

GALLAGHER  
EVELIUS & JONES LLP  
ATTORNEYS AT LAW

November 21, 2018

Ms. Ruby Potter  
[ruby.potter@maryland.gov](mailto:ruby.potter@maryland.gov)  
Health Facilities Coordination Officer  
Maryland Health Care Commission  
4160 Patterson Avenue  
Baltimore, Maryland 21215

**VIA EMAIL & USPS**

Re: Supplement to Application for Certificate of Need  
Establishment of 16-Bed Inpatient Acute Psychiatric Unit at UMMC

Dear Ms. Potter:

On behalf of Applicant University of Maryland Medical Center, we are submitting six copies of its Supplement to its Application for Certificate of Need to establish a 16-Bed Inpatient Acute Psychiatric Unit at UMMC and related exhibits, filed August 3, 2018. We will transmit searchable PDF files of the supplement and a WORD version by separate email to Commission Staff only.

The Supplement contains (i) a letter statement by Dana Farrakhan; (ii) a revised need analysis, to replace Applicant's response to COMAR § 10.24.01.08G(3)(b), pages 41-48 of its initial application; and (iii) a redline demonstrating the changes between Applicant's initial submission and this revision.

We also respectfully request an update regarding the timing of the review of this application, which has been pending for three months. To date, we have received neither requests for more information nor notice that the application will soon be docketed.

We hereby certify that a copy of this submission has also been forwarded to the appropriate local health planning agency as noted below.

Sincerely,



Thomas C. Dame



Ella R. Aiken

TCD/ERA:blr  
Enclosures

#645801  
006551-0237

Ms. Ruby Potter  
November 21, 2018  
Page 2

cc: Kevin McDonald, Chief, Certificate of Need  
Paul Parker, Director, Center for Health Care Facilities Planning & Development  
Suellen Wideman, Esq., Assistant Attorney General  
Mary Beth Haller, Baltimore City Interim Health Commissioner  
Megan M. Arthur, Esq., Senior Vice-President & General Counsel  
Sandra H. Benzer, Esq., Associate Counsel, UMMS  
Mohan Suntha, M.D., MBA, President and CEO  
Sarah M. Edwards, DO, Assistant Professor of Psychiatry, UMMC  
Dana D. Farrakhan, FACHE, Sr. VP, Strategy, Community and Business Development  
Joseph E. Hoffman III, Senior Vice President and Chief Financial Officer, UMMC  
Craig Fleischmann, Senior Vice President, Finance, UMMC  
Leonard Taylor, Jr., Senior Vice President for Asset Planning, UMMS  
Greg D. Raymond, MS, MBA, RN, Vice President of Nursing and Patient Care Services,  
Clinical Practice & Professional Development, Neuroscience, Behavioral Health, UMMC  
Brian Sturm, Senior Director, Financial and Capital Planning, UMMS  
Scott Tinsley-Hall, Director, Strategic Planning, UMMC  
Linda Whitmore, Director for Project Development, UMMC  
Bret Elam, Project Manager, UMMS  
Andrew L. Solberg, A.L.S. Healthcare Consultant Services

**IN THE MARYLAND HEALTH CARE COMMISSION**

***SUPPLEMENT TO***  
**APPLICATION FOR**  
**CERTIFICATE OF NEED**

to  
Establish 16-Bed  
Inpatient Acute Psychiatric Unit  
at UMMC

---

**Applicant**  
*University of Maryland Medical Center*

November 21, 2018

(i)

November 15, 2018

22 S. Greene Street  
Baltimore, Maryland 21201-1595

**VIA USPS and EMAIL**

Mr. Ben Steffen, Executive Director  
C/O Ms. Ruby Potter  
[ruby.potter@maryland.gov](mailto:ruby.potter@maryland.gov)  
Health Facilities Coordination Officer  
Maryland Health Care Commission  
4160 Patterson Avenue  
Baltimore, Maryland 21215

Re: Application for Certificate of Need  
Establishment of 16-Bed Inpatient Acute Psychiatric Unit at  
University of Maryland Medical Center

Dear Mr. Steffen:

I write regarding the Certificate of Need of University of Maryland Medical Center (“UMMC”) to establish a 16-Bed Inpatient Acute Psychiatric Unit at UMMC. I request that this letter be added to the record in this review.

A prime goal of UMMC’s CON request to offer inpatient adolescent psychiatry services is to reduce the bottleneck in the pediatric Emergency Department (“ED”) pod by reducing boarding of patients awaiting transfer to other hospitals.

We wish to clarify that it is our expectation that we will admit all adolescents presenting to our ED who require inpatient psychiatric care that we are programmatically capable of providing, regardless of their diagnostic presentation, based on bed availability. This includes patients with neurocognitive disorders, behavioral dyscontrol, and self-injurious behaviors.

Thank you for your consideration of UMMC’s Application.

I hereby certify that a copy of this submission has also been forwarded to the appropriate local health planning agencies as noted below.

Sincerely,



Dana Farrakhan, FACHE  
Senior Vice President, Strategy, Community and  
Business Development  
University of Maryland Medical Center

Mr. Ben Steffen  
November 15, 2018  
Page 2

cc: Kevin McDonald, Chief, Certificate of Need  
Paul Parker, Director, Center for Health Care Facilities Planning & Development  
Suellen Wideman, Esq., Assistant Attorney General  
Leana S. Wen, M.D., MSc., Baltimore City Health Commissioner  
Thomas C. Dame, Esq., Gallagher, Evelius & Jones  
Ella R. Aiken, Esq., Gallagher, Evelius & Jones  
Megan M. Arthur, Esq., Senior Vice-President & General Counsel  
Sandra H. Benzer, Esq., Associate Counsel, UMMS  
Mohan Suntha, M.D., MBA, President and CEO  
Sarah M. Edwards, DO, Assistant Professor of Psychiatry, UMMC  
Joseph E. Hoffman III, Senior Vice President and Chief Financial Officer, UMMC  
Craig Fleischmann, Senior Vice President, Finance, UMMC  
Leonard Taylor, Jr., Senior Vice President for Asset Planning, UMMS  
Greg D. Raymond, MS, MBA, RN, Vice President of Nursing and Patient Care Services,  
Clinical Practice & Professional Development, Neuroscience, Behavioral Health,  
UMMC  
Brian Sturm, Senior Director, Financial and Capital Planning, UMMS  
Scott Tinsley-Hall, Director, Strategic Planning, UMMC  
Linda Whitmore, Director for Project Development, UMMC  
Bret Elam, Project Manager, UMMS  
Kevin Day, Project Architect, Living Design Lab  
Andrew L. Solberg, A.L.S. Healthcare Consultant Services

(ii)

**10.24.01.08G(3)(b). NEED.**

***The Commission shall consider the applicable need analysis in the State Health Plan. If no State Health Plan need analysis is applicable, the Commission shall consider whether the applicant has demonstrated unmet needs of the population to be served, and established that the proposed project meets those needs.***

**INSTRUCTIONS:** Please identify the need that will be addressed by the proposed project, quantifying the need, to the extent possible, for each facility and service capacity proposed for development, relocation, or renovation in the project. The analysis of need for the project should be population-based, applying utilization rates based on historic trends and expected future changes to those trends. This need analysis should be aimed at demonstrating needs of the population served or to be served by the hospital. The existing and/or intended service area population of the applicant should be clearly defined.

Fully address the way in which the proposed project is consistent with each applicable need standard or need projection methodology in the State Health Plan.

If the project involves modernization of an existing facility through renovation and/or expansion, provide a detailed explanation of why such modernization is needed by the service area population of the hospital. Identify and discuss relevant building or life safety code issues, age of physical plant issues, or standard of care issues that support the need for the proposed modernization.

Please assure that all sources of information used in the need analysis are identified. Fully explain all assumptions made in the need analysis with respect to demand for services, the projected utilization rate(s), the relevant population considered in the analysis, and the service capacity of buildings and equipment included in the project, with information that supports the validity of these assumptions.

Explain how the applicant considered the unmet needs of the population to be served in arriving at a determination that the proposed project is needed. Detail the applicant's consideration of the provision of services in non-hospital settings and/or through population-based health activities in determining the need for the project.

Complete the Statistical Projections (Tables F and I, as applicable) worksheets in the CON Table Package, as required. Instructions are provided in the cover sheet of the CON package.

---

[Applicant Response](#)

The purpose of the proposed project is to increase the availability of inpatient psychiatric services to the adolescent population (ages 13 through 17) in the Central Maryland region. There is significant unmet need in this region, and UMMC seeks to add eight adolescent psychiatry beds to meet a portion of this need. The analysis below relies upon data that include use-rate and population demand and unmet need at UMMC and two University of Maryland Medical System



(“UMMS”) affiliate hospitals, University of Maryland Baltimore Washington Medical Center (“UM BWMC”) and University of Maryland St. Joseph Medical Center (“UM SJMC”). The analysis also considers additional unmet demand in the service area.

Based on the analysis, there is sufficient need to support the proposed program and approval of this application will not have a significant adverse effect on existing programs in the State of Maryland.

### **Service Area Definition**

UMMC’s service area for the proposed inpatient adolescent psychiatry service is Anne Arundel County, Baltimore City, Baltimore County and Howard County, depicted in Figure 1 below. This service area is based on the top counties for 80% of UMMC’s FY2018 patient origin for the existing child psychiatry unit.

**Figure 1**  
**Map of Proposed Inpatient Adolescent Psychiatry Service Area**



### **Adolescent Population Estimates**

The adolescent population is defined as age 13 years through age 17 years. COMAR 10.24.07 (Definitions). Population estimates for the service area were obtained by Claritas for calendar years 2016 through 2019 and five year projections through 2024. Within the service

area, there are approximately 148,567 adolescents. Between 2019 and 2024, Claritas projects a 4% growth within the service area. Baltimore City has the fastest growing adolescent population over the next five years with projected growth of 6.2% followed by Anne Arundel County with projected growth of 5.3%.

**Table 3  
Adolescent Population Estimates for Proposed Service Area  
2016-2024**

	<u>2016</u> Est.	<u>2017</u> Est.	<u>2018</u> Est.	<u>2019</u> Est.	<u>2020</u> Proj.	<u>2021</u> Proj.	<u>2022</u> Proj.	<u>2023</u> Proj.	<u>2024</u> Proj.	<b>% Change 2019- 2024</b>
<b>Anne Arundel</b>	35,732	35,611	35,405	35,855	36,238	36,621	37,004	37,387	37,769	5.3%
<b>Baltimore City</b>	34,361	34,157	33,271	33,048	33,461	33,874	34,287	34,700	35,113	6.2%
<b>Baltimore County</b>	50,289	50,327	50,030	50,502	50,841	51,180	51,519	51,858	52,197	3.4%
<b>Howard County</b>	23,198	23,223	23,215	23,508	23,504	23,499	23,494	23,489	23,488	-0.1%
<b>4-County Total</b>	<b>143,580</b>	<b>143,318</b>	<b>141,921</b>	<b>142,913</b>	<b>144,044</b>	<b>145,174</b>	<b>146,304</b>	<b>147,434</b>	<b>148,567</b>	<b>4.0%</b>

Source: Claritas, July 2018

**Adolescent Psychiatric Projected Discharges in the Four County Service Area  
Based on Use Rate**

**Table 4  
Projected Adolescent Psychiatric Service Area Discharges  
2016-2024**

	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
<b>Population</b>	143,580	143,318	141,921	142,913	144,044	145,174	146,304	147,434	148,567
<b>Use Rate*</b>	16.94	16.30	15.49	15.49	15.49	15.49	15.49	15.49	15.49
<b>Discharges</b>	2,432	2,336	2,198	2,213	2,231	2,248	2,266	2,283	2,301

\*Use Rate calculated based on total discharges (obtained from HSCRC) per 1,000 population

The use rate was calculated using actual total adolescent (age 13-17) discharges obtained from the HSCRC for 2016, 2017 and 2018 9 months annualized. While this shows a declining trend, the use rate was held constant in years 2019-2024 making the assumptions that cases that are currently being transferred to facilities outside the state of Maryland would, with the increased beds in the market, remain in Maryland for treatment as well as assumptions around the unmet market demand outlined later in this application. Since the use rate is held constant, the growth mirrors the population growth between 2019 and 2024 of four percent.

### **Adolescent Psychiatric Inpatient Discharges for Four County Service Area**

Service area inpatient discharges for adolescent psychiatry increased by 5.0 % between fiscal year 2016 to fiscal year 2018. At the same time, average length of stay increased by 6.1%, compounding the need for more inpatient beds to treat adolescent psychiatry patients.

**Table 5  
Adolescent Psychiatry Service Area Discharges by Acute Care Hospital  
FY2016-FY2018**

	<b>FY2016</b>	<b>FY2017</b>	<b>FY2018</b>
JOHNS HOPKINS	350	306	379
FRANKLIN SQUARE	311	268	277
MONTGOMERY GENERAL	19	22	29
CARROLL COUNTY	23	27	23
SUBURBAN	3	4	17
UMMC	8	10	13
CALVERT MEMORIAL	7	11	11
UMMC MIDTOWN			5
ANNE ARUNDEL			3
HOPKINS BAYVIEW		2	-
UM SJMC		3	-
ST. MARYS			-
SINAI		1	-
<b>Total Discharges Acute Care Hospitals</b>	<b>721</b>	<b>654</b>	<b>757</b>
<b>Total Days Acute Care Hospitals</b>	<b>5,529</b>	<b>5,359</b>	<b>6,168</b>
<b>Average Length of Stay Acute Care Hospitals</b>	<b>7.67</b>	<b>8.19</b>	<b>8.14</b>
Adventist Behavioral Health	52	64	49
Brook Lane	-	-	19
Sheppard & Enoch Pratt Hospital	1,659	1,618	1,373
<b>Total Discharges Psych Specialty Hospitals</b>	<b>1,711</b>	<b>1,682</b>	<b>1,441</b>
<b>GRAND TOTAL DISCHARGES</b>	<b>2,432</b>	<b>2,336</b>	<b>2,198</b>

### **UMMC Pediatric Emergency Department Patient Demand**

In fiscal year 2017, UMMC's pediatric emergency department ("PED") treated 585 patients who had either a primary or secondary psychiatric diagnosis. Of these patients treated in the PED, 118 patients were transferred to an inpatient psychiatric facility, six of whom required admission to an inpatient pediatric general acute bed at UMMC until an inpatient psychiatric bed could be secured. An additional 30 patients were not transferred due to delay in transfer to another hospital. These patients waited for a bed in the PED for two days or greater, and would have benefited from an inpatient bed if one could have been secured. Instead, these

patients were stabilized in the PED until it was medically safe to discharge them with outpatient psychiatric support services. Thus, a total of 148 patients (118 + 30) were eligible for inpatient care in FY17. The length of stay for these 148 adolescent psychiatric PED patients ranged from one to seven days with 67% greater than 24 hours and 35% greater than 48 hours.

In fiscal year 2018, UMMC's PED treated a total of 873 patients who had a primary or secondary psychiatric diagnosis, a 49% increase from fiscal year 2017. UMMC transferred 70 of these patients to an inpatient psychiatric facility, six of whom required admission to a pediatric general acute bed until an inpatient psychiatric bed could be secured. The 70 patients transferred to an inpatient facility waited from one to nine days with an average wait time of 33 hours to be transferred. Of the patients who were not discharged to an inpatient psychiatric facility, 45 patients had a length of stay between two and 11 days in the PED and would have benefited from an inpatient psychiatric bed if one could have been secured. Instead, these patients were stabilized in the PED until it was medically safe to discharge them with outpatient psychiatric support services. Thus, a total of at least 115 patients (70 + 45) were eligible for inpatient care in FY18. The length of stay for PED patients needing an inpatient psychiatric bed ranged from 1 to 11 days with 67% having greater than 24 hours and 35% greater than 48 hours.

### **Referrals from Pediatric General Acute Unit**

In fiscal year 2018 there were 20 additional patients transferred to inpatient psychiatric facilities from the pediatric general acute care floor following treatment of medical conditions. These patients also waited extensively to be transferred to an inpatient psychiatry facility similar to the PED patients.

### **Outpatient Adolescent Care Direct Admission**

The University of Maryland School of Medicine faculty within the Department of Psychiatry and Division of Child & Adolescent Psychiatry currently provide outpatient services to adolescents. Approximately 40 patients per year are admitted through direct admissions from their practice and other consults across UMMC. These patients also wait extensively to be transferred to an inpatient psychiatry facility similar to the pediatric ED patients.

### **UMMS Affiliate Hospital Patient Demand**

Within the defined four county service area, UMMS has two other affiliated hospitals that would benefit from expanded access to inpatient adolescent psychiatry services.

UM BWMC has the second busiest emergency room in the State of Maryland. In FY2018, UM BWMC treated 469 adolescent patients with psychiatric needs. Of these, 163 patients were transferred to inpatient psychiatric facilities. These patients waited to be transferred to an inpatient psychiatric facility on average more than 12 hours. (*Source: Director of Behavioral Health Services at UM BWMC*)

UM SJMC treated 97 adolescent patients with psychiatric needs in its emergency department during FY2018. Of these, 37 patients were transferred to inpatient psychiatric

facilities. These patients waited to be transferred to an inpatient psychiatric facility on average more than 24 hours. (*Source: Transformation Coordinator at UM SJMC*)

UMMC estimates that 25% of the adolescent psychiatric volumes transferred to an inpatient facility from UM BWMC (41 patients) and UM SJMC (nine patients) would be redirected to UMMC's new proposed inpatient service. This percentage is similar to the current transfer rate of pediatric patients from these two hospitals to UMMC.

### **Factors Contributing to Increasing Demand Over the Next Five Years**

There is increasing demand among the adolescent population that will exacerbate the shortage of inpatient beds in the State of Maryland and Nationwide.

- Adolescent suicide rates are increasing. According to the Center for Disease Control and Prevention (“CDC”), the suicide rate for males age 15-19 increased 31% from 2007 to 2015. The rate for females doubled from 2007 to 2015 and was the highest since tracking began in 1975. (<https://www.cdc.gov/mmwr/volumes/66/wr/mm6630a6.htm>)
- Depression and anxiety are on the rise due to bullying. According to the CDC, 18.2% of Maryland high school students have been bullied on school property and 14.1% have been bullied through electronic means. (<https://nccd.cdc.gov/YouthOnline/App/Results.aspx?LID=MD>)
- Exposure to violence. According to the Baltimore City Health Department, 30 percent of children in Baltimore City have Adverse Childhood Experience (ACE) scores of 2 or more, meaning that they have experienced more than two incidences of events such as domestic violence, living with someone with an alcohol/drug problem, the death of a parent, or being a victim/witness of neighborhood violence. (<https://health.baltimorecity.gov/state-health-baltimore-winter-2016/state-health-baltimore-white-paper-2017>)
- Identification of social/emotional and mental health needs in the school system is increasing the demand for adolescent mental health services. While at the same time, the stigma of seeking care is decreasing. As the stigma of mental illness decreases, more people will seek care for themselves and family members.

### **UMMC: Projected Bed Need for Adolescent Inpatient Psychiatry Services**

Based on the market and program assumptions above, UMMC projects a total of 271 patients in Year 1 and 280 admissions by year 5. Approximately 48% of these admissions would originate from UMMC’s PED.

**Table 6  
Projected 5 Year Adolescent Psychiatry Admissions**

	Year 1	Year 2	Year 3	Year 4	Year 5
UMMC Pediatric ED Referrals	130	131	132	133	134
UMMC Referrals from IP Pediatric General Acute Unit	20	20	20	20	21
UM Direct Admits from Outpatient Clinics	41	41	41	42	42
Admits from UMMS Affiliate Hospitals	50	50	51	51	52
Unmet Need in Market	30	30	31	31	31
<b>TOTAL DISCHARGES</b>	<b>271</b>	<b>272</b>	<b>275</b>	<b>277</b>	<b>280</b>

UMMC projects that the average length of stay for the proposed adolescent psychiatry unit will be 8.6 days. This is based on the average length of stay of the top two acute care hospital programs in the State of Maryland (Johns Hopkins Hospital and MedStar Franklin Square Medical Center) over the past two years for adolescent psychiatric patients. Based on the average length of stay and an occupancy rate of 85%, UMMC projects a bed need of eight beds by year 5. This bed capacity would accommodate current and projected patients who seek care at UMMC through UMMC’s PED, outpatient clinics and a portion of our affiliate hospitals. These beds would be co-located with UMMC’s child psychiatry beds for efficiency.

**Table 7**  
**Total UMMC Bed Need for Proposed Inpatient Adolescent Psychiatry Unit**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Total Discharges	271	272	275	277	280
ALOS	8.6	8.6	8.6	8.6	8.6
Total Days	2,331	2,339	2,365	2,382	2,408
Occupancy Rate Assumption	85%	85%	85%	85%	85%
<b>Bed Need at UMMC</b>	<b>7.51</b>	<b>7.54</b>	<b>7.62</b>	<b>7.68</b>	<b>7.76</b>

In summary, there is a need for additional inpatient adolescent psychiatry beds in the four county service area of Anne Arundel County, Baltimore City, Baltimore County and Howard County. This is evident in the psychiatric volume growth and the extensive wait times experienced by UMMC's patients that present in UMMC's PED as well as in emergency departments at UM BWMC and UM SJMC. There is projected growth in adolescent inpatient psychiatric volumes in the service area and an increase in the length of stay of these patients, indicating the acuity of the patients is rising. There is evidence that the growth of these volumes will continue as the prevalence of suicide, depression, anxiety, and bullying for this population increase according to the CDC, and children are being exposed to more violence according to the Baltimore City Health Department. While it is a positive trend that the stigma of mental illness is decreasing and the social awareness of the disease is rising, this too creates more demand as people are more comfortable seeking treatment for themselves and their family members. As evident in the impact analysis, there will not be a significant effect on the volumes of other providers of adolescent inpatient psychiatry in Maryland. A new eight bed inpatient adolescent psychiatry unit at UMMC will improve the timeliness, quality, and coordination of care for adolescent patients in the service area.

**Table 8**  
**Impact to Existing Inpatient Adolescent Psychiatry Programs**

	FY2018 Total Adolescent Psychiatric Discharges*	Percent Impact	Year 1 Shift to UMMC	Year 2 Shift to UMMC	Year 3 Shift to UMMC	Year 4 Shift to UMMC	Year 5 Shift to UMMC
Sheppard Pratt Health System	3,315	3%	83	83	84	85	85
Psychiatric Institute of Washington	NA	NA	102	103	104	105	106
MedStar Franklin Square	336	11%	35	35	35	35	36
Johns Hopkins Hospital	489	0%	1	1	1	1	1
All other facilities	684	3%	20	20	20	20	20
MONTGOMERY GENERAL	191	0%					
CALVERT MEMORIAL	176	0%					
CARROLL COUNTY	127	0%					
SUBURBAN	111	0%					
ST. MARYS	39	0%					
UMMC	27	0%					
UMMC MIDTOWN	5	0%					
UM PRINCE GEORGES	4	0%					
ANNE ARUNDEL	3	0%					
UM SMC at DORCHESTER	1	0%					
SINAI	1	0%					
<b>TOTAL</b>	<b>4,824</b>		<b>241</b>	<b>242</b>	<b>244</b>	<b>246</b>	<b>248</b>

\*annualized based on 9 months, source: HSCRC discharge database

Based on the above impact analysis, the proposed eight bed inpatient adolescent psychiatry unit will not significantly impact existing providers' volumes enough to compromise the financial viability of the existing programs.

The proposed project will have minimal financial impact on existing providers and the Maryland's health care delivery system. UMMC is not requesting an increase to its Global Budgeted Revenue (GBR) associated with the addition of adolescent psychiatric inpatient beds. UMMC will charge its approved unit rates for services provided to adolescent psychiatric inpatients. As a result, UMMC's total charges per unit of service provided should decrease.



(iii)

**10.24.01.08G(3)(b). NEED.**

***The Commission shall consider the applicable need analysis in the State Health Plan. If no State Health Plan need analysis is applicable, the Commission shall consider whether the applicant has demonstrated unmet needs of the population to be served, and established that the proposed project meets those needs.***

**INSTRUCTIONS:** Please identify the need that will be addressed by the proposed project, quantifying the need, to the extent possible, for each facility and service capacity proposed for development, relocation, or renovation in the project. The analysis of need for the project should be population-based, applying utilization rates based on historic trends and expected future changes to those trends. This need analysis should be aimed at demonstrating needs of the population served or to be served by the hospital. The existing and/or intended service area population of the applicant should be clearly defined.

Fully address the way in which the proposed project is consistent with each applicable need standard or need projection methodology in the State Health Plan.

If the project involves modernization of an existing facility through renovation and/or expansion, provide a detailed explanation of why such modernization is needed by the service area population of the hospital. Identify and discuss relevant building or life safety code issues, age of physical plant issues, or standard of care issues that support the need for the proposed modernization.

Please assure that all sources of information used in the need analysis are identified. Fully explain all assumptions made in the need analysis with respect to demand for services, the projected utilization rate(s), the relevant population considered in the analysis, and the service capacity of buildings and equipment included in the project, with information that supports the validity of these assumptions.

Explain how the applicant considered the unmet needs of the population to be served in arriving at a determination that the proposed project is needed. Detail the applicant's consideration of the provision of services in non-hospital settings and/or through population-based health activities in determining the need for the project.

Complete the Statistical Projections (Tables F and I, as applicable) worksheets in the CON Table Package, as required. Instructions are provided in the cover sheet of the CON package.

---

[Applicant Response](#)

The purpose of the proposed project is to increase the availability of inpatient psychiatric services to the adolescent population (ages 13 through 17) in the Central Maryland region. There is significant unmet need in this region, and UMMC seeks to add eight adolescent psychiatry beds to

meet a portion of this need. The analysis below relies upon data that include use-rate and population demand and unmet need at UMMC and two University of Maryland Medical System (“UMMS”) affiliate hospitals, University of Maryland Baltimore Washington Medical Center (“UM BMMC”) and University of Maryland St. Joseph Medical Center (“UM SJMC”). The analysis also considers additional unmet demand in the service area.

Based on the analysis, there is sufficient need to support the proposed program and approval of this application will not have a significant adverse effect on existing programs in the State of Maryland.

### **Service Area Definition**

UMMC’s service area for the proposed inpatient adolescent psychiatry service is Anne Arundel County, Baltimore City, Baltimore County and Howard County, depicted in Figure 1 below. This service area is based on the top counties for 80% of UMMC’s FY2018 patient origin for the existing child psychiatry unit.

**Figure 41**  
**Map of Proposed Inpatient Adolescent Psychiatry Service Area**



## Adolescent Population Estimates

The adolescent population is defined as age 13 years through age 17 years. COMAR 10.24.07 (Definitions). Population estimates for the service area were obtained by Claritas for calendar years 2016 through 2019 and five year projections through 2024. Within the service area, there are approximately 148,567 adolescents. Between 2019 and 2024, Claritas projects a 4% growth within the service area. Baltimore City has the fastest growing adolescent population over the next five years with projected growth of 6.2% followed by Anne Arundel County with projected growth of 5.3%.

**Table 33**  
**Adolescent Population Estimates for Proposed Service Area**  
**2016--2024**

	2016	2017	2018	2019	2020	2021	2022	2023	2024	% Change 2019- 2024
<i>Anne Arundel</i>	35,73	35,61	35,40	35,85	36,23	36,62	37,00	37,38	37,769	5.3%
<i>Baltimore City</i>	34,36	34,15	33,27	33,04	33,46	33,87	34,28	34,70	35,113	6.2%
<i>Baltimore County</i>	50,28	50,32	50,03	50,50	50,84	51,18	51,51	51,85	52,197	3.4%
<i>Howard County</i>	23,19	23,22	23,21	23,50	23,50	23,49	23,49	23,48	23,488	-0.1%
<b>4-County Total</b>	<b>143,580</b>	<b>143,318</b>	<b>141,921</b>	<b>142,913</b>	<b>144,044</b>	<b>145,174</b>	<b>146,304</b>	<b>147,434</b>	<b>148,567</b>	<b>4.0%</b>

Source: Claritas, July 2018

## Adolescent Psychiatric Projected Discharges in the Four County Service Area Based on Use Rate **Table 4**

**Table 4**  
**Projected Adolescent Psychiatric Service Area Discharges**  
**2016--2024**

	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Population</b>	143,580	143,318	141,921	142,913	144,044	145,174	146,304	147,434	148,567
<b>Use Rate*</b>	9.6416.9	9.7416.3	9.7415.	9.7415.4	9.7415.4	9.7415.49	9.7415.4	9.7415.49	9.7415.4
<b>Discharges</b>	1,3982.	1,3962.3	1,3822.	1,3922.2	1,4032.2	1,4142.24	1,4252.2	1,4362.28	1,4472.3

\*Use Rate from Sheppard Pratt CON submitted 4/10/15 and total discharges calculated based on that use rate multiplied by service area population

\*Use Rate calculated based on total discharges (obtained from HSCRC) per 1,000 population

Due to the delay in receiving the private psychiatric data from the HSCRC, UMMC has used the statewide use rate provided in the Sheppard Pratt CON application-

~~submitted on 4/10/2015 for the establishment of Sheppard Pratt Hospital at Elkridge. UMMC applied this use rate to the service area population to project total adolescent psychiatry discharges each year through 2024. The use rate was calculated using actual total adolescent (age 13-17) discharges obtained from the HSCRC for 2016, 2017 and 2018 9 months annualized. While this shows a declining trend, the use rate was held constant in years 2019-2024 making the assumptions that cases that are currently being transferred to facilities outside the state of Maryland would, with the increased beds in the market, remain in Maryland for treatment as well as assumptions around the unmet market demand outlined later in this application. Since the use rate is held constant, the growth mirrors the population growth between 2019 and 2024 of four percent. UMMC expects to receive more recent data from the HSCRC by August 10, 2018 and will submit updated use rates within a reasonable amount of time after receipt.~~

### Adolescent Psychiatric Inpatient Discharges for Four County Service Area

Service area inpatient discharges for adolescent psychiatry increased by 5.0 % between fiscal year 2016 to fiscal year 2018. At the same time, average length of stay increased by 6.1%, compounding the need for more inpatient beds to treat adolescent psychiatry patients.

**Table 55**  
**Adolescent Psychiatry Service Area Discharges by Acute Care Hospital**  
**FY2016--FY2018**  
~~Acute Care Hospitals (1)~~

	FY2016	FY2017	FY2018
JOHNS HOPKINS	350	306	379
FRANKLIN SQUARE	311	268	277
MONTGOMERY GENERAL	19	22	29
CARROLL COUNTY	23	27	23
SUBURBAN	3	4	17
UMMC	8	10	13
CALVERT MEMORIAL	7	11	11
UMMC MIDTOWN			5
ANNE ARUNDEL			3
HOPKINS BAYVIEW		2	-
UM SJMC		3	-
ST. MARYS			-
SINAI		1	-
<b>Total Discharges Acute Care Hospitals</b>	<b>721</b>	<b>654</b>	<b>757</b>
<b>Total Days Acute Care Hospitals</b>	<b>5,529</b>	<b>5,359</b>	<b>6,168</b>
<b>Average Length of Stay Acute Care Hospitals</b>	<b>7.67</b>	<b>8.19</b>	<b>8.14</b>
Adventist Behavioral Health	52	64	49
Brook Lane	=	=	19

Sheppard & Enoch Pratt Hospital	1,659	1,618	1,373
<del>Grand Total Discharges Psych Specialty Hospitals</del>	<del>7211,71</del>	<del>6541,68</del>	<del>7571,44</del>
<del>Grand Total Days GRAND TOTAL DISCHARGES</del>	<del>5,5292,4</del>	<del>5,3592,3</del>	<del>6,1682,1</del>
<del>Average Length of Stay</del>	<del>7.67</del>	<del>8.19</del>	<del>8.14</del>

~~(Note: 1) The above table reflects the total number of discharges, days, and average length of stay for patients who were discharged from the private psychiatric acute care unit to the inpatient psychiatric facility, including those who were transferred to the inpatient psychiatric facility from the private psychiatric acute care unit.~~

### **UMMC Pediatric Emergency Department Patient Demand**

In fiscal year 2017, UMMC’s pediatric emergency department (“PED”) treated 585 patients who had either a primary or secondary psychiatric diagnosis. Of these patients treated in the PED, 118 patients were transferred to an inpatient psychiatric facility, six of whom required admission to an inpatient pediatric general acute bed at UMMC until an inpatient psychiatric bed could be secured. An additional 30 patients were not transferred due to delay in transfer to another hospital. These patients waited for a bed in the PED for two days or greater, and would have benefited from an inpatient bed if one could have been secured. Instead, these patients were stabilized in the PED until it was medically safe to discharge them with outpatient psychiatric support services. Thus, a total of 148 patients (118 + 30) were eligible for inpatient care in FY17. The length of stay for these 148 adolescent psychiatric PED patients ranged from one to seven days with 67% greater than 24 hours and 35% greater 48 hours.

In fiscal year 2018, UMMC’s PED treated a total of 873 patients who had a primary or secondary psychiatric diagnosis, a 49% increase from fiscal year 2017. UMMC transferred 70 of these patients to an inpatient psychiatric facility, six of whom required admission to a pediatric general acute bed until an inpatient psychiatric bed could be secured. The 70 patients transferred to an inpatient facility waited from one to nine days with an average wait time of 33 hours to be transferred. Of the patients who were not discharged to an inpatient psychiatric facility, 45 patients had a length of stay between two and 11 days in the PED and would have benefited from an inpatient psychiatric bed if one could have been secured. Instead, these patients were stabilized in the PED until it was medically safe to discharge them with outpatient psychiatric support services. Thus, a total of at least 115 patients (70 + 45) were eligible for inpatient care in FY18. The length of stay for PED patients needing an inpatient psychiatric bed ranged from 1 to 11 days with 67% having greater than 24 hours and 35% greater than 48 hours.

### **Referrals from Pediatric General Acute Unit**

In fiscal year 2018 there were 20 additional patients transferred to inpatient psychiatric facilities from the pediatric general acute care floor following treatment of medical conditions. These patients also waited extensively to be transferred to an inpatient psychiatry facility similar to the PED patients.

### **Outpatient Adolescent Care Direct Admission**

The University of Maryland School of Medicine faculty within the Department of Psychiatry and Division of Child & Adolescent Psychiatry currently provide outpatient services to adolescents.

Approximately 40 patients per year are admitted through direct admissions from their practice and other consults across UMMC. These patients also wait extensively to be transferred to an inpatient psychiatry facility similar to the pediatric ED patients.

### **UMMS Affiliate Hospital Patient Demand**

Within the defined four county service area, UMMS has two other affiliated hospitals that would benefit from expanded access to inpatient adolescent psychiatry services.

UM BWMC has the second busiest emergency room in the State of Maryland. In FY2018, UM BWMC treated 469 adolescent patients with psychiatric needs. Of these, 163 patients were transferred to inpatient psychiatric facilities. These patients waited to be transferred to an inpatient psychiatric facility on average more than 12 hours. (Source: *Director of Behavioral Health Services at UM BWMC*)

UM SJMC treated 97 adolescent patients with psychiatric needs in its emergency department during FY2018. Of these, 37 patients were transferred to inpatient psychiatric facilities. These patients waited to be transferred to an inpatient psychiatric facility on average more than 24 hours. (Source: *Transformation Coordinator at UM SJMC*)

UMMC estimates that 25% of the adolescent psychiatric volumes transferred to an inpatient facility from UM BWMC (41 patients) and UM SJMC (nine patients) would be redirected to UMMC's new proposed inpatient service. This percentage is similar to the current transfer rate of pediatric patients from these two hospitals to UMMC.

### **Factors Contributing to Increasing Demand Over the Next Five Years**

There is increasing demand among the adolescent population that will exacerbate the shortage of inpatient beds in the State of Maryland and Nationwide.



- Adolescent suicide rates are increasing. According to the Center for Disease Control and Prevention (“CDC”), the suicide rate for males age 15-19 increased 31% from 2007 to 2015. The rate for females doubled from 2007 to 2015 and was the highest since tracking began in 1975.  
(<https://www.cdc.gov/mmwr/volumes/66/wr/mm6630a6.htm>(<https://www.cdc.gov/mmwr/volumes/66/wr/mm6630a6.htm>)
- Depression and anxiety are on the rise due to bullying. According to the CDC, 18.2% of Maryland high school students have been bullied on school property and 14.1% have been bullied through electronic means.  
(<https://nccd.cdc.gov/YouthOnline/App/Results.aspx?LID=MD>(<https://nccd.cdc.gov/YouthOnline/App/Results.aspx?LID=MD>)
- Exposure to violence. According to the Baltimore City Health Department, 30 percent of children in Baltimore City have Adverse Childhood Experience (ACE) scores of 2 or more, meaning that they have experienced more than two incidences of events such as domestic violence, living with someone with an alcohol/drug problem, the death of a parent, or being a victim/witness of neighborhood violence.  
(<https://health.baltimorecity.gov/state-health-baltimore-winter-2016/state-health-baltimore-white-paper-2017>)(<https://health.baltimorecity.gov/state-health-baltimore-winter-2016/state-health-baltimore-white-paper-2017>)
- Identification of social/emotional and mental health needs in the school system is increasing the demand for adolescent mental health services. While at the same time, the stigma of seeking care is decreasing. As the stigma of mental illness decreases, more people will seek care for themselves and family members.

### **UMMC: Projected Bed Need for Adolescent Inpatient Psychiatry Services**

Based on the market and program assumptions above, UMMC projects a total of 271 patients in Year 1 and 280 admissions by year 5. Approximately 48% of these admissions would originate from UMMC’s PED.

**Table 66**  
**Projected 5 Year Adolescent Psychiatry Admissions**

	Year 1	Year 2	Year 3	Year 4	Year 5
UMMC Pediatric ED Referrals	130	131	132	133	134
UMMC Referrals from IP Pediatric General Acute Unit	20	20	20	20	21
UM Direct Admits from Outpatient Clinics	41	41	41	42	42
Admits from UMMS Affiliate Hospitals	50	50	51	51	52
Unmet Need in Market	30	30	31	31	31
<b>TOTAL DISCHARGES</b>	<b>271</b>	<b>272</b>	<b>275</b>	<b>277</b>	<b>280</b>

UMMC projects that the average length of stay for the proposed adolescent psychiatry unit will be 8.6 days. This is based on the average length of stay of the top two acute care hospital programs in the State of Maryland (Johns Hopkins Hospital and MedStar Franklin Square Medical Center) over the past two years for adolescent psychiatric patients. Based on the average length of stay and an occupancy rate of 85%, UMMC projects a bed need of eight beds by year 5. This bed capacity would accommodate current and projected patients who seek care at UMMC through

UMMC's PED, outpatient clinics and a portion of our affiliate hospitals. These beds would be co-located with UMMC's child psychiatry beds for efficiency.

**Table 77**  
**Total UMMC Bed Need for Proposed Inpatient Adolescent Psychiatry Unit**

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Discharges	271	272	275	277	280
ALOS	8.6	8.6	8.6	8.6	8.6
Total Days	2,331	2,339	2,365	2,382	2,408
Occupancy Rate Assumption	85%	85%	85%	85%	85%
<b>Bed Need at UMMC</b>	<b>7.51</b>	<b>7.54</b>	<b>7.62</b>	<b>7.68</b>	<b>7.76</b>

In summary, there is a need for additional inpatient adolescent psychiatry beds in the four county service area of Anne Arundel County, Baltimore City, Baltimore County and Howard County. This is evident in the psychiatric volume growth and the extensive wait times experienced by UMMC's patients that present in UMMC's PED as well as in emergency departments at UM BWMC and UM SJMC. There is projected growth in adolescent inpatient psychiatric volumes in the service area and an increase in the length of stay of these patients, indicating the acuity of the patients is rising. There is evidence that the growth of these volumes will continue as the prevalence of suicide, depression, anxiety, and bullying for this population increase according to the CDC, and children are being exposed to more violence according to the Baltimore City Health Department. While it is a positive trend that the stigma of mental illness is decreasing and the social awareness of the disease is rising, this too creates more demand as people are more comfortable seeking treatment for themselves and their family members. As evident in the impact analysis, there will not be a significant effect on the volumes of other providers of adolescent inpatient psychiatry in Maryland. A new eight bed inpatient adolescent psychiatry unit at UMMC will improve the timeliness, quality, and coordination of care for adolescent patients in the service area.

~~In response to the need for modernization of an existing facility, please see the discussion of patient safety in the response to COMAR § 10.24.01.08G(3)(c), Availability of More Cost-Effective Alternatives, below.~~

**Table 8**  
**Impact to Existing Inpatient Adolescent Psychiatry Programs**

	<u>FY2018 Total Adolescent Psychiatric Discharges*</u>	<u>Percent Impact</u>	<u>Year 1 Shift to UMMC</u>	<u>Year 2 Shift to UMMC</u>	<u>Year 3 Shift to UMMC</u>	<u>Year 4 Shift to UMMC</u>	<u>Year 5 Shift to UMMC</u>
<u>Sheppard Pratt Health System</u>	<u>3,315</u>	<u>3%</u>	<u>83</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>85</u>
<u>Psychiatric Institute of Washington</u>	<u>NA</u>	<u>NA</u>	<u>102</u>	<u>103</u>	<u>104</u>	<u>105</u>	<u>106</u>
<u>MedStar Franklin Square</u>	<u>336</u>	<u>11%</u>	<u>35</u>	<u>35</u>	<u>35</u>	<u>35</u>	<u>36</u>
<u>Johns Hopkins Hospital</u>	<u>489</u>	<u>0%</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>All other facilities</u>	<u>684</u>	<u>3%</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>MONTGOMERY GENERAL</u>	<u>191</u>	<u>0%</u>					
<u>CALVERT MEMORIAL</u>	<u>176</u>	<u>0%</u>					
<u>CARROLL COUNTY</u>	<u>127</u>	<u>0%</u>					
<u>SUBURBAN</u>	<u>111</u>	<u>0%</u>					
<u>ST. MARYS</u>	<u>39</u>	<u>0%</u>					
<u>UMMC</u>	<u>27</u>	<u>0%</u>					
<u>UMMC MIDTOWN</u>	<u>5</u>	<u>0%</u>					
<u>UM PRINCE GEORGES</u>	<u>4</u>	<u>0%</u>					
<u>ANNE ARUNDEL</u>	<u>3</u>	<u>0%</u>					
<u>UM SMC at DORCHESTER</u>	<u>1</u>	<u>0%</u>					
<u>SINAI</u>	<u>1</u>	<u>0%</u>					
<b><u>TOTAL</u></b>	<b><u>4,824</u></b>		<b><u>241</u></b>	<b><u>242</u></b>	<b><u>244</u></b>	<b><u>246</u></b>	<b><u>248</u></b>




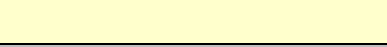

\*annualized based on 9 months, source: HSCRC discharge database

Based on the above impact analysis, the proposed eight bed inpatient adolescent psychiatry unit will not significantly impact existing providers' volumes enough to compromise the financial viability of the existing programs.

The proposed project will have minimal financial impact on existing providers and the Maryland's health care delivery system. UMMC is not requesting an increase to its Global Budgeted Revenue (GBR) associated with the addition of adolescent psychiatric inpatient beds. UMMC will charge its approved unit rates for services provided to adolescent psychiatric inpatients. As a result, UMMC's total charges per unit of service provided should decrease.

Document comparison by Workshare Compare on Wednesday, November 14, 2018 8:38:50 PM


Input:	
Document 1 ID	PowerDocs://DOCS/645846/1
Description	DOCS-#645846-v1-Revised_Need
Document 2 ID	PowerDocs://DOCS/645846/2
Description	DOCS-#645846-v2-Revised_Need
Rendering set	Standard

Legend:	
	<u>Insertion</u>
	<del>Deletion</del>
	<del>Moved from</del>
	<u>Moved to</u>
	Style change
	Format change
	<del>Moved deletion</del>
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	171
Deletions	63
Moved from	0
Moved to	0
Style change	0
Format changed	0
Total changes	234

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

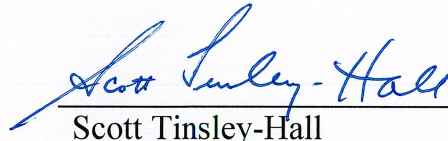
11/11/18  
Date

  
Dana Farrakhan  
Senior Vice-President, Strategy,  
Community & Business Development  
UMMC

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

11/15/2018

Date



Scott Tinsley-Hall  
Director, Strategic Planning  
UMMC