50	$69.85	$86.40	$172.21	$169.51	$210.28	$136.85
Total	7,303										
Average Round trip Cost per household		$45.44	$59.16	$98.77	$78.02	$98.25	$130.48	$172.58	$174.15	$215.33	$118.04

Sources & Methodology

Mileage: Taxi fares were calculated by using Google Maps to determine the fastest route between each hospital, without traffic, in each direction. Only the Zip Code was entered into Google Maps, which then pinpointed a central location within the Zip Code. Where routes had identical driving time, the shortest distance was used. If a route used a toll and was only 2 minutes faster than an alternative route, the non-toll route was used.

Rate: The County rate was applied to the trip mileage based on the County of trip origin. County rates were obtained from the following: Anne Arundel County: http://aacabconnection.com/; Baltimore City, Baltimore County: Maryland Public Service Commission (www.psc.state.md.us/); Montgomery County: http://www.montgomerycountymd.gov/DOT-Transit/taxi_reg/taximeterrate.html; Prince George's County: http://dctransitguide.com/taxi/taxi_rates/prince_george_md/. Because rates differ based on County of origin, the fare was calculated in each direction and then combined.

21225 Zip Code: Because the 21225 Zip Code sits in two counties, and taxi rates differ based on county of origin, the distance to two areas within the Zip Code was determined – Brooklyn, located in Baltimore City, MD, and Brooklyn Park, located in Anne Arundel County MD. The total housing units without vehicles in the Zip Code were distributed proportionally between Baltimore City (36.21%) and Anne Arundel County (63.39%), based on the total population distribution of the Zip Code in both counties. (http://www.city-data.com/zips/21225.html)

Additional Charges: A 15% service charge / tip was added to the total roundtrip fare. Fares exclude night, waiting, call, luggage and additional passenger charges. Fares originating in Prince George's County include a $1.00 fuel surcharge. Fares originating in Baltimore City include a $0.30 charge per county mile (mile in any county outside Baltimore City), where applicable.

Roundtrip Average: Zip Code averages are weighted to account for difference in number of households without cars per Zip Code.

19. Regarding the response to subpart (c), how many of the patients referred to cardiac surgery would have been good candidates to have their surgery performed at UM BWMC and how many would have still been referred to UMMC.

Applicant Response

In FY14, 979 diagnostic catheterization procedures were performed at UM BWMC, and 144[3] of these patients were referred for coronary artery bypass surgery (CABG). Of the 144 patients who were referred for cardiac surgery following a diagnostic catherization in UM BWMC's catherization lab, 107 (74%) were transferred/admitted to UMMC. Of these, 89 underwent cardiac surgery and 72 of those procedures could have been performed at UM BWMC if cardiac surgery services were available. Thus, 67% of the patients referred to UMMC, and 81% of those who underwent surgery, could have been treated at UM BWMC.

UM BWMC does not have detailed data for 37 of the 144 patients who were referred for cardiac surgery because they were not admitted to UMMC. However, if the percentage that applies to the patients referred to UMMC also applies to patients referred elsewhere (67%), then another 25 cases could have been performed at UM BWMC. Thus, UM BWMC estimates that a total of 97 of 144 patients could have received cardiac surgery services at UM BWMC.

(7) Financial Feasibility

20. Regarding the impact of the expected lower length of stay at UM BWMC compared to UMMC as detailed on page 63, wouldn't the average length of stay and cost per case at UMMC increase as it would lose some of its less severe cases and thus experience an increase in overall case complexity? Please address this assumption in the analysis of system impact.

Applicant Response

Yes, please refer to the answer to completeness question #15.

21. Explain how it will be possible for UMMC to run two fewer cardiac surgery teams when UM BWMC will only run one team.

Applicant Response

UMMC currently uses four operating rooms for cardiac surgery. Following approval and implementation of cardiac surgery services at UM BWMC, UMMC expects to run two fewer cardiac surgery teams for the following reasons:

(a) As projected in Exhibit 23, approximately 150 cases will be performed each year at UM BWMC that otherwise would have been performed at UMMC, producing a decline in volume at UMMC.

(b) Currently, some non-cardiac cases are performed in the four cardiac surgery operating rooms at UMMC. UMMC intends to shift enough of those cases to the

[3] The application incorrectly identified 145 patients referred for CABG procedures.

other UMMC operating rooms to achieve reduction in staffing in the cardiac operating rooms.

(c) The Commission's projections show declines in cardiac surgery utilization over the next several years. If these projections prove correct, UMMC's volume of cardiac cases may decline.

OTHER CRITERIA

Availability of More Cost-Effective Alternatives

22. Why can't there be expanded and enhanced outreach programs for cardiovascular disease prevention and treatment without the establishment of a new cardiac surgery service at UM BWMC?

Applicant Response

UM BWMC's community outreach programs are developed in response to identified community needs and the capacities of UM BWMC staff and clinical programs.

As a part of its broad outreach efforts, UM BWMC currently provides comprehensive cardiovascular disease prevention and early diagnosis activities throughout its service area, educating residents about their health, healthy behaviors, screenings, and treatment options. With the addition of a cardiac surgery program, and the associated staff, UM BWMC will have additional resources to commit to cardiovascular outreach.

Furthermore, as UM BWMC becomes established as a comprehensive cardiovascular care program, the hospital expects to see increasing demand for cardiovascular-related community outreach services by local senior centers, community organizations, faith-based organizations, schools, and the general public.

Viability of the Proposal

23. The response does not address the sustainability of the proposed services nor did it describe the sources and methods for recruitment of needed staff resources for the new service. Please address these subjects as requested in the application form.

Applicant Response

Tables G, H, J, K and L demonstrate the sustainability of the proposed project. A full description of the assumptions used to complete Tables G, H, J, K and L are included as part of completeness questions 26 and 27. These tables rely on adequate case volume to support the projections. This case volume will be supported through existing relationships with cardiologists and market share shifts that will occur with the program's maturation.

Strength of UM BWMC's Relationships with Referring Cardiologists

UM BWMC's proposed cardiac surgery will be sustainable due in large part to the strength of the integration with the local cardiologist community and the demonstrated support for UM BWMC's proposed cardiac surgery program. These strong relationships will assure maintenance of a strong referral volume necessary to sustain a cardiac surgery program (in excess of 200 cases per year).

Two large cardiology practices, Heart Center of Northern Anne Arundel County and Arundel Heart Associates, have documented in their letters of support that they anticipate referring 81 and 79 cardiac surgery cases per year respectively to UM BWMC. Members of these cardiologist practices (Drs. Ramirez and Yoon) also hold leadership positions in UM BWMC's existing cardiovascular medicine and interventional cardiology programs and hold appointments to UM SOM. Collectively, Drs. Ramirez and Yoon have more than 35 years of tenure at UM BWMC and have strong relationships throughout UMMS.

Dr. Jorge Ramirez serves as UM BWMC's Chair of Medicine and the Chair of Cardiology. Dr. Ramirez holds a faculty appointment at UM SOM as a Clinical Assistant Professor of Medicine. Three of the other five physicians at this practice also hold faculty appointments at UM SOM.

Dr. Samuel Yoon, a member of the Heart Center of Northern Anne Arundel County, serves as the Medical Director of UM BWMC's Cardiac Catheterization Laboratory and the Cardiac Interventional Center. Dr. Yoon holds a faculty appointment at UM SOM as a Clinical Assistant Professor of Medicine. The other six physicians at this practice also hold faculty appointments at UM SOM.

Maryland Heart Associates is another local cardiology practice committed to referring to a cardiac surgery program at UM BWMC, estimated at 41 cases per year and documented by a letter of support. Dr. Shusheel K. Sharma of this practice holds an appointment to the UM SOM.

Dr. Ashwani Bassi, MD, a local cardiologist who submitted a letter of support for the proposed program, also holds an appointment to the UM SOM.

Chesapeake Cardiology at Shore Health and the UM SOM Division of Cardiovascular Medicine, as UMMS entities with strong relationships with the UM Division of Cardiac Surgery, will continue to refer patients to UMMS cardiac surgery locations. These practices have submitted letters of support for the proposed cardiac surgery program at UM BWMC and anticipate annual referral volumes of 57 and 54 cases per year, respectively. Chesapeake Cardiology currently refers patients to the UM Division of Cardiac Surgery's outpatient clinic in Queenstown. UM BWMC expects that many of the lower-acuity patients seen at the Queenstown clinic will have their surgeries performed at UM BWMC due to its more convenient location and lower cost setting.

UM BWMC's Cardiology Observation Cases

Currently, UM BWMC leads all hospital providers in cardiology observation cases for patients in Anne Arundel County. As shown in Table 24 below, UM BWMC has a market share of almost 50% for cardiology observation cases. This is further evidence of the strength of

cardiovascular services at UM BWMC, and it supports the sustainability of the proposed cardiac surgery program at UM BWMC.

Table 24
Cardiology Observation Cases for Anne Arundel County Patients (FY 2015, YTD)

Hospital	Cases	Share
Baltimore Washington Medical Center	1,039	49.2%
Anne Arundel Medical Center	367	17.4%
Harbor Hospital Center	324	15.4%
Calvert Memorial Hospital	84	4.0%
St. Agnes Healthcare	56	2.7%
Laurel Regional Hospital	37	1.8%
Howard County General	36	1.7%
University of Maryland Hospital	21	1.0%
Maryland General Hospital	21	1.0%
Mercy Medical Center	18	0.9%
Bon Secours Hospital	16	0.8%
Southern Maryland	10	0.5%
Doctors Community	8	0.4%
Franklin Square Hospital	8	0.4%
Johns Hopkins Bayview Medical Center	8	0.4%
Northwest Hospital Center	5	0.2%
Union Memorial Hospital	5	0.2%
Sinai Hospital	5	0.2%
Johns Hopkins Hospital	5	0.2%
Good Samaritan Hospital	5	0.2%
Prince George's Hospital	5	0.2%
Holy Cross Hospital	4	0.2%
Frederick Memorial Hospital	4	0.2%
Greater Baltimore Medical	4	0.2%
Atlantic General Hospital	2	0.1%
Washington Adventist Hospital	2	0.1%
Saint Joseph Hospital	2	0.1%
St. Mary's Hospital	1	0.0%
Harford Memorial Hospital	1	0.0%
Suburban Hospital	1	0.0%

Hospital	Cases	Share
Montgomery General	1	0.0%
Upper Chesapeake Medical Center	1	0.0%
Civista Medical Center	1	0.0%
Fort Washington Medical Center	1	0.0%
Carroll Hospital Center	1	0.0%
Sacred Heart Hospital	1	0.0%
GRAND TOTAL	2,110	

Source: MSA Database

Recruiting for Cardiac Surgery Services at UM BWMC

UM BWMC will recruit and maintain a highly-qualified staff for the cardiac surgery program. Several key staff required for the program will be filled under contractual arrangements by staff who support the current program at UMMC including the cardiac surgeons, anesthesiologists and perfusionists. This arrangement will help promote efficiency and reduce overall costs of operating the UM BWMC program location. For any staff vacancies that need recruitment, UMMS Human Resources operates as a shared service and will support the cardiac surgery locations at UMMC, UM SJMC and UM BWMC. This is a significant advantage, as UMMS Human Resources has extensive experience recruiting staff with the credentials, skills, and experience required to support a successful cardiac surgery program with multiple locations. Applicants are automatically evaluated to determine which location in the UMMS system would be most suitable based on operational needs and the candidates' qualifications.

UM BWMC's perioperative and post-operative (critical care and step-down) nursing teams will receive training and support from UMMC's cardiac nursing care team through a collaborative training agreement as described in Exhibit 7 of the original application submission. The training will occur before, during, and after the implementation of the cardiac surgery program at UM BWMC, and will occur at both UM BWMC and UMMC. UMMC has successfully provided similar training services for the clinical staff within the cardiac surgery program at Prince George's Hospital Center. Additional ongoing training will be facilitated through UM BWMC's Clinical Education and Development Department.

24. In addition, the response does not identify the performance requirements under COMAR 10.24.01.12C(3) that would apply to the proposed project and explain how the project will be implemented in compliance with such performance requirements. Please respond to this part of the Viability criterion.

Applicant Response

The applicable performance requirement is set forth in COMAR 10.24.01C3(f). UM BWMC expects to obligate 51% of the approved capital expenditure within one month of CON approval, and expects to complete the project within six months from capital obligation.

25. Please resubmit the MHCC tables F through K (Exhibit 1) labeling each column specifying the year for each column. Clearly indicate whether the year is calendar or fiscal year.

Applicant Response

Revised Exhibit 1, including Tables F through K, is attached.

26. Instructions for completing Tables G, H, J, and K specify that attachments to the application be provided explaining the basis for the projections and all assumptions used.

Applicant Response

The projections in Tables G, H, J and K rely upon the assumptions attached as Exhibit 41.

27. It does not appear that the workforce costs reported and projected in Table L are consistent with the salary and wage expense line in Table G for the current year and a projected year on Table J for the proposed service. Please explain and reconcile the amounts reported in the Workforce table for the current year and for total cost with the salary and wages reported on Table G for the current year and a projection year. Please explain and reconcile the amounts reported in the Workforce table for the projected changes as a result of the proposed project with a projected year on Table J.

Applicant Response

The workforce table does not include benefits. For the current year, the UM BWMC current experienced rate of 20.4% was used to calculate the benefit amount on table G ($28,760,080). In the last projection year the UM BWMC expected benefit rate of 22% was used ($32,145,993). The same methodology was used for the proposed project Table J.

Table of Exhibits

Table of Tables

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3/29/15
Date

Keith D. Persinger
Executive Vice President & COO
UMMC

#520317
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3/30/15
Date

Dana Farrakhan
Senior Vice President
Strategy, Community and Business Development
UMMC

#520231
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3-30-15
Date

Janet Petit
Clinical Program Administrator,
Division of Cardiac Surgery
UMMS

#520229
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3/30/2015
Date

Scott Tinsley-Hall
Director of Strategy and Program Development
UMMS

#520232
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3/20/2015
Date

Donald Steacy
Planning Project Manager
UMMS

#520233
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3-24-15
Date

Alfred Pietsch
Senior Vice President and CFO
UM BWMC

#520226
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3-24-15
Date

Kathy McCollum
Senior Vice President, Clinical Integration and COO
UM BWMC

#520223
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

3/24/15
Date

Rebecca Paesch

Becky Paesch
Senior Director, Strategic Planning and
Physician Enterprise
UM BWMC

#520224
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

March 30, 2015
Date

Daniel Donaldson
Director of Finance Decision Support
UM BWMC

#520227
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

March 23, 2015
Date

Laurie Fetterman
Planning & Business Development
Analyst
UM BWMC

#520225
011598-0019

I hereby declare and affirm under the penalties of perjury that the facts stated in BWMC's response to completeness questions dated March, 10, 2015 and its attachments are true and correct to the best of my knowledge, information, and belief.

2/24/15
Date

Andrew L. Solberg
A.L.S. Healthcare Consultant Services

Table Number	Table Title	Instructions
Table A	**Physical Bed Capacity Before and After Project**	All applicants whose project impacts any nursing unit, regardless of project type or scope, must complete Table A.
Table B	**Departmental Gross Square Feet**	All applicants, regardless of project type or scope, must complete Table B for all departments and functional areas affected by the proposed project.
Table C	**Construction Characteristics**	All applicants proposing new construction or renovation must complete Table C.
Table D	**Site and Offsite Costs Included and Excluded in Marshall Valuation Costs**	All applicants proposing new construction or renovation must complete Table D.
Table E	**Project Budget**	All applicants, regardless of project type or scope, must complete Table E.
Table F	**Statistical Projections - Entire Facility**	Existing facility applicants must complete Table F. All applicants who complete this table must also complete Tables G and H.
Table G	**Revenues & Expenses, Uninflated - Entire Facility**	Existing facility applicants must complete Table G. The projected revenues and expenses in Table G should be consistent with the volume projections in Table F.
Table H	**Revenues & Expenses, Inflated - Entire Facility**	Existing facility applicants must complete Table H. The projected revenues and expenses in H should be consistent with the projections in Tables F and G.
Table I	**Statistical Projections - New Facility or Service**	Applicants who propose to establish a new facility, existing facility applicants who propose a new service, and applicants who are directed by MHCC staff must complete Table I. All applicants who complete this table must also complete Tables J and K.
Table J	**Revenues & Expenses, Uninflated - New Facility or Service**	Applicants who propose to establish a new facility and existing facility applicants who propose a new service and any other applicant who completes a Table I must complete Table J. The projected revenues and expenses in Table J should be consistent with the volume projections in Table I.
Table K	**Revenues & Expenses, Inflated - New Facility or Service**	Applicants who propose to establish a new facility and existing facility applicants who propose a new service and any other applicant that completes a Table I must complete Table K. The projected revenues and expenses in Table K should be consistent with the projections in Tables I and J.
Table L	**Manpower**	All applicants, regardless of project type or scope, must complete Table L.

REVISED (3/30/15)

TABLE A. PHYSICAL BED CAPACITY BEFORE AND AFTER PROJECT

INSTRUCTION: Identify the location of each nursing unit (add or delete rows if necessary) and specify the room and bed count before and after the project in accordance with the definition of physical capacity noted below. Applicants should add columns and recalculate formulas to address rooms with 3 and 4 bed capacity. See additional instruction in the column to the right of the table.
NOTE: Physical capacity is the total number of beds that could be physically set up in space without significant renovations. This should be the maximum operating capacity under normal, non-emergency circumstances and is a physical count of bed capacity, rather than a measure of staffing capacity. A room with two headwalls and two sets of gasses should be counted as having capacity for two beds, even if it is typically set up and operated with only one bed. A room with one headwall and one set of gasses is counted as a private room, even if it is large enough from a square footage perspective to be used as a semi-private room, since renovation/construction would be required to convert it to semi-private use. If the hospital operates patient rooms that contain no headwalls or a single headwall, but are normally used to accommodate one or more than one patient (e.g., for psychiatric patients), the physical capacity of such rooms should be counted as they are currently used.

Before the Project							After Project Completion							
Hospital Service	Location (Floor/Wing)*	Licensed Beds: July 1, 2014	Based on Physical Capacity: Room Count Private	Semi-Private	Total Rooms	Bed Count: Physical Capacity	Hospital Service	Location (Floor/Wing)*	Based on Physical Capacity: Room Count Private	Semi-Private	Total Rooms	Bed Count: Physical Capacity	Additional Instruction
ACUTE CARE							**ACUTE CARE**						
General Medical/Surgical*					0	0	**General Medical/Surgical***						
	7 West		0	0	0	0		7 West	30	0	30	30	
	6 West		30	0	30	30		6 West	30	0	30	30	
	6 South		24	0	24	24		6 South	24	0	24	24	
	5 West		30	0	30	30		5 West	30	0	30	30	
	5 South		2	20	22	42		5 South	4	18	22	40	
	4 West		27	0	27	27		4 West	27	0	27	27	
	4 South		3	22	25	47		4 South	22		22	22	
	PCU		2	20	22	42		PCU	5	17	22	39	
SUBTOTAL Gen. Med/Surg*			**118**	**62**	**180**	**242**	**SUBTOTAL Gen. Med/Surg***		**172**	**35**	**207**	**242**	*Calculate the sum of all General Medical/Surgical rows*
ICU/CCU	2 CCW/SICU		36	0	36	36	**ICU/CCU**		36		36	36	
Other *(Specify/add rows as needed)*					0	0					0	0	
TOTAL MSGA		**271**	**154**	**62**	**216**	**278**	**TOTAL MSGA**		**208**	**35**	**243**	**278**	***Calculate the sum of Med/Surg Subtotal, ICU/CCU, and other physical capacity***
Obstetrics	3 South	**15**	18		18	18	**Obstetrics**		18		18	18	
Pediatrics	3 East	**10**	10		10	10	**Pediatrics**		10		10	10	
Psychiatric	2 East	**14**	2	6	8	14	**Psychiatric**		2	6	8	14	
TOTAL ACUTE		**310**	**184**	**68**	**252**	**320**	**TOTAL ACUTE**		**238**	**41**	**279**	**320**	*Ensure that Total includes Total MSGA and Obstetrics, Pediatrics, and Psych rows*
NON-ACUTE CARE							**NON-ACUTE CARE**						
Dedicated Observation**					0	0	**Dedicated Observation****				0	0	
Rehabilitation					0	0	**Rehabilitation**				0	0	
Comprehensive Care					0	0	**Comprehensive Care**				0	0	
Other *(Specify/add rows as needed)*					0	0	**Other** *(Specify/add rows as needed)*				0	0	
TOTAL NON-ACUTE							**TOTAL NON-ACUTE**						*Calculate the sum of all Non-Acute Care rows*
HOSPITAL TOTAL		**310**	**184**	**68**	**252**	**320**	**HOSPITAL TOTAL**		**238**	**41**	**279**	**320**	*Ensure that Hospital Total includes Total Acute and Total Non-acute rows*

* Include beds dedicated to gynecology and addictions, if unit(s) is separate for acute psychiatric unit

** Include services included in the reporting of the "Observation Center". Service furnished by the hospital on the hospital's promise, including use of a bed and periodic monitoring by the hospital's nursing or other staff, which are reasonable and necessary to determine the need for a possible admission to the hospital as an inpatient; Must be ordered and documented in writing, given by a medical practitioner.

REVISED (3/30/15)

TABLE B. DEPARTMENTAL GROSS SQUARE FEET AFFECTED BY PROPOSED PROJECT

INSTRUCTION: Add or delete rows if necessary. See additional instruction in the column to the right of the table.

DEPARTMENT/FUNCTIONAL AREA	DEPARTMENTAL GROSS SQUARE FEET				
	Current	To be Added Thru New Construction	To Be Renovated	To Remain As Is	Total After Project Completion
Operating Room Suite	51,200	0	0	51,200	51,200
Cardiovascular Recovery Unit	1,125	0	0	1,125	1,125
2 West - Critical Care West	27,000	0	0	27,000	27,000
6 West - Step Down Unit	28,300	0	0	28,300	28,300
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
Total					107,625

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TABLE E. PROJECT BUDGET

INSTRUCTION: Estimates for Capital Costs (1.a-e), Financing Costs and Other Cash Requirements (2.a-g), and Working Capital Startup Costs (3) must reflect current costs as of the date of application and include all costs for construction and renovation. Explain the basis for construction cost estimates, renovation cost estimates, contingencies, interest during construction period, and inflation in an attachment to the application. See additional instruction in the column to the right of the table.

NOTE: Inflation should only be included in the Inflation allowance line A.1.e. The value of donated land for the project should be included on Line A.1.a as a use of funds and on line B.8 as a source of funds

	Hospital Building	Other Structure	Total
A. USE OF FUNDS			
1. CAPITAL COSTS			
a. Land Purchase			**$0**
b. New Construction			
(1) Building	$0		$0
(2) Fixed Equipment	$0		$0
(3) Site and Infrastructure	$0		$0
(4) Architect/Engineering Fees	$0		$0
(5) Permits (Building, Utilities, Etc.)	$0		$0
SUBTOTAL	**$0**	**$0**	**$0**
c. Renovations			
(1) Building	$0		$0
(2) Fixed Equipment (not included in construction)	$0		$0
(3) Architect/Engineering Fees	$0		$0
(4) Permits (Building, Utilities, Etc.)	$0		$0
SUBTOTAL	**$0**	**$0**	**$0**
d. Other Capital Costs			
(1) Movable Equipment	$1,042,717		$1,042,717
(2) Contingency Allowance	$116,400		$116,400
(3) Gross interest during construction period			$0
(4) Other *(Specify/add rows if needed)*			$0
SUBTOTAL	***$1,159,117***		**$1,159,117**
TOTAL CURRENT CAPITAL COSTS	**$1,159,117**	**$0**	**$1,159,117**
e. Inflation Allowance			$0
TOTAL CAPITAL COSTS	**$1,159,117**	**$0**	**$1,159,117**
2. Financing Cost and Other Cash Requirements			
a. Loan Placement Fees			$0
b. Bond Discount			$0
c. Legal Fees	**$50,000**		$50,000
d. Non-Legal Consultant Fees	**$50,000**		$50,000
e. Liquidation of Existing Debt			$0
f. Debt Service Reserve Fund			$0
g. Other *(Specify/add rows if needed)*			$0
SUBTOTAL	***$100,000***		**$100,000**
3. Working Capital Startup Costs			$0
TOTAL USES OF FUNDS	***$1,259,117***	***$0***	***$1,259,117***
B. Sources of Funds			
1. Cash	**$1,259,117**		$1,259,117
2. Philanthropy (to date and expected)			$0
3. Authorized Bonds			$0
4. Interest Income from bond proceeds listed in #3			$0
5. Mortgage			$0
6. Working Capital Loans			$0
7. Grants or Appropriations			
a. Federal			$0
b. State			$0
c. Local			$0
8. Other *(Specify/add rows if needed)*			$0
TOTAL SOURCES OF FUNDS	***$1,259,117***		**$1,259,117**
Annual Lease Costs (if applicable)			
1. Land			$0
2. Building			$0
3. Major Movable Equipment			$0
4. Minor Movable Equipment			$0
5. Other *(Specify/add rows if needed)*			$0

Describe the terms of the lease(s) below, including information on the fair market value of the item(s), and the number of years, annual cost, and the interest rate for the lease.

REVISED (3/30/15)

TABLE F. STATISTICAL PROJECTIONS - ENTIRE FACILITY

INSTRUCTION: Complete this table for the entire facility, including the proposed project. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.				
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**
1. DISCHARGES								
a. General Medical/Surgical*	16,014	15,216	14,779	14,731	14,904	14,944	15,020	15,090
b. ICU/CCU	644	570	552	555	558	560	563	566
Total MSGA	**16,658**	**15,786**	**15,331**	**15,286**	**15,462**	**15,504**	**15,583**	**15,656**
c. Pediatric	355	327	329	329	329	329	329	329
d. Obstetric	885	845	947	1,174	1,180	1,186	1,192	1,198
e. Acute Psychiatric	981	965	1,185	1,185	1,185	1,185	1,185	1,185
Total Acute	***18,879***	***17,923***	***17,792***	***17,974***	***18,155***	***18,204***	***18,289***	***18,368***
f. Rehabilitation								
g. Comprehensive Care								
h. Other (Newborn)	847	727	897	1,050	1,150	1,250	1,350	1,450
TOTAL DISCHARGES	***19,726***	***18,650***	***18,689***	***19,024***	***19,305***	***19,454***	***19,639***	***19,818***
2. PATIENT DAYS								
a. General Medical/Surgical*	67,638	64,724	56,877	57,817	59,037	59,509	59,965	60,358
b. ICU/CCU	7,496	7,352	8,041	8,165	8,325	8,390	8,452	8,506
Total MSGA	**75,134**	**72,076**	**64,918**	**65,982**	**67,362**	**67,898**	**68,416**	**68,864**
c. Pediatric	736	701	857	857	857	857	857	857
d. Obstetric	4,562	4,364	5,119	6,346	6,378	6,410	6,442	6,474
e. Acute Psychiatric	5,031	4,939	5,257	5,257	5,257	5,257	5,257	5,257
Total Acute	***85,463***	***82,080***	***76,151***	***78,442***	***79,854***	***80,422***	***80,972***	***81,452***
f. Rehabilitation								
g. Comprehensive Care								
h. Other (Specify/add rows of needed)								
TOTAL PATIENT DAYS	***85,463***	***82,080***	***76,151***	***78,442***	***79,854***	***80,422***	***80,972***	***81,452***

REVISED (3/30/15)

TABLE F. STATISTICAL PROJECTIONS - ENTIRE FACILITY

INSTRUCTION: Complete this table for the entire facility, including the proposed project. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.				
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**
3. AVERAGE LENGTH OF STAY (patient days divided by discharges)								
a. General Medical/Surgical*	4.2	4.3	3.8	3.9	4.0	4.0	4.0	4.0
b. ICU/CCU	11.6	12.9	14.6	14.7	14.9	15.0	15.0	15.0
Total MSGA	4.5	4.6	4.2	4.3	4.4	4.4	4.4	4.4
c. Pediatric	2.1	2.1	2.6	2.6	2.6	2.6	2.6	2.6
d. Obstetric	5.2	5.2	5.4	5.4	5.4	5.4	5.4	5.4
e. Acute Psychiatric	5.1	5.1	4.4	4.4	4.4	4.4	4.4	4.4
Total Acute	4.5	4.6	4.3	4.4	4.4	4.4	4.4	4.4
f. Rehabilitation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
g. Comprehensive Care	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
h. Other (Specify/add rows of needed)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL AVERAGE LENGTH OF STAY	4.3	4.4	4.1	4.1	4.1	4.1	4.1	4.1

REVISED (3/30/15)

TABLE F. STATISTICAL PROJECTIONS - ENTIRE FACILITY

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	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.				
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**
4. NUMBER OF LICENSED BEDS								
a. General Medical/Surgical*	235	235	235	235	235	235	235	235
b. ICU/CCU	36	36	36	36	36	36	36	36
Total MSGA	**271**	**271**	**271**	**271**	**271**	**271**	**271**	**271**
c. Pediatric	10	10	10	10	10	10	10	10
d. Obstetric	15	15	15	15	15	15	15	15
e. Acute Psychiatric	14	14	14	14	14	14	14	14
Total Acute	***310***	***310***	***310***	***310***	***310***	***310***	***310***	***310***
f. Rehabilitation	0	0	0	0	0	0	0	0
g. Comprehensive Care	0	0	0	0	0	0	0	0
h. Other (Specify/add rows of needed)	0	0	0	0	0	0	0	0
TOTAL LICENSED BEDS	***310***	***310***	***310***	***310***	***310***	***310***	***310***	***310***
5. OCCUPANCY PERCENTAGE *IMPORTANT NOTE:* *Leap year formulas should be changed by applicant to reflect 366 days per year.*								
a. General Medical/Surgical*	78.9%	75.5%	66.3%	67.4%	68.8%	69.4%	69.9%	70.4%
b. ICU/CCU	57.0%	56.0%	61.2%	62.1%	63.4%	63.8%	64.3%	64.7%
Total MSGA	**76.0%**	**72.9%**	**65.6%**	**66.7%**	**68.1%**	**68.6%**	**69.2%**	**69.6%**
c. Pediatric	20.2%	19.2%	23.5%	23.5%	23.5%	23.5%	23.5%	23.5%
d. Obstetric	83.3%	79.7%	93.5%	115.9%	116.5%	117.1%	117.7%	118.2%
e. Acute Psychiatric	98.5%	96.7%	102.9%	102.9%	102.9%	102.9%	102.9%	102.9%
Total Acute	**75.5%**	**72.5%**	**67.3%**	**69.3%**	**70.6%**	**71.1%**	**71.6%**	**72.0%**

REVISED (3/30/15)

TABLE F. STATISTICAL PROJECTIONS - ENTIRE FACILITY

INSTRUCTION: Complete this table for the entire facility, including the proposed project. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.				
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**
f. Rehabilitation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
g. Comprehensive Care	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
h. Other (Specify/add rows of needed)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL OCCUPANCY %	**75.5%**	**72.5%**	**67.3%**	**69.3%**	**70.6%**	**71.1%**	**71.6%**	**72.0%**
6. OUTPATIENT VISITS								
a. Emergency Department	103,284	99,703	100,723	101,227	101,733	102,241	102,753	103,266
b. Same-day Surgery	7,784	6,919	6,775	6,775	6,775	6,775	6,775	6,775
c. Laboratory	268,586	257,974	259,264	260,560	261,863	263,172	264,488	265,811
d. Imaging	79,197	75,193	75,569	75,947	76,327	76,708	77,092	77,477
e. Clinic Visits	37,253	39,910	42,833	43,841	44,913	45,813	46,710	47,591
TOTAL OUTPATIENT VISITS	***496,104***	***479,699***	***485,164***	***488,349***	***491,611***	***494,710***	***497,817***	***500,920***
7. OBSERVATIONS**								
a. Number of Patients	6,054	7,562	7,170	7,206	7,242	7,278	7,314	7,351
b. Hours	168,248	188,349	178,585	179,478	180,376	181,278	182,184	183,095

* Include beds dedicated to gynecology and addictions, if separate for acute psychiatric unit.

** Services included in the reporting of the “Observation Center”, direct expenses incurred in providing bedside care to observation patients; furnished by the hospital on the hospital’s premises, including use of a bed and periodic monitoring by the hospital’s nursing or other staff, in order to determine the need for a possible admission to the hospitals as an inpatient. Such services must be ordered and documented in writing, given by a medical practitioner; may or may not be provided in a distinct area of the hospital.

REVISED (3/30/15)

TABLE G. REVENUES & EXPENSES, UNINFLATED - ENTIRE FACILITY

INSTRUCTION: Complete this table for the entire facility, including the proposed project. Table G should reflect current dollars (no inflation). Projected revenues and expenses should be consistent with the projections in Table F and with the costs of Manpower listed in Table L. Manpower. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. Specify the sources of non-operating income. See additional instruction in the column to the right of the table.

	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**		
1. REVENUE										
a. Inpatient Services	$ 218,347,000	$ 224,227,000	$ 234,789,000	$ 236,353,238	$ 238,537,446	$ 239,765,868	$ 240,931,243	$ 241,974,357		
b. Outpatient Services	$ 177,578,000	$ 198,484,000	$ 200,163,000	$ 201,937,000	$ 203,664,000	$ 206,156,000	$ 208,695,000	$ 211,281,000		
Gross Patient Service Revenues	***$ 395,925,000***	***$ 422,711,000***	***$ 434,952,000***	***$ 438,290,238***	***$ 442,201,446***	***$ 445,921,868***	***$ 449,626,243***	***$ 453,255,357***	***$ -***	***$ -***
c. Allowance For Bad Debt	$ 11,135,000	$ 27,697,000	$ 15,391,000	$ 15,525,646	$ 15,686,960	$ 15,823,714	$ 15,958,586	$ 16,090,046		
d. Contractual Allowance	$ 40,559,000	$ 49,740,000	$ 56,194,000	$ 56,465,613	$ 56,741,636	$ 57,175,555	$ 57,615,233	$ 58,056,703		
e. Charity Care	$ 25,709,000	$ 13,307,000	$ 8,068,000	$ 8,120,142	$ 8,179,722	$ 8,246,006	$ 8,312,458	$ 8,378,347		
Net Patient Services Revenue	***$ 318,522,000***	***$ 331,967,000***	***$ 355,299,000***	***$ 358,178,837***	***$ 361,593,129***	***$ 364,676,592***	***$ 367,739,965***	***$ 370,730,262***	***$ -***	***$ -***
f. Other Operating Revenues (Specify/add rows if needed)	$ 4,066,000	$ 3,433,000	$ 2,860,000	$ 2,889,000	$ 2,917,000	$ 2,947,000	$ 2,976,000	$ 3,006,000		
NET OPERATING REVENUE	***$ 322,588,000***	***$ 335,400,000***	***$ 358,159,000***	***$ 361,067,837***	***$ 364,510,129***	***$ 367,623,592***	***$ 370,715,965***	***$ 373,736,262***	***$ -***	***$ -***
2. EXPENSES										
a. Salaries & Wages (including benefits)	$ 168,708,000	$ 160,741,000	$ 169,546,000	$ 171,939,392	$ 173,812,323	$ 174,849,509	$ 176,126,346	$ 177,384,788		
b. Contractual Services	$ 63,943,000	$ 66,229,000	$ 72,293,000	$ 73,264,426	$ 73,710,606	$ 73,942,442	$ 74,223,875	$ 74,498,696		
c. Interest on Current Debt	$ 9,341,000	$ 7,941,000	$ 8,546,000	$ 8,326,000	$ 8,171,000	$ 8,010,000	$ 7,852,000	$ 7,673,000		
d. Interest on Project Debt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
e. Current Depreciation	$ 23,467,000	$ 22,234,000	$ 22,018,000	$ 23,929,000	$ 25,545,000	$ 27,025,000	$ 28,125,000	$ 29,134,000		
f. Project Depreciation	$ -	$ -	$ -	$ 107,890	$ 215,779	$ 215,779	$ 215,779	$ 215,779		
g. Current Amortization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
h. Project Amortization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
i. Supplies	$ 60,662,000	$ 61,394,000	$ 63,404,000	$ 64,909,308	$ 66,697,891	$ 67,360,407	$ 68,117,798	$ 68,804,682		
j. Other Expenses (Insurance)	$ 3,628,000	$ 4,163,000	$ 5,253,000	$ 6,216,360	$ 7,271,160	$ 7,582,120	$ 6,588,000	$ 5,973,560		
TOTAL OPERATING EXPENSES	**$ 329,749,000**	**$ 322,702,000**	**$ 341,060,000**	**$ 348,692,376**	**$ 355,423,759**	**$ 358,985,257**	**$ 361,248,798**	**$ 363,684,505**	**$ -**	**$ -**
3. INCOME										
a. Income From Operation	**$ (7,161,000)**	**$ 12,698,000**	**$ 17,099,000**	**$ 12,375,461**	**$ 9,086,370**	**$ 8,638,335**	**$ 9,467,167**	**$ 10,051,757**	**$ -**	**$ -**
b. Non-Operating Income	$ 2,968,000	$ 7,552,000	$ (936,000)	$ 2,291,000	$ 2,291,000	$ 2,291,000	$ 2,291,000	$ 2,291,000		
SUBTOTAL	***$ (4,193,000)***	***$ 20,250,000***	***$ 16,163,000***	***$ 14,666,461***	***$ 11,377,370***	***$ 10,929,335***	***$ 11,758,167***	***$ 12,342,757***	***$ -***	***$ -***
c. Income Taxes										
NET INCOME (LOSS)	***$ (4,193,000)***	***$ 20,250,000***	***$ 16,163,000***	***$ 14,666,461***	***$ 11,377,370***	***$ 10,929,335***	***$ 11,758,167***	***$ 12,342,757***	***$ -***	***$ -***

REVISED (3/30/15)

TABLE G. REVENUES & EXPENSES, UNINFLATED - ENTIRE FACILITY

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	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**		
4. PATIENT MIX										
a. Percent of Total Revenue										
1) Medicare	40.0%	39.8%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%		
2) Medicaid	1.6%	1.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%		
3) Blue Cross	9.4%	9.1%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%		
4) Commercial Insurance	8.8%	11.1%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%		
5) Self-pay	9.8%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%		
6) Other	30.4%	30.5%	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%		
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***0.0%***	***0.0%***
b. Percent of Equivalent Inpatient Days										
1) Medicare	49.0%	48.8%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%		
2) Medicaid	13.1%	15.7%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%		
3) Blue Cross	9.2%	9.3%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%		
4) Commercial Insurance	9.1%	8.1%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%		
5) Self-pay	5.5%	3.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%		
6) Other	14.1%	14.6%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%		
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***0.0%***	***0.0%***

REVISED (3/30/15)

TABLE H. REVENUES & EXPENSES, INFLATED - ENTIRE FACILITY

INSTRUCTION: Complete this table for the entire facility, including the proposed project. Table H should reflect inflation. Projected revenues and expenses should be consistent with the projections in Table F. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**		
1. REVENUE										
a. Inpatient Services	$ 218,347,000	$ 224,227,000	$ 234,789,000	$ 242,222,238	$ 250,529,981	$ 257,968,035	$ 265,532,237	$ 273,169,786		
b. Outpatient Services	$ 177,578,000	$ 198,484,000	$ 200,163,000	$ 206,941,000	$ 213,884,000	$ 221,849,000	$ 230,126,000	$ 238,730,000		
Gross Patient Service Revenues	***$ 395,925,000***	***$ 422,711,000***	***$ 434,952,000***	***$ 449,163,238***	***$ 464,413,981***	***$ 479,817,035***	***$ 495,658,237***	***$ 511,899,786***	***$ -***	***$ -***
c. Allowance For Bad Debt	$ 11,135,000	$ 27,697,000	$ 15,391,000	$ 15,910,646	$ 16,474,204	$ 17,024,572	$ 17,588,976	$ 18,166,815		
d. Contractual Allowance	$ 40,559,000	$ 49,740,000	$ 56,194,000	$ 57,868,613	$ 59,599,714	$ 61,544,111	$ 63,549,203	$ 65,617,968		
e. Charity Care	$ 25,709,000	$ 13,307,000	$ 8,068,000	$ 8,322,142	$ 8,591,237	$ 8,873,698	$ 9,165,304	$ 9,465,302		
Net Patient Services Revenue	***$ 318,522,000***	***$ 331,967,000***	***$ 355,299,000***	***$ 367,061,837***	***$ 379,748,826***	***$ 392,374,654***	***$ 405,354,754***	***$ 418,649,701***	***$ -***	***$ -***
f. Other Operating Revenues (Specify/add rows if needed)	$ 4,066,000	$ 3,433,000	$ 2,860,000	$ 2,889,000	$ 2,917,000	$ 2,947,000	$ 2,976,000	$ 3,006,000		
NET OPERATING REVENUE	***$ 322,588,000***	***$ 335,400,000***	***$ 358,159,000***	***$ 369,950,837***	***$ 382,665,826***	***$ 395,321,654***	***$ 408,330,754***	***$ 421,655,701***	***$ -***	***$ -***
2. EXPENSES										
a. Salaries & Wages (including benefits)	$ 168,708,000	$ 160,741,000	$ 169,546,000	$ 176,199,392	$ 183,430,092	$ 190,039,107	$ 197,145,642	$ 204,485,347		
b. Contractual Services	$ 63,943,000	$ 66,229,000	$ 72,293,000	$ 75,076,426	$ 77,791,235	$ 80,372,723	$ 83,092,790	$ 85,896,880		
c. Interest on Current Debt	$ 9,341,000	$ 7,941,000	$ 8,546,000	$ 8,326,000	$ 8,171,000	$ 8,010,000	$ 7,852,000	$ 7,673,000		
d. Interest on Project Debt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
e. Current Depreciation	$ 23,467,000	$ 22,234,000	$ 22,018,000	$ 23,929,000	$ 25,545,000	$ 27,025,000	$ 28,125,000	$ 29,134,000		
f. Project Depreciation	$ -	$ -	$ -	$ 107,890	$ 215,779	$ 215,779	$ 215,779	$ 215,779		
g. Current Amortization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
h. Project Amortization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
i. Supplies	$ 60,662,000	$ 61,394,000	$ 63,404,000	$ 66,504,308	$ 70,348,537	$ 73,159,246	$ 76,175,025	$ 79,228,237		
j. Other Expenses (Specify/add rows if needed)	$ 3,628,000	$ 4,163,000	$ 5,253,000	$ 6,347,360	$ 7,579,705	$ 8,074,505	$ 7,272,436	$ 6,855,716		
TOTAL OPERATING EXPENSES	**$ 329,749,000**	**$ 322,702,000**	**$ 341,060,000**	**$ 356,490,376**	**$ 373,081,348**	**$ 386,896,359**	**$ 399,878,673**	**$ 413,488,959**	**$ -**	**$ -**
3. INCOME										
a. Income From Operation	**$ (7,161,000)**	**$ 12,698,000**	**$ 17,099,000**	**$ 13,460,461**	**$ 9,584,478**	**$ 8,425,295**	**$ 8,452,081**	**$ 8,166,743**	**$ -**	**$ -**
b. Non-Operating Income	$ 2,968,000	$ 7,552,000	$ (936,000)	$ 2,359,730	$ 2,430,522	$ 2,503,438	$ 2,578,541	$ 2,655,897		
SUBTOTAL	***$ (4,193,000)***	***$ 20,250,000***	***$ 16,163,000***	***$ 15,820,191***	***$ 12,015,000***	***$ 10,928,733***	***$ 11,030,621***	***$ 10,822,639***	***$ -***	***$ -***
c. Income Taxes										
NET INCOME (LOSS)	***$ (4,193,000)***	***$ 20,250,000***	***$ 16,163,000***	***$ 15,820,191***	***$ 12,015,000***	***$ 10,928,733***	***$ 11,030,621***	***$ 10,822,639***	***$ -***	***$ -***

REVISED (3/30/15)

TABLE H. REVENUES & EXPENSES, INFLATED - ENTIRE FACILITY

INSTRUCTION: Complete this table for the entire facility, including the proposed project. Table H should reflect inflation. Projected revenues and expenses should be consistent with the projections in Table F. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Two Most Recent Years (Actual)		Current Year Projected	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**		
4. PATIENT MIX										
a. Percent of Total Revenue										
1) Medicare	40.0%	39.8%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%		
2) Medicaid	1.6%	1.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%		
3) Blue Cross	9.4%	9.1%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%		
4) Commercial Insurance	8.8%	11.1%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%		
5) Self-pay	9.8%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%		
6) Other	30.4%	30.5%	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%		
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***0.0%***	***0.0%***
b. Percent of Equivalent Inpatient Days										
Total MSGA										
1) Medicare	49.0%	48.8%	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%		
2) Medicaid	13.1%	15.7%	17.6%	17.6%	17.6%	17.6%	17.6%	17.6%		
3) Blue Cross	9.2%	9.3%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%		
4) Commercial Insurance	9.1%	8.1%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%		
5) Self-pay	5.5%	3.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%		
6) Other	14.1%	14.6%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%		
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***0.0%***	***0.0%***

REVISED (3/30/15)

TABLE I. STATISTICAL PROJECTIONS - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	
1. DISCHARGES							
a. General Medical/Surgical*	84	204	228	250	264	270	
b. ICU/CCU							
Total MSGA	**84**	**204**	**228**	**250**	**264**	**270**	**0**
c. Pediatric							
d. Obstetric							
e. Acute Psychiatric							
Total Acute	***84***	***204***	***228***	***250***	***264***	***270***	***0***
f. Rehabilitation							
g. Comprehensive Care							
h. Other (Specify/add rows of needed)							
TOTAL DISCHARGES	***84***	***204***	***228***	***250***	***264***	***270***	***0***
2. PATIENT DAYS							
a. General Medical/Surgical*	657	1,595	1,783	1,955	2,064	2,111	
b. ICU/CCU	84	204	228	250	264	270	
Total MSGA	**741**	**1,799**	**2,011**	**2,205**	**2,328**	**2,381**	**0**
c. Pediatric							
d. Obstetric							
e. Acute Psychiatric							
Total Acute	***741***	***1,799***	***2,011***	***2,205***	***2,328***	***2,381***	***0***
f. Rehabilitation							
g. Comprehensive Care							
h. Other (Specify/add rows of needed)							
TOTAL PATIENT DAYS	***741***	***1,799***	***2,011***	***2,205***	***2,328***	***2,381***	***0***

REVISED (3/30/15)

TABLE I. STATISTICAL PROJECTIONS - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	
3. AVERAGE LENGTH OF STAY							
a. General Medical/Surgical*	7.8	7.8	7.8	7.8	7.8	7.8	#DIV/0!
b. ICU/CCU	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total MSGA	8.8	8.8	8.8	8.8	8.8	8.8	#DIV/0!
c. Pediatric	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
d. Obstetric	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
e. Acute Psychiatric	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Acute	8.8	8.8	8.8	8.8	8.8	8.8	#DIV/0!
f. Rehabilitation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
g. Comprehensive Care	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
h. Other (Specify/add rows of needed)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL AVERAGE LENGTH OF STAY	8.8	8.8	8.8	8.8	8.8	8.8	#DIV/0!

REVISED (3/30/15)

TABLE I. STATISTICAL PROJECTIONS - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	
4. NUMBER OF LICENSED BEDS							
a. General Medical/Surgical*							
b. ICU/CCU							
Total MSGA	**0**	**0**	**0**	**0**	**0**	**0**	**0**
c. Pediatric							
d. Obstetric							
e. Acute Psychiatric							
Total Acute	***0***	***0***	***0***	***0***	***0***	***0***	***0***
f. Rehabilitation							
g. Comprehensive Care							
h. Other (Specify/add rows of needed)							
TOTAL LICENSED BEDS							
5. OCCUPANCY PERCENTAGE *IMPORTANT NOTE:* *Leap year formulas should be changed by applicant to reflect 366 days per year.*							
a. General Medical/Surgical*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
b. ICU/CCU	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total MSGA	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
c. Pediatric	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
d. Obstetric	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
e. Acute Psychiatric	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Acute	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

REVISED (3/30/15)

TABLE I. STATISTICAL PROJECTIONS - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). For sections 4 & 5, the number of beds and occupancy percentage should be reported on the basis of licensed beds. In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. See additional instruction in the column to the right of the table.

	Projected Years (ending five years after completion) Add columns if needed.						
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	
f. Rehabilitation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
g. Comprehensive Care	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
h. Other (Specify/add rows of needed)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL OCCUPANCY %	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
6. OUTPATIENT VISITS							
a. Emergency Department							
b. Same-day Surgery							
c. Laboratory							
d. Imaging							
e. Clinic Visits	151	367	410	450	475	486	
TOTAL OUTPATIENT VISITS	***151***	***367***	***410***	***450***	***475***	***486***	***0***
7. OBSERVATIONS**							
a. Number of Patients							
b. Hours							

*Include beds dedicated to gynecology and addictions, if separate for acute psychiatric unit.

** Services included in the reporting of the "Observation Center", direct expenses incurred in providing bedside care to observation patients; furnished by the hospital on the hospital's premises, including use of a bed and periodic monitoring by the hospital's nursing or other staff, in order to determine the need for a possible admission to the hospitals as an inpatient. Such services must be ordered and documented in writing, given by a medical practitioner; may or may not be provided in a distinct area of the hospital.

REVISED (3/30/15)

TABLE J. REVENUES & EXPENSES, UNINFLATED - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Table J should reflect current dollars (no inflation). Projected revenues and expenses should be consistent with the projections in Table I and with the costs of Manpower listed in Table L. Manpower. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. Specify the sources of non-operating income.

	Projected Years (ending five years after completion) Add columns of needed.							*Additional Instruction*
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**		*Indicate CY or FY*
1. REVENUE								
a. Inpatient Services	$ 1,703,238	$ 4,132,446	$ 4,615,868	$ 5,035,243	$ 5,334,357	$ 5,459,251		
b. Outpatient Services								
Gross Patient Service Revenues	***$ 1,703,238***	***$ 4,132,446***	***$ 4,615,868***	***$ 5,035,243***	***$ 5,334,357***	***$ 5,459,251***	***$ -***	*Ensure that Gross Patient Service Revenue includes 1 a-b.*
c. Allowance For Bad Debt	$ 76,646	$ 185,960	$ 207,714	$ 226,586	$ 240,046	$ 245,666		
d. Contractual Allowance	$ 59,613	$ 144,636	$ 161,555	$ 176,233	$ 186,703	$ 191,074		
e. Charity Care	$ 22,142	$ 53,722	$ 60,006	$ 65,458	$ 69,347	$ 70,970		
Net Patient Services Revenue	***$ 1,544,837***	***$ 3,748,129***	***$ 4,186,592***	***$ 4,566,965***	***$ 4,838,262***	***$ 4,951,540***	***$ -***	*Ensure that Net Patient Services Revenue includes Gross Patients Service Revenue minus 1 c-e.*
f. Other Operating Revenues (Specify)								
NET OPERATING REVENUE	***$ 1,544,837***	***$ 3,748,129***	***$ 4,186,592***	***$ 4,566,965***	***$ 4,838,262***	***$ 4,951,540***	***$ -***	*Ensure that Net Operating Revenue reflects the sum of Net Patient Services Revenue and all Other Operating Revenue rows.*
2. EXPENSES								
a. Salaries & Wages (including benefits)	$ 1,051,392	$ 1,792,323	$ 1,940,509	$ 2,076,346	$ 2,162,788	$ 2,199,834		
b. Contractual Services	$ 683,426	$ 887,606	$ 928,442	$ 965,875	$ 989,696	$ 999,905		
c. Interest on Current Debt								
d. Interest on Project Debt								
e. Current Depreciation								
f. Project Depreciation	$ 107,890	$ 215,779	$ 215,779	$ 215,779	$ 215,779	$ 107,890		
g. Current Amortization								
h. Project Amortization								
i. Supplies	$ 887,308	$ 2,154,891	$ 2,408,407	$ 2,640,798	$ 2,788,682	$ 2,852,061		OR Supplies and Drubs
j. Other Expenses (Specify)	$ 213,360	$ 518,160	$ 579,120	$ 635,000	$ 670,560	$ 685,800		
TOTAL OPERATING EXPENSES	**$ 2,943,376**	**$ 5,568,759**	**$ 6,072,257**	**$ 6,533,798**	**$ 6,827,505**	**$ 6,845,491**	**$ -**	*Ensure that Total Operating Expenses includes any added Other rows.*

REVISED (3/30/15)

TABLE J. REVENUES & EXPENSES, UNINFLATED - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Table J should reflect current dollars (no inflation). Projected revenues and expenses should be consistent with the projections in Table I and with the costs of Manpower listed in Table L. Manpower. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable. Specify the sources of non-operating income.

	Projected Years (ending five years after completion) Add columns of needed.							*Additional Instruction*
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**		*Indicate CY or FY*
3. INCOME								
a. Income From Operation	**$ (1,398,538.97)**	**$ (1,820,629.96)**	**$ (1,885,665.34)**	**$ (1,966,832.75)**	**$ (1,989,243.35)**	**$ (1,893,950.43)**	**$ -**	*Ensure that Income from Operation includes Net Operating Revenue minus Total Operating Expenses.*
b. Non-Operating Income								
SUBTOTAL	***$ (1,398,538.97)***	***$ (1,820,629.96)***	***$ (1,885,665.34)***	***$ (1,966,832.75)***	***$ (1,989,243.35)***	***$ (1,893,950.43)***	***$ -***	*Ensure that Subtotal includes 3 a-b.*
c. Income Taxes								
NET INCOME (LOSS)	***$ (1,398,538.97)***	***$ (1,820,629.96)***	***$ (1,885,665.34)***	***$ (1,966,832.75)***	***$ (1,989,243.35)***	***$ (1,893,950.43)***	***$ -***	*Ensure that the Net Income (Loss) includes Subtotal and Income Taxes.*
4. PATIENT MIX								
a. Percent of Total Revenue								
1) Medicare	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%	
2) Medicaid	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	
3) Blue Cross	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	
4) Commercial Insurance	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	
5) Self-pay	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	
6) Other	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	*Ensure that 4a captures 100% of patients*
b. Percent of Equivalent Inpatient Days								
Total MSGA								
1) Medicare	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%	
2) Medicaid	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	
3) Blue Cross	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	
4) Commercial Insurance	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	
5) Self-pay	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	
6) Other	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	*Ensure that 4b captures 100% of patients*

REVISED (3/30/15)

TABLE K. REVENUES & EXPENSES, INFLATED - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Table K should reflect inflation. Projected revenues and expenses should be consistent with the projections in Table I. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable.

	Projected Years (ending five years after completion) Add columns of needed.						
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	
1. REVENUE							
a. Inpatient Services	$ 1,703,238	$ 4,248,981	$ 4,746,035	$ 5,177,237	$ 5,484,786	$ 5,613,201	
b. Outpatient Services							
Gross Patient Service Revenues	***$ 1,703,238***	***$ 4,248,981***	***$ 4,746,035***	***$ 5,177,237***	***$ 5,484,786***	***$ 5,613,201***	***$ -***
c. Allowance For Bad Debt	$ 76,646	$ 191,204	$ 213,572	$ 232,976	$ 246,815	$ 252,594	
d. Contractual Allowance	$ 59,613	$ 148,714	$ 166,111	$ 181,203	$ 191,968	$ 196,462	
e. Charity Care	$ 22,142	$ 55,237	$ 61,698	$ 67,304	$ 71,302	$ 72,972	
Net Patient Services Revenue	***$ 1,544,837***	***$ 3,853,826***	***$ 4,304,654***	***$ 4,695,754***	***$ 4,974,701***	***$ 5,091,174***	***$ -***
f. Other Operating Revenues (Specify/add rows of needed)							
NET OPERATING REVENUE	***$ 1,544,837***	***$ 3,853,826***	***$ 4,304,654***	***$ 4,695,754***	***$ 4,974,701***	***$ 5,091,174***	***$ -***
2. EXPENSES							
a. Salaries & Wages (including benefits)	$ 1,051,392	$ 1,846,092	$ 2,054,107	$ 2,255,642	$ 2,412,347	$ 2,522,875	
b. Contractual Services	$ 683,426	$ 914,235	$ 983,723	$ 1,051,790	$ 1,107,880	$ 1,151,631	
c. Interest on Current Debt							
d. Interest on Project Debt							
e. Current Depreciation							
f. Project Depreciation	$ 107,890	$ 215,779	$ 215,779	$ 215,779	$ 215,779	$ 107,890	
g. Current Amortization							
h. Project Amortization							
i. Supplies	$ 887,308	$ 2,219,537	$ 2,547,246	$ 2,863,025	$ 3,101,237	$ 3,259,554	
j. Other Expenses (Specify/add rows of needed)	$ 213,360	$ 533,705	$ 612,505	$ 688,436	$ 745,716	$ 783,785	
TOTAL OPERATING EXPENSES	**$ 2,943,376**	**$ 5,729,348**	**$ 6,413,359**	**$ 7,074,673**	**$ 7,582,959**	**$ 7,825,735**	**$ -**

REVISED (3/30/15)

TABLE K. REVENUES & EXPENSES, INFLATED - NEW FACILITY OR SERVICE

INSTRUCTION: After consulting with Commission Staff, complete this table for the new facility or service (the proposed project). Table K should reflect inflation. Projected revenues and expenses should be consistent with the projections in Table I. Indicate on the table if the reporting period is Calendar Year (CY) or Fiscal Year (FY). In an attachment to the application, provide an explanation or basis for the projections and specify all assumptions used. Applicants must explain why the assumptions are reasonable.

	Projected Years (ending five years after completion) Add columns of needed.						
Indicate CY or FY	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	
3. INCOME							
a. Income From Operation	**$ (1,398,539)**	**$ (1,875,522)**	**$ (2,108,705)**	**$ (2,378,919)**	**$ (2,608,257)**	**$ (2,734,562)**	**$ -**
b. Non-Operating Income							
SUBTOTAL	***$ (1,398,539)***	***$ (1,875,522)***	***$ (2,108,705)***	***$ (2,378,919)***	***$ (2,608,257)***	***$ (2,734,562)***	***$ -***
c. Income Taxes							
NET INCOME (LOSS)	***$ (1,398,539)***	***$ (1,875,522)***	***$ (2,108,705)***	***$ (2,378,919)***	***$ (2,608,257)***	***$ (2,734,562)***	***$ -***
4. PATIENT MIX							
a. Percent of Total Revenue							
1) Medicare	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%
2) Medicaid	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
3) Blue Cross	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%
4) Commercial Insurance	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%
5) Self-pay	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
6) Other	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***
b. Percent of Equivalent Inpatient Days							
1) Medicare	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%	50.6%
2) Medicaid	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
3) Blue Cross	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%
4) Commercial Insurance	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%
5) Self-pay	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
6) Other	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***

REVISED (3/30/15)

TABLE L. MANPOWER INFORMATION

INSTRUCTION: List the facility's existing staffing and changes required by this project. Include all major job categories under each heading provided in the table. The number of Full Time Equivalents (FTEs) should be calculated on the basis of 2,080 paid hours per year equals one FTE. In an attachment to the application, explain any factor used in converting paid hours to worked hours. Please ensure that the projections in this table are consistent with expenses provided in uninflated projections in Tables G and J. See additional instruction in the column to the right of the table.

	CURRENT ENTIRE FACILITY			PROJECTED CHANGES AS A RESULT OF THE PROPOSED PROJECT THROUGH THE LAST YEAR OF PROJECTION (CURRENT DOLLARS)			OTHER EXPECTED CHANGES IN OPERATIONS THROUGH THE LAST YEAR OF PROJECTION (CURRENT DOLLARS)			PROJECTED ENTIRE FACILITY THROUGH THE LAST YEAR OF PROJECTION (CURRENT DOLLARS) *		
Job Category	**Current Year FTEs**	**Average Salary per FTE**	**Current Year Total Cost**	**FTEs**	**Average Salary per FTE**	**Total Cost** *(should be consistent with projections in Table J)*	**FTEs**	**Average Salary per FTE**	**Total Cost**	**FTEs**	**Total Cost** *(should be consistent with projections in Table G)*	*Additional Instruction*
1. Regular Employees												
Administration *(List general categories, add rows if needed)*												
Nursing Directors	5.0	$134,000	$670,000			$0	0.0	$0	$0	5.0	$670,000	
Nurse Manager	15.0	$105,000	$1,575,000			$0	0.0	$0	$0	15.0	$1,575,000	
Other Supervisor/Mgmt	118.0	$86,000	$10,143,700	0.5	$67,000	$67,000	0.0	$0	$0	118.5	$10,210,700	Research Coordinator
Med Staff Leadership			$1,184,677									
Misc Physician Support			$350,000									
Directorships			$999,640									
			$0			$0			$0	0.0	$0	
Total Administration	138.0		$14,923,017			$67,000			$0	138.0	$14,990,017	*Calculate the sum of Administration*
Direct Care Staff *(List general categories, add rows if needed)*												
Ambulatory	39.9	$70,000	$2,793,700			$0	3.1	$70,000	$217,629	43.0	$3,011,329	
Advanced Practice Providers	26.1	$100,000	$2,609,000			$0	1.0	$100,000	$100,968	27.1	$2,709,968	
Cardiac Catherization Cardiology	18.3	$73,000	$1,332,980			$0	0.7	$73,000	$51,586	19.0	$1,384,566	
Lab	63.5	$56,000	$3,556,000	0.5	$62,000	$31,000	2.5	$56,000	$137,617	66.5	$3,724,617	Med Lab Scientist
Other Supervisor/Mgmt	86.8	$46,000	$3,992,800			$0	0.0	$46,000	$0	86.8	$3,992,800	
Patient Care Techs	246.8	$32,000	$7,897,600	3.1	$38,000	$116,660	4.8	$32,000	$152,424	254.6	$8,166,684	
Periop Tech	60.3	$43,000	$2,592,900	1.0	$66,000	$66,000	2.3	$43,000	$100,345	63.6	$2,759,245	
Pharmacy	37.8	$79,000	$2,986,200	0.8	$127,000	$95,250	1.5	$79,000	$115,566	40.0	$3,197,016	
Physician	46.5	$217,000	$10,088,330			$0	1.8	$217,000	$390,418	48.3	$10,478,748	
Radiology	47.4	$69,000	$3,270,600			$0	1.8	$69,000	$126,572	49.2	$3,397,172	
Rehb Services	27.3	$75,000	$2,050,500	1.0	$58,000	$58,000	1.1	$75,000	$79,354	29.4	$2,187,854	
Respiratory	28.7	$65,000	$1,865,500			$0	1.1	$65,000	$72,195	29.8	$1,937,695	
RN	640.9	$70,000	$44,860,900	8.4	$111,000	$929,070	12.4	$70,000	$865,815	661.6	$46,655,785	
Transport	62.2	$22,000	$1,368,180			$0	2.4	$22,000	$52,949	64.6	$1,421,129	
Call pay, Physicians			$1,135,890						43,958.9		$1,179,849	
Contract Labor			$1,803,394						$ (157,574)		$1,645,820	Cost savings initiative
Severna Anesthesia			$1,518,800						$0		$1,518,800	
Total Direct Care	1,432.45		$95,723,274	14.69		$1,295,980			$2,349,824	1,447.1	$99,369,078	*Calculate the sum of Direct Care*
Support Staff *(List general categories, add rows if needed)*												
Ambulatory	12.5	$38,000	$475,000			$0	1.0	$38,000	$37,003	13.5	$512,003	
Admin/Secretary	48.4	$43,000	$2,081,200	0.0	$0	$0	0.0	$43,000	$0	48.4	$2,081,200	Physician Office Admin support
Business Office/Finance	129.9	$40,000	$5,196,000			$0	0.0	$40,000	$0	129.9	$5,196,000	
Environmental Services	106.7	$24,000	$2,560,800			$0	4.1	$24,000	$99,103	110.8	$2,659,903	
Facilities	34.5	$53,000	$1,828,500			$0	0.0	$53,000	$0	34.5	$1,828,500	
Nutritional Services	41.8	$27,000	$1,128,600			$0	1.6	$27,000	$43,677	43.4	$1,172,277	
Quality/Care Mgmt	31.7	$74,000	$2,345,800	1.0	$86,000	$170,220	1.2	$74,000	$90,782	33.9	$2,606,802	Quality Analyst and Case Manager
Security	25.7	$30,000	$771,000			$0	0.0	$30,000	$0	25.7	$771,000	
Contract Labor Support			$1,615,500						0		$1,615,500	
Other Support Staff	296.0	$41,000	$12,137,230	1.0	$75,000	$75,000	0.0	$0	$0	297.0	$12,212,230	Cardiac Outreach Coordinator
Total Support	727.2		$30,139,630	2.0		$245,220			$270,565	729.2	$30,655,414	*Calculate the sum of Administration Support Staff*
REGULAR EMPLOYEES TOTAL	***2,297.6***		***140,785,920***	***16.7***		$1,608,200			***2,620,389***	2,314.3	$145,014,510	*Calculate the sum of Administration, Direct Care, and Support Staff*
2. Contractual Employees												
Administration *(List general categories, add rows if needed)*												
Physician/Department Agreement			$0	0.2	$1,000,000	$200,000			$0	0.2	$200,000	
Perfusion Director			$0	0.25	$198,000	$49,500			$0	0.3	$49,500	
Med Director Anesthesia			$0			$50,000			$0	0.0	$50,000	
Resident						$75,000					$75,000	
						$0			$0	0.0	$0	
Total Administration			$0	0.5		$374,500			$0	0.5	$374,500	*Calculate the sum of Administration*
Direct Care Staff *(List general categories, add rows if needed)*												
Perfusionists			$0			$166,000			$0	0.0	$166,000	
Anesthesia Contract			$0			$141,650			$0	0.0	$141,650	Anesthesia Call 24x7x365
CT Assist			$0			$250,000			$0	0.0	$250,000	
			$0			$0			$0	0.0	$0	
Total Direct Care Staff			$0	0.0		$557,650			$0	0.0	$557,650	*Calculate the sum of Direct Care*
Support Staff *(List general categories, add rows if needed)*												
			$0			$0			$0	0.0	$0	
			$0			$0			$0	0.0	$0	
			$0			$0			$0	0.0	$0	
			$0			$0			$0	0.0	$0	
Total Support Staff			$0			$0			$0	0.0	$0	*Calculate the sum of Administration Support Staff*
CONTRACTUAL EMPLOYEES TOTAL			$0			$932,150			$0	0.0	$932,150	*Calculate the sum of Administration, Direct Care, and Support Staff*
Benefits *(State method of calculating benefits below)* **:**												
												Include the method of calculating benefits in green field at far left
TOTAL COST	***2,297.6***		***$140,785,920***	***16.7***		***$2,540,350***	***0.0***		***$2,620,389***		***$145,946,660***	*Ensure that the sums and Total Cost of Regular Employees Total and Contractual Employee are correct*

EXHIBIT 34

Implementation and financial analysis of an operating room satellite pharmacy

JEFFERY W. STROUP AND ARLENE M. IGLAR

Abstract: The rationale and implementation of an operating room (OR) pharmacy satellite is described, and the first-year savings are evaluated.

The OR in an 874-bed university teaching hospital, consisting of 17 rooms for inpatients, 6 rooms for ambulatory patients, and a postanesthesia care unit, lacked comprehensive pharmacy services; this resulted in poor drug-use control and accountability, varied controlled-substance audit trails, and suboptimal patient services. A task force examined other institutions' OR pharmacy satellites and chose to implement a satellite that provides all pharmaceuticals and i.v. admixtures by using case trays for each surgical patient. One year after implementation of the satellite, inventory in the operating-room areas was reduced by 56.5%, annual pharmaceutical costs by 2.6% (adjusted for inflation), and average cost per patient by 8.0% (adjusted for inflation). First-year cost reductions and revenue identification exceeded operating costs for materials, supplies, and labor by $271,755.

Implementation of an OR pharmacy satellite reduced the net cost of providing pharmaceutical services to the OR.

Index terms: Additives; Costs; Hospitals; Inventory; Manpower; Pharmaceutical services; Pharmacy, institutional, hospital

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In many institutions, the ability of the hospital pharmacy to exert control over the drug-use process (i.e., direct control over the acquisition, storage, preparation, distribution, accountability, and use of all pharmaceuticals and injectable solutions) has been improved by evolution of the traditional floor-stock system to unit dose drug distribution and i.v. admixture programs. Many hospital pharmacies are examining the drug-use process in patient-care areas that are outside of most unit dose and i.v. admixture systems; operating rooms and adjunct support areas are under scrutiny in many institutions.

This report reviews the justification and steps in the implementation of an operating room (OR) pharmacy satellite in an 874-bed university teaching hospital. Solutions to operational problems unique to our hospital in the inpatient operating suites and ambulatory surgery unit (ASU) are briefly described.

Background

The departments of operative services and anesthesia maintain 23 operating rooms. On average, 75–80 operative procedures are conducted daily.

Inpatient operating rooms. Seventeen operating rooms are routinely used for inpatient surgeries on weekdays until 1600, seven or eight rooms until 1800, and four or five rooms until 2000; usually two rooms are available after 2000, during the night shift. The busiest time for the inpatient OR is between 0600 and 2000. Although most of the surgeries occur during the day shift, evening surgeries (i.e., cases beginning at 1500–2330) account for approximately 16% of total OR cases. On weekends, two operating rooms are maintained at all times for emergency cases, with staffing provided by regular shifts or on an on-call basis. Usually, both rooms are used on Saturdays during the day shift because of emergencies and overflows from the weekdays. On average, the inpatient OR performs approximately 50 surgeries per weekday.

The use of pharmaceuticals and injectable solutions in the inpatient OR was divided into two categories: (1) drug preparation and administration by the anesthesiologist, nurse anesthetist, or certified registered nurse anesthetist (CRNA) and (2) drug preparation by the nurse or OR technician for use by surgeons in the sterile field during surgery; the second category included most pharmaceutical and injectable solution use. The majority of these drugs were stored in the anesthesia workroom and in each operating room. No security or control was exercised with these stock supplies. Drugs prepared by the circulating nurse and placed in the sterile field for intraoperative administration (e.g., injectable antimicrobials, irrigations for orthopedic surgeries, corticosteroids, ophthalmic preparations) were

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stored in a floor-stock room maintained by the nursing staff.

Controlled-substance accountability was also problematic, although some degree of control and auditing was maintained through use of a special dispensing module.[a] The module provided automated access to narcotics by anesthesia personnel yet could not guarantee tight control. Controlled substances were found daily in unattended rooms after surgeries had been completed.

In the floor-stock system, pharmaceuticals, controlled substances, i.v. supplies, and utility items (e.g., isopropyl alcohol) were not charged directly to patients. Rather, the costs of drugs used by the department of anesthesia were transferred to departmental accounts. These costs were then used to calculate an average OR anesthesia technical charge, which was billed to every surgical patient regardless of the drugs actually used. The costs of pharmaceuticals used by the OR nursing staff were not transferred to OR accounts, resulting in a lack of cost accountability.

Problems with the floor-stock system in our institution were consistent with those identified by others: (1) unnecessarily large and duplicative drug inventories, (2) drugs cluttered and poorly organized in each operating room, which increased the potential for errors, (3) substantial drug waste, (4) poor accountability of drug use, particularly for controlled substances, and (5) inadequate conditions for the aseptic preparation of i.v. admixtures (e.g., lack of laminar-airflow hood).[1-7]

Ambulatory surgery unit (ASU). The ASU operates only during the day shift on weekdays and maintains six operating rooms. Typically, 25 ambulatory-patient surgeries are performed daily, with all cases completed and the ASU closed by 1730.

The use of pharmaceuticals in the ASU was similar to that in the inpatient area, except that controlled substances were distributed in a standardized kit that was used by one attending anesthesiologist, who supervised the ongoing surgeries monitored by the CRNAs. Preoperative drug use was minimal; postoperative medications generally included controlled substances for pain and antimicrobials.

Postanesthesia care unit (PACU). The PACU maintains staffing on weekdays but converts to on-call coverage for weekends. During peak times (1100–1500), up to 15 patients may recover from surgery during any single hour.

Pharmaceutical use in the PACU was primarily by a floor-stock system. Medications included analgesics (mostly controlled substances) and the initiation of patient-controlled analgesia, first doses of antimicrobials, and medications for the postanalgesia period. The costs of pharmaceuticals were not charged to the PACU or to patients; theoretical costs were incorporated into the OR anesthesia technical charge. However, i.v. solutions and external products (e.g., povidone iodine) were charged to the PACU operating accounts.

Rationale for operating room pharmacy satellite

The lack of comprehensive pharmacy services to the operating rooms (particularly unit dose drug distribution and i.v. admixture systems), coupled with duplicated inventories, resulted in poor control and accountability of drug use in the surgical areas. The audit trails for controlled-substance use were inadequate, and overall quality assurance for the preparation, storage, labeling, and use of injectable medications could not be appropriately maintained.

There was no system for charging patients directly for all pharmaceuticals and i.v. solutions used during surgical procedures, nor were the costs of all pharmaceuticals acquired by the surgical areas assigned to OR accounts (e.g., OR nursing). These factors contributed to excessive operational costs, unknown amounts of drug costs that should be charged to individual patients, and lost revenues for the institution.

The presence of pharmacy personnel in the OR would ensure

1. Improved patient-specific and OR-specific accountability for drug use,
2. Improved patient safety because of aseptic drug preparation in a laminar-airflow hood and proper labeling of i.v. admixtures, which would reduce the potential for medication errors,
3. An expanded opportunity for the pharmacist to provide pharmaceutical care in the OR (e.g., monitoring of drug diversion and antimicrobials for infection prophylaxis) and serve as a drug information resource,
4. Consolidated drug storage in the OR pharmacy satellite and subsequent reduction of excessive and duplicated inventories in all supply areas and in each surgical room,
5. Reduced aggregate inventory costs because of more efficient logistical support from the pharmacy department's warehouse,
6. Reduced drug waste because of patient-specific drug preparation,
7. Reduced loss and waste of controlled substances,
8. Implementation of direct patient charges for drug use, thereby improving cost accountability and the capturing of charges (less lost revenues),
9. Initiation of drug-use evaluations in the OR, and
10. Reduction in the amount of time nonpharmacy personnel (anesthesiologists, anesthesiology support staff, CRNAs, and nursing personnel) spend with drug acquisition, preparation, and distribution.

Planning the project

Initially, the departments of anesthesia and operative services approached the pharmacy department with the idea of an OR pharmacy satellite. In June 1990, a formal proposal was submitted to and accepted

by hospital administration; the following month, the OR pharmacy task force was established. Space for the pharmacy satellite (approximately 300 sq ft) was acquired from a stockroom centrally located in the OR.

Three representatives from pharmacy, four from anesthesia, and six from OR nursing made up the task force; they met twice monthly to develop policies and procedures. Eleven OR pharmacy satellites in other hospitals were surveyed by telephone by using a standard questionnaire that we developed. Data regarding staffing patterns, services provided, patient charge mechanisms, and workload comparisons were collected and discussed by the task force. Members of the task force visited two institutions that had OR pharmacy satellites.

Three levels of OR pharmacy services were identified:

1. Pharmacy satellite provides controlled substances only,
2. Pharmacy satellite provides controlled substances, i.v. admixtures, and special preparations but maintains floor-stock pharmaceuticals in each operating room, and
3. Pharmacy satellite provides all controlled substances, i.v. admixtures, and pharmaceuticals on an individual basis.

We chose the third level. Pharmacy staffing requirements for the satellite included 5.0 full-time equivalents (FTEs) to provide weekday coverage of 0600–2230 and Saturday coverage of 0730–1600: 2.0 pharmacist FTEs and 3.0 pharmacy technician FTEs.

Description of the system

The OR pharmacy satellite started providing services on January 9, 1991. Although a minimal inventory of drugs is maintained in each operating room (emergency drugs), pharmaceuticals and i.v. admixtures are prepared and dispensed for each patient. Before the start of each surgery, the anesthesiologist or CRNA retrieves three groups of items from the satellite: (1) a pharmacy-prepared standard primary tray, (2) supplemental case-specific items, and (3) i.v. admixtures and controlled substances. Additional items, when required, are prepared and delivered to each operating room by pharmacy satellite personnel. The supplemental items used by surgeons are case-specific and surgeon-specific; drug lists or "preference cards" were developed by nursing and surgery staffs, and these items are reviewed by the pharmacist and dispensed when appropriate.

Anesthesia tray and controlled-substance systems. The primary anesthesia tray includes all medications typically required by our anesthesiology staff members during surgery. A new tray is issued for every case. At the completion of the case, the tray is returned for reconciliation, controlled-substance-use review, and patient billing. Inclusion of medications in the primary tray was agreed upon jointly by the anesthesia and pharmacy departments. The tray also contains pharmacy-prepared syringes for seven high-use items. Specialized trays with items specific for cardiothoracic, neurosurgery, ambulatory, or liver transplant surgeries are provided, when appropriate.

Patients are charged for the contents of the tray and any supplemental item not returned to the pharmacy satellite after surgery is completed. The anesthesia record is not used for determining patient charges because of inconsistencies in charting and illegible carbon copies of orders.

Each operating room contains a back-up tray with 39 less commonly used medications and emergency drugs. The back-up tray is restocked daily. When items are used, an anesthesia staff member communicates to the pharmacy the need for charging and replenishment.

During operational hours, the pharmacy satellite provides all controlled substances; the controlled-substance dispensing module is used only when the satellite is closed.

Before each OR case, the anesthesiologist or CRNA completes a preprinted anesthesia order form to request controlled substances, i.v. admixtures, and other special items as a supplement to the primary tray. Usually the request is completed the evening before surgery, after the next day's OR schedule is prepared. Anesthesia staff members review the schedule that is posted at the pharmacy satellite and complete the order form before leaving the hospital. If this task is not done the evening before a scheduled surgery, the form is completed before the start of surgery.

Anesthesia staff members indicate on the order form which controlled substances are needed for each surgery. When the anesthesiologist returns all unused controlled substances with the primary tray, the pharmacist retrieves the request form and reconciles the inventory. The pharmacy satellite uses a personal computer system[b] to record all controlled-substance transactions. The system maintains a perpetual computerized inventory as well as a record of drug issues for each anesthesia staff member, for surveillance purposes.

Standard i.v. admixtures and floor stock. Anesthesia staff members request i.v. admixtures by using the preprinted form. Standard concentrations for many infusions were determined by the anesthesia staff before the pharmacy satellite opened. The satellite always keeps on hand a low par level of standard i.v. admixtures for emergency situations. Satellite pharmacy personnel prepare special infusions, including pediatric and pain-management admixtures, on request.

In each operating room, pharmacy personnel daily review and restock three categories of pharmaceutical:

- Anesthesia back-up tray,
- I.V. solutions such as 5% dextrose injection and 0.9% sodium chloride injection, based on stand-

par levels, and
- Volatile agents including halothane, enflurane, and isoflurane.

Daily routine. The evening set-up is key to the success of the pharmacy satellite. At approximately 1400, the pharmacy satellite receives a copy of the next day's OR schedule from the scheduling office. The pharmacist consults the preference card for each surgeon and surgical procedure and initiates a billing form that also serves as the pick list. Using this form, the pharmacist indicates which medications the pharmacy technician must acquire or prepare for each surgery. The pharmacy technician places the drugs in a bag and labels the bag with the patient's name, operating room number, and scheduled time for surgery. Based on the anesthesia order form completed by the anesthesiologist, the pharmacist prepares a supply of controlled substances for each patient. Admixtures and other items are also prepared as ordered.

During the planning phase for the satellite, the anesthesia staff was apprehensive about the potential wait at the pharmacy satellite window. Our response was to urge anesthesia staff members to complete their order forms the night before their cases were scheduled.

On weekdays at 0600, the inventory of i.v. solutions, volatile anesthetic agents, and back-up trays is checked in each operating room. Before each surgery begins, the anesthesiologist retrieves from the pharmacy satellite window a primary anesthesia tray or kit, controlled substances, medications specifically prepared for the individual surgeon, and any other special requests.

If unanticipated medications are required during surgery, the back-up tray is used; a nurse or anesthesiologist telephones the satellite if the needed medication is not on the tray. At the end of surgery, the anesthesiologist returns to the satellite all pharmaceuticals, including items used from the primary tray and controlled substances. At this time, the anesthesiologist receives a new primary tray or kit for the next surgical patient.

The pharmacist records on the anesthesia request form all returned controlled substances and enters the transactions into the computer system. The pharmacy technician replenishes the primary tray and the kit and records on the patient billing form all medications that need to be charged and replaced.

Three operating rooms serve as the sites for all emergency surgeries. At approximately 1700, the pharmacy technician places a primary tray in each of the emergency surgical areas. When the pharmacy satellite closes, the controlled substances in the satellite are locked in a safe and the controlled-substance dispensing module is activated. Anesthesia staff members acquire all controlled substances from the module until 0600. The OR charge nurse and the on-call attending anesthesiologist have keys to the satellite so that they can obtain additional primary trays or other medications during the night. They record on a clipboard the patient's name and the description and number of items taken.

Financial analysis

Financial improvements that resulted from implementation of the OR pharmacy satellite are based on inventory reduction, improved efficiency, cost reductions, improved cost accountability, and identification of unclaimed revenue.

Inventory reduction. Inventory was reduced by consolidation and increased turnover, as well as general inventory maintenance by pharmacy satellite personnel. Inventory in all the OR areas, including the pharmacy satellite, was reduced from $53,984 to $23,459 (–56.5%).

Improved efficiency and cost reductions. Recycling of prepared but unused pharmaceuticals and i.v. solutions, reduction of the number of expired items, preparation of i.v. admixtures and bulk pharmaceuticals in batches, and reduction of drug waste should reduce drug costs. Based on our preliminary data and other experiences,[7] we anticipated at least a 10% reduction in waste after the satellite became operational, but we did not specifically analyze waste.

From 1989 to 1990, the cost of floor stock provided to the surgical areas increased by 16.5% (not adjusted for inflation); operation of the OR pharmacy satellite reduced the cost of providing pharmaceuticals by 2.6% (adjusted for 8% annual inflation rate, our institution's standardized adjustment for inflation) (Table 1). The average cost per patient increased 12.4% from 1990 to 1991 but decreased 8% after implementation of the OR satellite (and adjustment for inflation).

Only two of the five FTE satellite positions were new to the pharmacy budget; the other positions were reassigned from other pharmacy areas. The departments of operative services and anesthesia did not eliminate any positions; instead, staff members who previously prepared pharmaceuticals were assigned nonpharmaceutical activities.

Improved cost accountability and identification of unclaimed revenue. Approximately 20% of first-year costs for the OR pharmacy satellite were one-time, fixed costs associated with construction of the satellite; salaries and benefits for satellite personnel accounted for the remaining costs. However, these costs were offset by savings and identification of previously unclaimed revenue that occurred as a result of satellite operation (Table 2).

In 1990, the costs of pharmaceuticals used by the OR nursing staff (costs not previously transferred to OR accounts) totaled $441,750, which was 36% of all pharmaceutical costs in the surgical areas. Satellite personnel now charge for all pharmaceuticals and i.v.

Table 1.
Costs for Pharmacy Items Used in Operating Rooms and Cost per Patient

Variable	Without Pharmacy Satellite		With Pharmacy Satellite
	1989	1990	1991[a]
Controlled substances ($)	150,222	170,001	168,106
Drugs other than controlled substances ($)	744,631	768,902	900,644
I.V. solutions ($)	130,475	261,256	201,090
Utilities[b] ($)	25,249	23,777	25,698
Total ($)	1,050,577	1,223,936	1,295,538[c]
No. of patients	15,411	15,979	16,907
Average cost per patient ($)	68.17	76.60	76.63[d]

[a] April 1991 through March 1992. The pharmacy satellite began operation in January 1991.
[b] Includes alcohol and scrub solutions.
[c] $1,191,895, after adjustment for 8% annual inflation rate (1990 to 1991); this adjusted figure represents a 2.6% decrease in costs compared with 1990.
[d] $70.50 per patient, after adjustment for 8% annual inflation rate (1990 to 1991); this adjusted figure represents an 8.0% decrease in cost per patient compared with 1990.

Table 2.
First-Year Expense and Cost-Reduction Summary for Operating Room Pharmacy Satellite

Variable	$
Material and supply costs	
Renovations[a]	22,913
Laminar-airflow hood	5,166
Refrigerator	2,900
Calculator	30
Work surfaces and shelving[b]	3,000
Carts, trays, and equipment	2,500
Controlled-substance cabinet	1,500
Personal computer	3,000
Other	2,000
Labor costs[c]	
Pharmacists, 2.0 FTEs	102,500
Technicians, 3.0 FTEs	78,000
Total materials, supplies, and labor	223,509
Cost reductions	
Inventory[d]	30,525
Expired drugs[e]	32,041
Identification of patient charges[f]	432,698
Total cost reductions	495,264
Net fiscal benefit	271,755

[a] Includes removal of fixed shelving; installation of electrical, telephone, and computer cables, double-bowl sink, and cabinet; and repair of light fixtures.
[b] Some of the existing shelving units remained after transformation of the stockroom into the pharmacy satellite.
[c] Includes 25% salary-benefits allowance. FTE = full-time equivalent.
[d] Consolidation of inventory is a one-time savings that represents the net change after stocking the pharmacy satellite.
[e] Decrease in cost of drugs that expired in the operating rooms; cost adjusted for 8% annual inflation rate (1990 to 1991).
[f] Costs that are charged to patients and were not previously charged to operating-room departments.

solutions used for each patient. Improvements in cost accountability and charge capture resulted from the change to direct patient charges.

Because of our hospital's total patient charges comparable to charges by other providers in our local health-care market, the commonly used justification for a satellite—enhancing revenues—was not a strong incentive in our project. Revenue neutrality became the goal. The OR anesthesia technical charge was reduced to offset the increased direct patient charges. However, improved identification of patients with drug charges that were not previously transferred to OR accounts caused net pharmacy revenue to increase.

Discussion

Based on our one-year experience with an OR pharmacy satellite, we believe that the program is a fiscally responsible service improvement, enhances the quality of pharmacy services provided to the OR, improves our compliance with regulatory requirements for controlled-substance accountability, and facilitates our efforts to control unnecessary and costly drug use. In the future, the OR pharmacy satellite will provide services to the 16-bed surgical intensive-care unit.

Conclusion

Despite initial start-up costs and personnel costs, an OR pharmacy satellite reduced overall pharmaceutical costs in the OR.

[a] Lionville CD-Module, Lionville Systems, Inc., Exton, PA.
[b] NARCOPERP software, Version 1.0, Pharmacy & Health Care Computer Applications, Laguna Niguel, CA.

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2. Buchanan EC, Gaither MW. Development of an operating room pharmacy on a restricted budget. *Am J Hosp Pharm.* 1986; 43:1719-22.
3. Carmody G, Vogel D. Unit dose distribution of controlled substances for the operating room. *Am J Hosp Pharm.* 1986; 43:413-5.
4. McClure-Zola E, Cipolle RJ, Zaske DE. Distribution system for controlled substances in the operating room. *Am J Hosp Pharm.* 1981; 38:687-9.
5. Nevius L. OR satellite pharmacies: demographics, services, and implementation. *Hosp Pharm.* 1987; 22:33-8.
6. Polwell PJ, Maland L, Bair J et al. Implementing an operating room pharmacy satellite. *Am J Hosp Pharm.* 1983; 40:1192-8.
7. Ziter CA, Dennis BW, Shoup LK. Justification of an operating room satellite pharmacy. *Am J Hosp Pharm.* 1989; 46:1353-61.

Surgic anesth

ROGER L. KLEIN,

Abstract: The re survey on the use satellite pharmacie tals with anesthesi ing programs are r In June 1990 a q naire was mailed tc tors of anesthesiolc training programs i cians. The question ited information or presence of surgical pharmacies in the t hospitals and the n the services provide ing accounting for c substances. Responses were re

Anesthesiolo substances, epines, anc commonly diverte the use of controll requirement. The substances prescrit names of prescribe documented.[1,2] Ho keeping do not pr diverting controlle Improved divers niques have been d

1. Two-person dc trolled substan
2. Searching for c record and th record (narcoti dence may be a
3. Auditing indivi cessive use patte
4. Random chemic dilution or subs

ROGER L. KLEIN, M.D., is M.D., is Professor and C M.D., is Professor, Depart Sciences University (OHS Director, Pharmacy Servic Address reprint reque Anesthesiology, UHS-2, C

EXHIBIT 35

Acute General Hospital Licensed Bed Designation: FY 2015

Office of Health Care Quality and Maryland Health Care Commission

Hospital Name: *University of Maryland Baltimore Washington Medical Center*

License Number: *02-015*

A. LICENSED ACUTE CARE BEDS SUBJECT TO DESIGNATION PROCEDURE

Service Category:	Designation of Beds
MEDICAL/SURGICAL/GYNECOLOGICAL/ADDICTIONS (MSGA)	
Medical-Surgical Acute	123
Gynecologic	0
Addictions	0
Definitive Observation/Stepdown	118
Medical Surgical Intensive Care	30
Medical Cardiac Critical Care	0
Burn Critical Care (HSCRC-designated service only)	0
Shock Trauma (HSCRC-designated service only)	0
Oncology (HSCRC-designated service only)	0
Total Medical/Surgical/Gynecological/Addictions (MSGA)	*271*
OBSTETRIC	*15*
PEDIATRIC	
Pediatric Acute	10
Pediatric Intensive Care	0
Total Pediatric	*10*
PSYCHIATRIC	
Acute Psychiatric-Adult	14
Acute Psychiatric-Child (MHCC-designated service only)	0
Acute Psychiatric-Adolescent (MHCC-designated service only)	0
Acute Psychiatric-Geriatric (MHCC-designated service only)	0
Acute Psychiatric-Intensive Care	0
Total Acute Psychiatric	*14*
TOTAL: CURRENT LICENSED ACUTE CARE BED CAPACITY	*310*

B. INVENTORY OF OTHER BEDS

BASSINETS	
Newborn Nursery	15
Premature Nursery (HSCRC-designated service only)	0
Neonatal Intensive Care Unit (NICU)	0
Total Newborn Services (Bassinets)	*15*
SPECIAL HOSPITAL SERVICES	
Acute Rehabilitation-Comprehensive Inpatient	0
Acute Rehabilitation-Brain Injury	0
Acute Rehabilitation-Spinal Cord Injury	0
Acute Rehabilitation-Stroke Specialty Programs	0
Acute Rehabilitation-Pediatrics	0
Chronic Care	0
Total Special Hospital Services	
NON ACUTE SERVICES	
Comprehensive Care	0
Comprehensive - Special Care Certified	0
Intermediate Care Facility (ICF)	0
Residential Treatment Center (RTC)	0
Total Non Acute Care Services	

Approved: Jenne R Webster (DHMH)

Date Issued: July 1, 2014 Expiration Date: June 30, 2015

cc: Health Services Cost Review Commission

TABLE A. PHYSICAL BED CAPACITY BEFORE AND AFTER PROJECT

INSTRUCTION: Identify the location of each nursing unit (add or delete rows if necessary) and specify the room and bed count before and after the project in accordance with the definition of physical capacity noted below. Applicants should add columns and recalculate formulas to address rooms with 3 and 4 bed capacity. See additional instruction in the column to the right of the table.

NOTE: Physical capacity is the total number of beds that could be physically set up in space without significant renovations. This should be the maximum operating capacity under normal, non-emergency circumstances and is a physical count of bed capacity, rather than a measure of staffing capacity. A room with two headwalls and two sets of gasses should be counted as having capacity for two beds, even if it is typically set up and operated with only one bed. A room with one headwall and one set of gasses is counted as a private room, even if it is large enough from a square footage perspective to be used as a semi-private room, since renovation/construction would be required to convert it to semi-private use. If the hospital operates patient rooms that contain no headwalls or a single headwall, but are normally used to accommodate one or more than one patient (e.g., for psychiatric patients), the physical capacity of such rooms should be counted as they are currently used.

Before the Project							After Project Completion							Additional Instruction
Hospital Service	Location (Floor/Wing)*	Licensed Beds: July 1, 2014	Based on Physical Capacity				Hospital Service	Location (Floor/Wing)*	Based on Physical Capacity					
			Room Count			Bed Count			Room Count			Bed Count		
			Private	Semi-Private	Total Rooms	Physical Capacity			Private	Semi-Private	Total Rooms	Physical Capacity		
ACUTE CARE							**ACUTE CARE**							
General Medical/Surgical*					0	0	**General Medical/Surgical***							
	7 West		0	0	0	0		7 West	30	0	30	30		
	6 West		30	0	30	30		6 West	30	0	30	30		
	6 South		24	0	24	24		6 South	24	0	24	24		
	5 West		30	0	30	30		5 West	30	0	30	30		
	5 South		2	20	22	42		5 South	4	18	22	40		
	4 West		27	0	27	27		4 West	27	0	27	27		
	4 South		3	22	25	47		4 South	22		22	22		
	PCU		2	20	22	42		PCU	5	17	22	39		
SUBTOTAL Gen. Med/Surg*			**118**	**62**	**180**	**242**	**SUBTOTAL Gen. Med/Surg***		**172**	**35**	**207**	**242**		*Calculate the sum of all General Medical/Surgical rows*
ICU/CCU	2 CCW/SICU		36	0	36	36	**ICU/CCU**		36		36	36		
Other *(Specify/add rows as needed)*					0	0					0	0		
TOTAL MSGA		**271**	**154**	**62**	**216**	**278**	**TOTAL MSGA**		**208**	**35**	**243**	**278**		***Calculate the sum of Med/Surg Subtotal, ICU/CCU, and other physical capacity***
Obstetrics	3 South	**15**	18		18	18	**Obstetrics**		18		18	18		
Pediatrics	3 East	**10**	10		10	10	**Pediatrics**		10		10	10		
Psychiatric	2 East	**14**	2	6	8	14	**Psychiatric**		2	6	8	14		
TOTAL ACUTE		**310**	**184**	**68**	**252**	**320**	**TOTAL ACUTE**		**238**	**41**	**279**	**320**		*Ensure that Total includes Total MSGA and Obstetrics, Pediatrics, and Psych rows*
NON-ACUTE CARE							**NON-ACUTE CARE**							
Dedicated Observation**					0	0	**Dedicated Observation****				0	0		
Rehabilitation					0	0	**Rehabilitation**				0	0		
Comprehensive Care					0	0	**Comprehensive Care**				0	0		
Other *(Specify/add rows as needed)*					0	0	**Other** *(Specify/add rows as needed)*				0	0		
TOTAL NON-ACUTE							**TOTAL NON-ACUTE**							*Calculate the sum of all Non-Acute Care rows*
HOSPITAL TOTAL		**310**	**184**	**68**	**252**	**320**	**HOSPITAL TOTAL**		**238**	**41**	**279**	**320**		*Ensure that Hospital Total includes Total Acute and Total Non-acute rows*

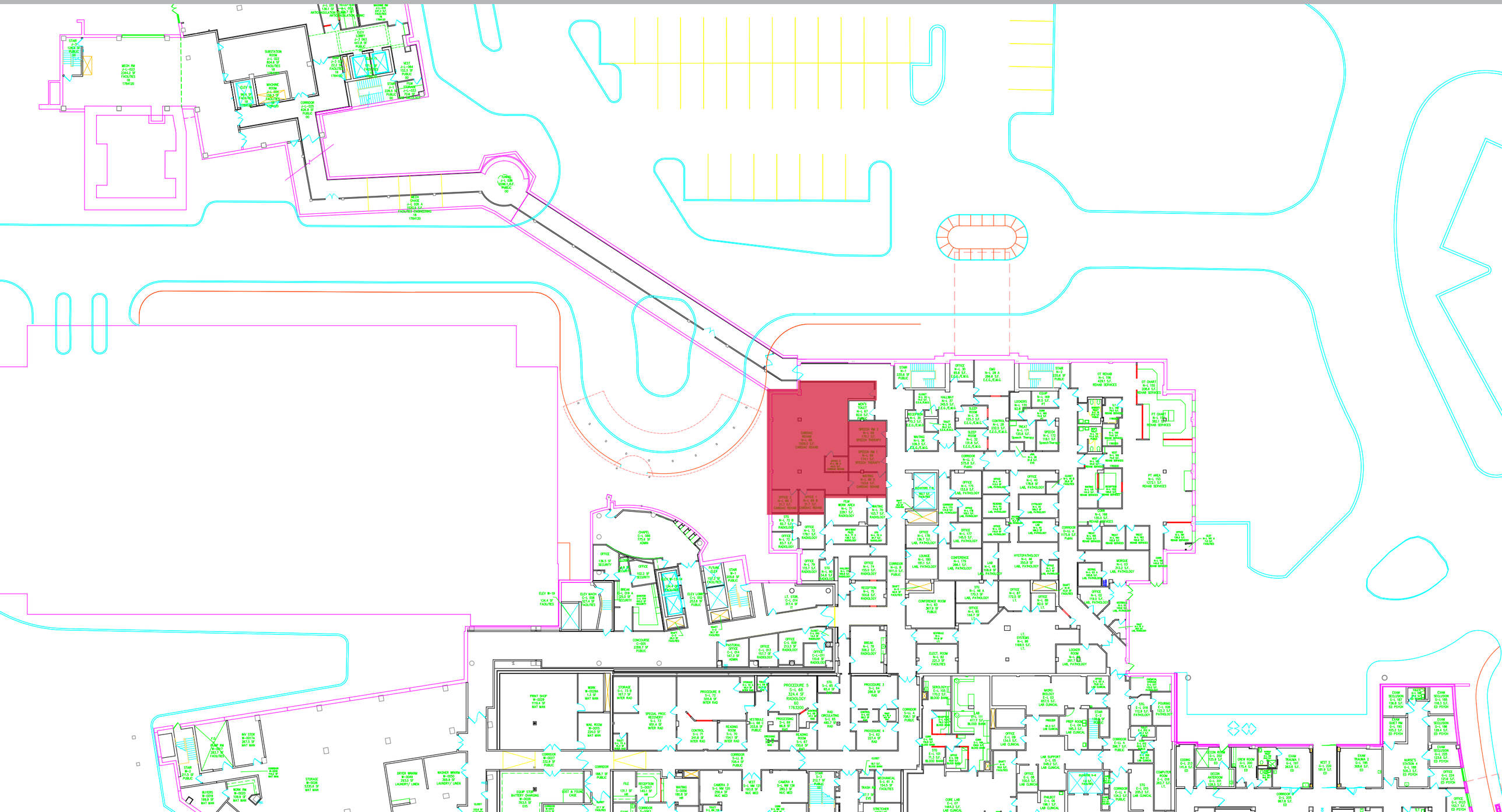
* Include beds dedicated to gynecology and addictions, if unit(s) is separate for acute psychiatric unit

** Include services included in the reporting of the "Observation Center". Service furnished by the hospital on the hospital's promise, including use of a bed and periodic monitoring by the hospital's nursing or other staff, which are reasonable and necessary to determine the need for a possible admission to the hospital as an inpatient; Must be ordered and documented in writing, given by a medical practitioner.

EXHIBIT 36

UM BWMC CARDIAC REHABILITATION

UNIVERSITY of MARYLAND
BALTIMORE WASHINGTON
MEDICAL CENTER

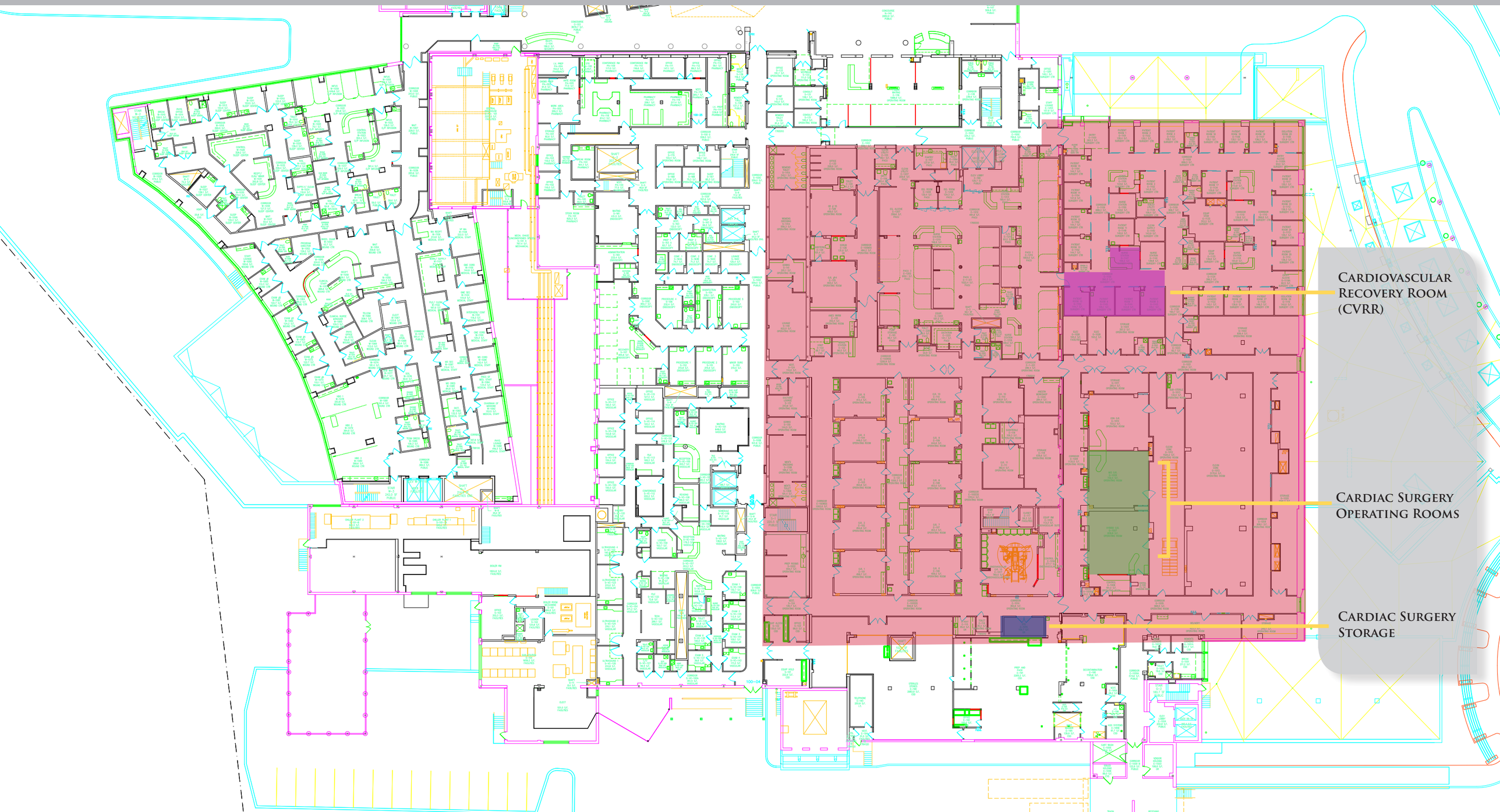


UM BWMC CRITICAL CARE WEST (CCW)

UNIVERSITY of MARYLAND
BALTIMORE WASHINGTON
MEDICAL CENTER

UM BWMC SURGERY DEPARTMENT

University of Maryland
Baltimore Washington
Medical Center



UM BWMC SURGICAL STEP-DOWN TELEMETRY UNIT (6 WEST)

University of Maryland
Baltimore Washington
Medical Center

EXHIBIT 37

UM BWMC Cardiac Surgery Project Budget Details			
	Quantity	**Cost**	**Total**
Major Equipment			
Heart Lung Machines	2	$ 197,269	$ 394,538
Heater/Coolers	2	$ 41,567	$ 83,134
Xtra auto transusion system	2	$ 26,535	$ 53,070
Cardioplegia Delivery System Quest MPS	2	$ 43,000	$ 86,000
Marquet ECMO	1	$ 50,000	$ 50,000
Cardiopquip H/C	1	$ 15,000	$ 15,000
Maquet Intra Aortic Balloon Pump IABP Consoles for OR	2	$ 63,450	$ 126,900
Isoforane vaporizers	2	$ 4,200	$ 8,400
computer printer	2	$ 2,500	$ 5,000
Medtronic Heparin Management System	2	$ 12,320	$ 24,640
Major Equipment Subtotal			***$ 846,682***
Minor Equipment			
Instrument Sets			
Cardiac Valve Set	4	$ 2,643	$ 10,572
Chest Aneurysm Set	4	$ 2,423	$ 9,692
Cooley atrial retractor Set Symmetry need more	4	$ 540	$ 2,160
Radial artery EVH scope	4	$ 3,249	$ 12,996
Rultract retractor Set	4	$ 1,913	$ 7,652
Cardiac Vein Harves Set	4	$ 753	$ 3,012
Sternal Saw	4	$ 13,623	$ 54,492
Conmed surgical units	2	$ 12,286	$ 24,572
Istat	1		$ 11,500
Rotoblade - Cardiac Cath	1	$ 9,907	$ 9,907
Rotoblator Cart	1	$ 9,577	$ 9,577
Open Chest Cart	3	$ 2,499	$ 7,497
Cardiac Saw (Stryker) - for open chest cart	2	$ 13,623	$ 27,246
Minor Equipment Subtotal			***$ 190,875***
OR Boom Modifications			
OR Boom Modifications - Nitrous Oxide			$ 5,160
OR Boom Modifications Subtotal			***$ 5,160***
MOVEABLE EQUIPMENT SUBTOTAL			**$ 1,042,717**
Contingency			
General Instruments and Containers			$ 102,000
Carts for Supplies			$ 14,400

EXHIBIT 38

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GENERAL HOSPITAL COSTS

We do not have a complete breakdown listing or weighting of the various pieces of hospital equipment beyond the outline on the three major groupings, as found on page 20, Section 15 of the Marshall Valuation Service manual. However, they may be generally defined as follows:

Group I equipment is permanent equipment, installed in or attached to the building during construction and would, for example, include such items as built-in shelves, cabinets and nursing stations, i.e., all items which are normally part of the general contract and would be included in the Calculator costs. Typically, this would include the following, depending on quality, i.e., the majority of these items would only be found in the modern Good to Excellent major hospitals:

1. Oxygen system, tubing and outlet at each patient's bed.

2. Nurse call stations, including conduit to each patient's room.

3. Sufficient doors with a requirement of one hour rating minimum to extreme heat, and construction within stringent fire prevention codes.

4. Conductive floor systems in Operating, Obstetrical and Emergency Rooms.

5. Steam boiler and piping necessary to operate autoclaves, but not the autoclaves themselves.

6. Separate ventilation systems for Nursery, Operating and Delivery Rooms, but not the special filtering equipment.

7. Acoustically treated ceiling, doors, walls and floors in Electo-encephalogram Room.

8. Isolated wiring system of the Intensive Care Unit, including extra conduit for monitors, but none of the equipment.

9. Narcotic vault in Pharmacy.

10. Substantial plumbing and wiring for use of a wide range of equipment in Laboratory, but not Laboratory equipment.

11. Lead shielding and extra support built into the walls, ceiling and floors of the X-ray Rooms. Also, the higher voltage electrical system to handle the X-ray equipment, but no equipment.

(Cont'd)

General Hospital Costs - Cont'd.

12. The isolated high cost electrical system and lead lining of the Operating Room.

13. The insulation requirement of the built-in coolers and freezers in the hospital kitchen.

14. Emergency power generating equipment.

Group II equipment is often installed and becomes part of the real property, but typically not part of the general contract, and not included in our costs. This group would generally include permanent surgical and/or kitchen equipment, i.e., autoclaves, permanent surgical lighting and laminar flow filtering systems. The rough-in work for these items is normally performed under the general contract, but the equipment is usually purchased and installed by the manufacturer or his representative. This group would relate closely to what is normally considered trade fixtures in a commercial occupancy such as a retail store.

Group III is all movable chattel, such as linen, beds, furniture, kitchen utensils, typewriters, etc., and would never be included in any of our building costs.

These definitions, as we have stated them, are for the purpose of assisting in the interpretation of our manual, and do not necessarily conform to those of Medicare of Medical.

EXHIBIT 39

	UM BALTIMORE WASHINGTON MEDICAL CENTER **Subject:** Quoting Prices for Hospital Services – Administrative Policy Manual	Policy Number: A.20 [ ] New [X] Revised 3/15 [ ] Reviewed	
	Originator: Director, Financial Services	Effective Date	3/15
		Next Review Date	3/18
Senior VP/COO KCMcColl	Date: 3/18/15	Page	1 of 1
		Supersedes	1/15

PURPOSE:

UM Baltimore Washington Medical Center will provide price information for hospital services to help patients plan for health care expenses. It is intended to inform patients of cost estimates and to promote price transparency for charge comparison and their potential financial liability.

POLICY:

Price transparency information and how to request an estimate for hospital services appear on the hospital website and is updated quarterly by the Finance Department. The hospital will promptly provide price estimates when requested from patients. Patients may call the Pre-Registration Department at 410-787-4437 and will be asked to provide procedure and testing names and detail CPT codes to obtain price estimates to maximize accuracy of the quote. CPT Codes identifies specific procedures and can be obtained from the patient's physician's office.

All price quotes are only an estimate and actual charges may be different. The estimates only include charges related to the hospital bill. The department will provide a verbal explanation of the price estimate and a written estimate if requested.

Average charges are based on the type of care that was provided to patients and can differ from patient to patient for the same service depending on any complications or differences in treatment plans provided, as ordered by the physician, due to the patient's health. Therefore, actual total charges to a specific patient most likely differ from the average charge per case.

Physician related charges are not included in hospital price estimates and are billed separately. Callers will be advised to call their physicians with questions about their fees.

PROCEDURE:

1. Requests for hospital price estimates are provided by the Pre-Registration and Patient Access Department. The staff will look up CPT codes on the current version of the hospital Charge Description Master (CDM) or utilize the STAR Price Estimate Report for procedures.
2. Staff will inform the caller that the average price is an estimate and the charges will range based on hospital services used and the patients' health condition.
3. Staff will also advise patients that the hospital price estimate does not include physician fees.
4. Patients will be offered the hospital financial assistance plans if requested and will be referred to the Financial Assistance Coordinator at 410-787-4517.

ORIGINATOR: Director, Financial Services

REVIEW CYCLE: 3-year

APPROVAL: Senior VP/COO

EXHIBIT 40

UNIVERSITY of MARYLAND
BALTIMORE WASHINGTON
MEDICAL CENTER

CELEBRATING 50 YEARS

Patient Information List

UM BWMC provides the information below regarding charges for common procedures and services to help patients plan for health care expenses. The chart below includes the average range of fees associated with common procedures and services. The cost for services is based on a specific patient's condition. The chart below can help you estimate your costs which might be higher or lower. For additional help with estimating charges, please contact our Pre-Registration Department at 410-787-4437.

To apply for financial assistance for hospital charges, contact our Patient Financial Services Department at 410-787-4440.

Physician-related charges are not included in the chart below. They are billed separately. Contact your physician's office with questions about their fees.

Inpatient Medical/Surgical	**Minimum**	**Maximum**	**Average**
SEPTICEMIA & DISSEMINATED INFECTIONS	$ 1,051	$ 92,061	$ 15,400
HEART FAILURE	$ 1,095	$ 63,657	$ 9,633
CHRONIC OBSTRUCTIVE PULMONARY DISEASE	$ 1,120	$ 79,473	$ 8,946
OTHER PNEUMONIA	$ 1,093	$ 43,474	$ 8,363
CELLULITIS & OTHER BACTERIAL SKIN INFECTIONS	$ 1,679	$ 34,549	$ 6,822
CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS	$ 1,713	$ 58,609	$ 6,390
KIDNEY & URINARY TRACT INFECTIONS	$ 1,624	$ 76,187	$ 7,302
CVA & PRECEREBRAL OCCLUSION W/ INFARCT	$ 998	$ 65,870	$ 9,789
RENAL FAILURE	$ 1,200	$ 91,403	$ 10,454
KNEE JOINT REPLACEMENT	$ 8,186	$ 65,888	$ 20,678

Outpatient Surgery	**Minimum**	**Maximum**	**Average**
ESOPHAGOGASTRODUODENOSCOPY BIOPSY	$ 1,224	$ 10,509	$ 2,986
COLONOSCOPY BIOPSY	$ 805	$ 9,382	$ 2,748
ARTHROSCOPY KNEE	$ 1,767	$ 9,792	$ 2,963
CHOLECYSTECTOMY LAPAROSCOPIC	$ 2,891	$ 13,515	$ 5,238
EXCISION MINOR LESION	$ 738	$ 4,207	$ 2,181
INSERTION PORT-A-CATH	$ 2,331	$ 8,808	$ 3,696
ANGIOGRAM EXTREMITY	$ 1,689	$ 17,892	$ 6,044
LITHOTRIPSY	$ 2,674	$ 9,416	$ 5,864
HYSTEROSCOPY WITH DILATATION AND CURETTAGE	$ 1,770	$ 8,577	$ 3,227
CHOLECYSTECTOMY LAPAROSCOPIC WITH CHOLANGIOGRAM	$ 2,730	$ 8,624	$ 4,425

Psychiatric	**Minimum**	**Maximum**	**Average**
MAJOR DEPRESSIVE DISORDERS & OTHER/UNSPECIFIED PSYCHOSE	$ 1,354	$ 38,459	$ 7,694
DEPRESSION EXCEPT MAJOR DEPRESSIVE DISORDER	$ 1,406	$ 12,359	$ 5,392
ALCOHOL ABUSE & DEPENDENCE	$ 1,860	$ 54,984	$ 5,935
BIPOLAR DISORDERS	$ 2,015	$ 21,208	$ 7,184
SCHIZOPHRENIA	$ 1,651	$ 55,440	$ 10,935
OPIOID ABUSE & DEPENDENCE	$ 1,587	$ 74,275	$ 6,876
ORGANIC MENTAL HEALTH DISTURBANCES	$ 2,255	$ 75,596	$ 12,324
COCAINE ABUSE & DEPENDENCE	$ 1,395	$ 12,426	$ 5,322
INVOLUNTARY - MAJOR DEPRESSION DISORDERS	$ 1,502	$ 17,829	$ 8,027
DRUG & ALCOHOL ABUSE OR DEPENDENCE, LEFT AGAINST MEDICA	$ 2,138	$ 16,211	$ 5,067

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Obstetric	Minimum	Maximum	Average
VAGINAL DELIVERY	$ 5,290	$ 27,874	$ 9,974
CESAREAN DELIVERY	$ 6,031	$ 28,108	$ 11,319
OTHER ANTEPARTUM DIAGNOSES	$ 2,481	$ 25,646	$ 6,281
POSTPARTUM & POST ABORTION DIAGNOSES W/O PROCEDURE	$ 2,305	$ 17,261	$ 6,138
VAGINAL DELIVERY W/ STERILIZATION &/OR D&C	$ 9,365	$ 24,887	$ 12,865
MODERATELY EXTENSIVE PROCEDURE UNRELATED TO PRINCIPAL D	$ 5,128	$ 13,540	$ 8,281
ECTOPIC PREGNANCY PROCEDURE	$ 6,297	$ 8,952	$ 7,615
THREATENED ABORTION	$ 3,434	$ 7,673	$ 5,414
FALSE LABOR	$ 3,001	$ 3,001	$ 3,001
NONEXTENSIVE PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	$ 8,302	$ 8,302	$ 8,302

Pediatric	Minimum	Maximum	Average
ASTHMA	$ 2,103	$ 15,914	$ 4,658
OTHER PNEUMONIA	$ 2,156	$ 12,036	$ 5,107
BRONCHIOLITIS & RSV PNEUMONIA	$ 2,053	$ 10,276	$ 5,165
CELLULITIS & OTHER BACTERIAL SKIN INFECTIONS	$ 1,883	$ 7,105	$ 4,039
APPENDECTOMY	$ 4,866	$ 19,796	$ 8,360
KIDNEY & URINARY TRACT INFECTIONS	$ 2,507	$ 15,982	$ 7,304
INFECTIONS OF UPPER RESPIRATORY TRACT	$ 2,691	$ 10,063	$ 4,669
NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING	$ 1,956	$ 8,884	$ 4,513
POISONING OF MEDICINAL AGENTS	$ 3,302	$ 7,065	$ 5,433
VIRAL ILLNESS	$ 4,245	$ 8,308	$ 5,986

Estimated Laboratory Charges	
BASIC METABOLIC PANEL	$ 28
BILIRUBIN DIRECT	$ 15
CBC	$ 20
CBC W/ AUTO DIFF	$ 25
PANEL	$ 38
C-REACTIVE PROTEIN	$ 38
GLUCOSE	$ 10
GLYCOHEMOGLOBIN	$ 51
HCG QUALITATIVE	$ 25
HEPATIC FUNCTION PANEL	$ 28
LIPID PANEL	$ 48
MAGNESIUM	$ 15
MICROALBUMIN URINE QUANTITATIVE	$ 38
MISC URINALYSIS	$ 23
PARTIAL THROMBOPLASTIN	$ 20
PROTHOMBIN TIME	$ 20
RENAL FUNCTION PANEL	$ 30
SEDIMENTAT RATE RBC NON-AUTO	$ 15
THYROID STIMULATING HORMONE	$ 38
TROPONIN QUANTITATIVE	$ 63
URINALYSIS W/ MICRO AUTO	$ 23

Estimated Radiology Charges	
CT ABDOMEN W/ & W/O CONTRAST	$ 141
CT CERVICAL SPINE W/O CONTRAST	$ 85
CT HEAD OR BRAIN W/O CONTRAST	$ 64
CT PELVIS W/ CONTRAST	$ 107
MAMMOGRAM SCREENING BILATERAL	$ 90
MRI ABDOMEN W/ & W/O CONTRAST	$ 306
MRI BRAIN W/ & W/O CONTRAST	$ 220
MRI CERVICAL SPINE W/ & W/O CONTRAST	$ 220
MRI CHEST W/ & W/O CONTRAST	$ 220
MRI LUMBAR SPINE W/ & W/O CONTRAST	$ 220
MRI ORBIT FACE OR NECK W/ CONTRAST	$ 159
MRI PELVIS W/ & W/O CONTRAST	$ 220
MRI THORACIC SPINE W/ & W/O CONTRAST	$ 220
SONO BREAST	$ 299
X-RAY CHEST SPECIAL VIEWS	$ 60
X-RAY ELBOW COMPLETE 3+ VIEWS	$ 90
X-RAY KNEE 3 VIEWS	$ 90
X-RAY PELVIS 1-2 VIEWS	$ 90

Other Estimated Charges	
EKG SINGLE	$ 31
STRESS TEST-NUC MED	$ 78
MULTI SLEEP LATENCY TEST(MSLT)	$ 1,784

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EXHIBIT 41

ASSUMPTIONS SUPPORTING UM BWMC TABLES G, H, J, AND K

General assumptions from UMMS Strategic Planning Group:

Inpatient Volume Changes

	2016	2017	2018	2019	2020
Population/Aging	1.97%	1.97%	1.97%	1.97%	1.97%
PAU Reduction	(1.09%)	(1.09%)	(1.10%)	(1.11%)	(1.11%)
Medicare Shared Savings	(0.33%)	(0.54%)	(0.74%)	(0.51%)	(0.50%)
Total Volume Chg	0.55%	0.34%	0.13%	0.35%	0.36%

Outpatient Volume Changes

	2016	2017	2018	2019	2020
Population/Aging	1.97%	1.97%	1.97%	1.97%	1.97%
Medicare Shared Savings	(0.33%)	(0.54%)	(0.74%)	(0.51%)	(0.50%)
Total Volume Chg	1.63%	1.43%	1.24%	1.46%	1.48%

Inpatient Revenue Changes

	2016	2017	2018	2019	2020
Inflation Factor	2.50%	2.50%	2.50%	2.50%	2.50%
Volume	0.55%	0.34%	0.13%	0.35%	0.36%
Other	(0.60%)	(0.44%)	0.18%	(0.04%)	(0.05%)
Total Rev Chg	2.44%	2.40%	2.82%	2.82%	2.82%

Outpatient Revenue Changes

	2016	2017	2018	2019	2020
Inflation Factor	2.50%	2.50%	2.50%	2.50%	2.50%
Volume	1.63%	1.43%	1.24%	1.46%	1.48%
Other	(0.58%)	(0.42%)	0.21%	(0.01%)	(0.02%)
Total Rev Chg	3.55%	3.51%	3.94%	3.95%	3.96%

Expense Assumptions

	2016	2017	2018	2019	2020
Salaries and Wages (assumes 65% of wages are variable)	2.50%	3.00%	3.00%	3.00%	3.00%
Supplies and Drugs (assumes 80% of supplies are variable)	2.50%	3.00%	3.00%	3.00%	3.00%
Purchased Services (assumes 30% of purchased services are variable)	2.50%	3.00%	3.00%	3.00%	3.00%
Physician Services (assumes 50% of purchased services are variable)	2.50%	3.00%	3.00%	3.00%	3.00%

	2016	2017	2018	2019	2020
Insurance (assumes 0% of purchased services are variable)	2.50%	3.00%	3.00%	3.00%	3.00%
Other Fixed Expenses	$750K	$1,500K	$2,250K	$3,000K	$3,750K
Performance Improvement	$0	$0	($500K)	($2,300K)	($3,700K)

Table G Assumptions:

1. Revenue – Total of project and non-project related revenue. Non-project related revenue from UMMS financial planning department, assumptions for projections included in table above, with the exception of inflation, which for the purposes of this table were assumed to be 0%. Project related revenue covered in assumptions for Table J.

2. Deductions from Revenue - Total of project and non-project related deductions from revenue. Non-project related deductions from revenue from UMMS financial planning department, assumptions for projections included in table above, with the exception of inflation, which for the purposes of this table were assumed to be 0%. Project related deductions from revenue covered in assumptions for Table J.

3. Other Revenue - Total of project and non-project related other revenue. Non-project related other revenue from UMMS financial planning department, assumptions for projections included in table above, with the exception of inflation, which for the purposes of this table were assumed to be 0%. Project related other revenue covered in assumptions for Table J.

4. Expenses - Total of project and non-project related expenses. Non-project related expenses from UMMS financial planning department, assumptions for projections included in table above, with the exception of inflation, which for the purposes of this table were assumed to be 0%. Project related expenses covered in assumptions for Table J.

5. Patient Mix – Assuming no changes in current patient payer mix. Open heart surgery would represent roughly 1% of patient population and therefore will not materially impact overall patient mix.

Table H Assumptions:

1. Revenue – Total of project and non-project related revenue with inflation factored in. Non-project related revenue from UMMS financial planning department, assumptions for projections included in table above. Project related revenue with inflation factored in covered in assumptions for Table K.

2. Deductions from Revenue - Total of project and non-project related deductions from revenue with inflation factored in. Non-project related deductions from revenue from UMMS financial planning department, assumptions for projections included in table above. Project related deductions from revenue with inflation factored in covered in assumptions for Table K.

3. Other Revenue - Total of project and non-project related other revenue with inflation factored in. Non-project related other revenue from UMMS financial planning department, assumptions for projections included in table above. Project related other revenue with inflation factored in covered in assumptions for Table K.

4. Expenses - Total of project and non-project related expenses with inflation factored in. Non-project related expenses from UMMS financial planning department, assumptions for projections included in table above. Project related expenses with inflation factored in covered in assumptions for Table K.

5. Patient Mix – Assuming no changes in current patient payer mix. Open heart surgery would represent roughly 1% of patient population and therefore will not materially impact overall patient mix.

Table J Assumptions:

1. Revenue – Total of project related revenue. Project related revenue from UMMS rates and reimbursement department, Question 26 BWMC Cardiac Surgery CON Revenue v2 020615.xls attached. Case volume and procedure mix from UMMS Strategic Planning Department, Question 26 BWMC CON volume projections 6 years with market impact 02172015.xls. Assumptions for projections included in the worksheets.

2. Deductions from Revenue - Project deductions from revenue percentages based on current experience and held constant going forward.

3. Other Revenue – This project is not expected to created Other Revenue.

4. Expenses – Project salary and wages (including benefits) are based on Table L, Manpower. The Patient Care Technicians, Perioperative Technicians, Rehabilitation staff and RNs were considered to be variable employed staff and these expenses were flexed according to case volume. All other employed staff was considered fixed and the expenses related to these staff members was held

constant throughout the projection. For ease of computation the benefit amount was fixed at 21.5% throughout the projection. The contractual services line is based on Table L, Manpower. The Anesthesia Contract and the CT Assist contract were considered variable, the remaining contracts were considered fixed through the projected period. The project depreciation was based on the capital expenditures using a projected useful life of 5 years and utilizing the GAAP methodologies in place within UMMS. The supply costs were based on a per case estimation completed by UMMS and BWMC OR personnel (summary provided within Question 26 Supply Expense.xls). Other Expenses included Malpractice insurance at $340 per case (BWMC standard rate for adult surgical cases) and $2,200 per case for other miscellaneous expenses such as EVS, HR, Admitting, etc (based on BWMC experience that overhead costs of this type are generally 10% of other expenses).

5. Patient Mix – Assuming no changes in current patient payer mix. Open heart surgery would represent roughly 1% of patient population and therefore will not materially impact overall patient mix.

Table K Assumptions:

1. Revenue – Total of project related revenue with inflation factored in. Project related revenue from UMMS rates and reimbursement department, Question 26 BWMC Cardiac Surgery CON Revenue v2 020615.xls attached. Case volume and procedure mix from UMMS Strategic Planning Department, Question 26 BWMC CON volume projections 6 years with market impact 02172015.xls. Assumptions for projections included in the worksheets.

2. Deductions from Revenue - Project deductions from revenue percentages based on current experience and held constant going forward.

3. Other Revenue – This project is not expected to create Other Revenue

4. Expenses - Project salary and wages (including benefits) are based on Table L, Manpower. The Patient Care Technicians, Perioperative Technicians, Rehabilitation staff and RNs were considered to be variable employed staff and these expenses were flexed according to case volume. All other employed staff was considered fixed and the expenses related to these staff members was held constant throughout the projection. For ease of computation the benefit amount was fixed at 21.5% throughout the projection. The contractual services line is based on Table L, Manpower. The Anesthesia Contract and the CT Assist contract were considered variable, the remaining contracts were considered fixed through the projected period. The project depreciation was based on the capital expenditures using a projected useful life of 5 years and utilizing the GAAP methodologies in place within UMMS. The supply costs were based on a per case estimation completed by UMMS and BWMC OR personnel (summary provided within Question 26 Supply Expense.xls). Other Expenses included Malpractice insurance at $340 per case (BWMC standard rate for adult surgical cases) and $2,200 per case for

other miscellaneous expenses such as EVS, HR, Admitting, etc (based on BWMC experience that overhead costs of this type are generally 10% of other expenses). With the exception of depreciation, each category was inflated at 3% per year based on past BWMC experience.

5. Patient Mix – Assuming no changes in current patient payer mix. Open heart surgery would represent roughly 1% of patient population and therefore will not materially impact overall patient mix.