

**DIVISION OF HEALTH PLANNING
AND RESOURCE DEVELOPMENT
AUGUST 2013**

**CON REVIEW HG-RC-0613-008
BAPTIST MEMORIAL HOSPITAL- NORTH MISSISSIPPI, INC.
d/b/a BAPTIST MEMORIAL HOSPITAL-NORTH MISSISSIPPI
HOSPITAL INFUSION SERVICES ADDITION AT BAPTIST MEMORIAL
HOSPITAL OXFORD CANCER CENTER
CAPITAL EXPENDITURE: \$4,153,323
LOCATION: OXFORD, LAFAYETTE COUNTY, MISSISSIPPI**

STAFF ANALYSIS

I. PROJECT SUMMARY

A. Applicant Information

Baptist Memorial Hospital-North Mississippi, Inc. (“BMH-NMS, Inc.”), d/b/a Baptist Memorial Hospital-North Mississippi (“BMH-NMS” or the “Hospital”), is a not-for-profit corporation owned by Baptist Health Care Corporation, Memphis, Tennessee. The 217-bed Hospital is governed by nine officers and directors, is accredited by the Joint Commission, and is certified to participate in the Medicaid and Medicare programs.

The bed complement of BMH-NMS consists of 204 short-term acute care beds and 13 rehabilitation beds. The occupancy rates, average lengths of stay (ALOS), and the Medicaid utilization rates for BMH-NMS are as follows:

**Baptist Memorial Hospital – North Mississippi
Utilization Data**

Fiscal Year	Occupancy Rate (%)	ALOS (Days)	Medicaid Utilization Rate (%)
2010	51.95	4.58	12.21
2011	48.81	4.79	12.12
2012	45.66	4.66	13.09

Source: Division of Health Facilities Licensure and Certification, MSDH.

B. Project Description

Baptist Memorial Hospital-North Mississippi requests Certificate of Need (CON) authority for the addition of hospital infusion services at Baptist Memorial Hospital Oxford Cancer Center. The applicant submits that BMH-NMS has experienced significant growth in oncology services and more space is needed for chemotherapy administration. To meet current and future needs, the Hospital proposes to improve, relocate, and replace its infusion services department that is currently located in two locations. One existing area is located inside the main hospital facility on South Lamar Boulevard and the other existing area is located at the hospital's Cancer Center on Azalea Drive. The proposed new department will be constructed adjacent to the existing Cancer Center and will provide approximately 30 treatment stations and infusion support areas such as the treatment mixing room. The treatment stations will be configured in six pods with five stations each. The existing main hospital area will continue to be used for other types of existing outpatient services and the area currently dedicated for infusions and injections at the Azalea Drive building will be converted for physicians' medical office services.

The hospital infusion services addition project will consist of approximately 12,000 square feet of new construction and 2,300 square feet of renovation where the new construction adjoins the existing building. The new facility includes reception, registration and waiting areas, exam and treatment rooms, staff work areas and separate medication preparation areas with ventilation hoods for mixing oncology chemotherapy and non-chemotherapy medications. No new beds will be added as a result of this project.

The applicant states that the final objective of this project is to fulfill BMH-NMS' mission and vision for the citizens of Oxford, Lafayette County, and all other residents of the Hospital's service area through the development, construction and operation of a highly advanced, state-of-the-art infusion facility which is responsive to the community's immediate and long-term health care needs.

The applicant does not project need for additional staffing. However, the applicant states that the proposal continues existing services and highly trained professional staff will continue providing the services.

The total proposed capital expenditure is \$4,153,323, which includes \$2,727,546 for new construction and \$100,000 for renovation (See Expenditure Summary for complete percentage breakdown of capital expenditure). The applicant projects that the capital expenditure will be obligated by October 2013 and the project will be complete by June 2014.

The applicant indicates the proposed capital expenditure will be funded from the hospital's accumulated cash reserves.

The MSDH Division of Health Facilities Licensure and Certification has approved the site for the Hospital Infusion Services Addition, as proposed. The applicant states that services requiring approval by the Division of Radiological Health are not involved in this project.

II. TYPE OF REVIEW REQUIRED

This project is reviewed in accordance with Section 41-7-173, 41-7-191 1(j), and 41-7-193 of the Mississippi Code of 1972, Annotated, as amended, and duly adopted rules, procedures, plans, criteria, and standards of the Mississippi State Department of Health.

In accordance with Section 41-7-197(2) of the Mississippi Code 1972, Annotated, as amended, any affected person may request a public hearing on this project within 20 days of publication of the staff analysis. The opportunity to request a hearing expires on September 4, 2013.

III. CONFORMANCE WITH THE STATE HEALTH PLAN AND OTHER ADOPTED CRITERIA AND STANDARDS

A. State Health Plan (SHP)

The *FY2013 State Health Plan* contains criteria and standards which the applicant is required to meet before receiving CON authority for construction, renovation, and expansion of projects involving a capital expenditure in excess of \$2,000,000. This application is in substantial compliance with the applicable criteria stated in the *Plan as follows*:

SHP Criterion 1 - Need

Projects which do not involve the addition of any acute care beds.

The applicant submits that BMH-NMS has experienced significant growth in oncology services and additional space is needed for chemotherapy infusion treatments. Other ambulatory patients who are currently receiving infusion/injections at the main hospital will also be served by the specially trained staff in the new facility. BMH-NMS cites Growth of Infusion Services, Improvement in Infusion Stations, Variation in Treatment Duration, and Treatment Capacity to Address Current and Future Needs among justification of need for this project.

Growth of Infusion Services. Based on a study released by the Moran Company on June 3, 2013, BMH-NMS determined that between 2005 and 2011, the relative number of chemotherapy administration procedures performed in hospital outpatient settings for Medicare Fee-for-Service (FFS) beneficiaries increased by more than 150%. The study indicates that the share of chemotherapy administration in the hospital outpatient setting increased from 13.5% in 2005 to 33.0% in 2011, relative to the physician clinic setting.

In addition to the patients moving from a physician's clinic to the hospital, the applicant states that chemotherapy workload is also increasing. The hospital uses a system of Relative Value Units (RVUs) as measures of resource intensities. A regression analysis of changes in chemotherapy procedure RVUs over a period of 19 months indicates an increase of approximately 22 RVUs per month.

Additionally, the applicant acknowledges that moving the outpatient infusions/injections from the main hospital campus created need for additional infusion stations. The applicant states that based on an analysis of activity, an average of approximately 10 patients per day, in addition to chemotherapy patients will be served.

Improvement in Infusion Stations. The applicant states that because injections may require a private environment for patient modesty, the need for patient privacy is demonstrated by patients receiving injections as well as chemotherapy. Five stations in the proposed infusion area will be enclosed by walls and a door for both visual and auditory privacy.

The applicant submits that all of the proposed infusion stations will meet or exceed the American Institute of Architects (AIA) minimum standard of 80 square feet per treatment station.

Variation in Treatment Duration. According to the applicant, another factor adding to the need for more stations is the variation in the duration of infusion treatments. The applicant states that depending on patient scheduling, every chair in the existing area can be in simultaneous use at various times throughout the day.

The applicant references a study published in the January 2007 edition of the Journal of oncology Practice, which showed that the number of patients per chair per working day ranged from 0.6 at the 25th percentile to 1.6 at the 75th percentile, with a mean of 1.3 patients.

Another study published in the 2011 Oncology Roundtable Staff Benchmarking Survey and published by the Advisory Board Company reports that the median number of patients per day per chair in 39 community hospitals was 1.6 patients. The Median length of infusion in 17 community hospitals was 3.0 hours. In 16 community hospitals, the median percentages of patients receiving specified treatments were:

Injections Only	10%
Single Drug Infusion	30%
Combination Drug Infusion	33%
Transfusions	18%
Hydration	11%

According to the applicant, the same Advisory Board Company Survey indicated that 36 participating Community hospitals reported a median number of 23 patients per day. At the high end, 19 participating AMC institutions reported the median number to be 60 patients per day. For all types of institutions, the survey indicated an average time of 34 minutes required from when the patient checks in to the infusion start time.

The applicant states that analysis of the patient data at BMH-NMS indicates that the average number of chemotherapy patients seen per day is 17.8. With the total number of chairs at 13, the number of patients per chair per day is approximately 1.37. That number, 1.37, appears to be between the mean and 75th percentile of the Benchmark referenced in the Journal of Oncology Practice Study. Also, 1.37 is below the Advisory Board Company study showing the median number at 1.6 patients per day per chair in Community hospitals.

Analysis of the BMN-NMS patients' chemotherapy infusion treatment times indicates an average of 155 minutes and mean of 150 minutes per treatment. Adding the mean preparation time of approximately 34 minutes, provided in the Advisory Board Benchmark, indicates a total average treatment chair time of 189 minutes, or 3 hrs 9 minutes, per BMH-NMS chemotherapy patient. This is comparable to the three hours reported by the Advisory Board.

Treatment Capacity to Address Current and Future Needs. BMH-NMS states that analysis of daily volumes at the hospital identified a minimum of 14 and a maximum of 20 chemotherapy patients per day. Using BMH-NMS average of 1.37 patients per treatment station per day with 20 patients, the applicant determined a need for 15 chairs ($20 \text{ patients} / 1.37 \text{ hr per chair} = \text{a need for access to } 14.6 \text{ or } 15 \text{ (rounded) treatment stations}$). The applicant proposes to construct six (6) pods of 5 (5) treatment stations for a total new capacity of 30 treatment stations. BMH-NMS will initially use three (3) pods to provide 15 stations for chemotherapy patients immediately.

Initially, the center will be staffed to operate four (4) pods with five (5) stations each for a total of 20 treatment stations. As the need increases, stations will be staffed to accommodate patients and families and to make the environment pleasant and productive for the patients and professional staff.

According to the applicant, the Chemotherapy Operations Planning and Scheduling study projects the demand for oncology services to increase from 41 million in 2005

to 61 million in 2020. This projected increase is due to the aging population, the age-sensitive nature of cancer, and the increase in cancer survivors. BMH-NMS submits that for Lafayette County, data published by the Office of Policy Research and Planning, Mississippi Institution of Higher Learning indicates that the population aged 65 and above is increasing at the rate of 16% (rounded) from 2015 to 2020 – an increase of more than 3% annually. The following table depicts the increase in population 65+ for Lafayette County from 2015 to 2025.

Lafayette County 65+ Population

Year	Total	Percentage Change	Per Year
2015	6123	15.80%	3.20%
2020	7272	13.13	2.60%
2025	8371		

Since the 65+ population cohort is the primary age group for cancer infusion therapy, the applicant states it used a conservative estimated increase in utilization for the financial analysis in this application of 2% per year.

SHP Criterion 5 – Charity/Indigent Care

The applicant submits that BMH-NMS currently provides in excess of \$16 million in indigent and uncompensated care annually. It expects that the proposed addition will remain fully accessible to all residents of the service area, regardless of ability to pay. BMH-NMS affirmed that it will continue to provide a reasonable amount of indigent/charity care to the residents of its service area. The following table is a breakdown of historical and projected gross patient revenue provided or to be provided to medically indigent/charity patients.

	Medically Indigent/Charity Care (\$)	Medically Indigent//Charity Care (%)
Fiscal Year 2011	\$16,022,915	4.06%
Fiscal Year 2012	\$16,437,049	3.72%
Projected Year 1	\$24,122,337	4.46%
Projected Year 2	\$26,144,092	4.52%

SHP Criterion 6 – Reasonableness of Cost

The applicant demonstrated that the cost per square foot is reasonable in comparison with similar projects.

SHP Criterion 7 – Floor Area and Space Requirements

BMH-NMS states that the building is designed in compliance with all state and local building codes with national standards, including the American Institute of Architects (AIA) guidelines. The guidelines include standards for the minimum area of 80 square feet for a treatment station. The facility is consistent with the size and scope of comparable hospital projects.

SHP Criterion 8 – Renovation versus Replacement

According to **RS Means Building Construction Cost Data, 2013 Edition**, the average cost per bed for 2013 is \$228,000. Therefore, the cost to replace the 217-bed facility would be approximately \$49,476,000. Based on this estimate, the cost of this project is approximately 8% of the cost to replace the facility and is well below the 85% stated in this criterion.

B. General Review (GR) Criteria

Chapter 8 of the *Mississippi Certificate of Need Review Manual, Revised September 1, 2011*; addresses general criteria by which all CON applications are reviewed. This application is in substantial compliance with general review criteria contained in the manual.

GR Criterion 1- Consistency with the *State Health Plan*

The project is in substantial compliance with applicable criteria, standards, and policies of the *FY 2013 Mississippi State Health Plan*.

GR Criterion 2 – Long Range Plan

The applicant states that the vision of BMH-NMS and its parent corporation, Baptist Memorial Health Care Corporation, is: “To transform the delivery of health care through partnering with patients, families, physicians, care providers, employers and payers; and to offer safe, integrated, patient-focused, high quality, innovative cost-effective care”. Thus, Baptist’s long-range plan for MBH-NMS focuses on the establishment of a state-of-the-art, highly advanced and technologically superior health center in order to offer the residents of North Mississippi the highest level of patient care in an accessible setting. The applicant contends that the proposed addition to the cancer center is part of fulfilling that plan.

GR Criterion 3 – Availability of Alternatives

The applicant considered two other alternatives to the proposed project.

One option considered was to continue operating at its current locations. The applicant states that this would not provide the additional space for growth needs and would have continued to require staff to work in separate locations.

Another option considered was to renovate the existing facility. The applicant states that neither the existing main hospital building nor the current building on Azalea Drive has enough space available. Adding space at the existing hospital is not reasonable due to limitations presented in the application to relocate the hospital.

According to BMH-NMS, there is no alternative to the proposed project which is both more effective and less costly. The applicant believes that the Hospital Infusion Service Addition is the best solution to the need for more space to accommodate a growing service.

BMH-NMS' primary goal for the project is to offer the residents of the area served by the Hospital a medical facility that will be designed, constructed and operated in a manner which is more responsive to the community's long-term health care needs.

GR Criterion 4 - Economic Viability

The applicant asserts that the charges associated with this project are comparable to charges for similar services currently provided at other Baptist Memorial Hospital facilities. In addition, the applicant states that the charges were calculated based on the cost of providing the service and the experiences of the Baptist Memorial Health Care Corporation. This project will not result in a change to charges.

Based on the applicant's financial projections (Project ONLY), the operations of this project will result in a net income of \$92,080 the first year but a loss of \$86,178 the second year, and \$120,764 the third year after completion of the project. However, the Income Statement "With Project", indicates sufficient revenues to absorb the losses. The applicant states, the projections are based on the normal operations of BMN-NMS infusion services. In addition, the applicant contends that Baptist Memorial Health Care Corporation, the parent of BMHUC, has the financial resources needed to cover any unexpected expenses.

The application contained a letter from the hospital's financial analyst attesting to the financial feasibility of the project.

GR Criterion 5 - Need for the Project

- a. **Access by Population Served:** The applicant states that infusion therapy is primarily needed by the population 65+ that is growing at 3.2% per year in the primary service area. The patient population includes many medically underserved groups, including racial and ethnic minorities, Medicaid recipients, and the indigent. BMH-NMS states it currently provides more than \$16 million in uncompensated care on an annual basis.
- b. **Relocation of Services:** This application does not propose the relocation of services as addressed by this criterion.
- c. **Current and Projected Utilization of Like Facilities in the Area:** BMH-NMS,, located in General Hospital Service Area (GHSA) IV, is a regional referral center offering a variety of tertiary care services and has the highest average daily census of any hospital in GHSA IV. The applicant accredits this growth to the hospital's recent addition of an infusion service previously provided by physicians' clinic.
- d. **Probable Effect on Existing Facilities in the Area:** The project is not expected to have an adverse impact on other hospitals in GHSA IV.

GR Criterion 6 - Access to the Facility or Service

- a. **Medically Underserved Population:** BMH-NMS affirmed that Baptist Memorial Oxford Cancer Center is accessible to all residents of the service area, and does not exclude patients because of race, age, sex, ethnicity, or ability to pay.

In addition, all residents of the health planning service area, including Medicaid recipients, charity/medically indigent patients, racial and ethnic minorities, women, handicapped persons and the elderly have and will continue to have access to the services of the existing facility.
- b. **Performance in Meeting Federal Obligations:** The applicant submits that BMH-NMS has no obligations under federal regulations requiring uncompensated care, community service, or access by minority/handicapped persons.
- c. **Unmet Needs to be Served by Applicant:** The applicant submits that all patient groups, including the medically underserved will continue to benefit.

GR Criterion 7 - Information Requirement

The applicant affirmed that it will record and maintain the information required by this criterion and make it available to the Mississippi State Department of Health within 15 business days of request.

GR Criterion 8 - Relationship to Existing Health Care System

The applicant asserts that BMH-NMS serves as a regional referral center for GHSA IV. In that capacity, the specialty services at the Cancer Center of BMH-NMS fills a unique role in complementing the range of health services available in the existing health care system.

The Department received no letters of opposition concerning the proposed project.

GR Criterion 9 - Availability of Resources

The applicant states that this proposal continues existing services. Highly trained professional staff will continue providing the services.

GR Criterion 11 – Health Professional Training Programs: BMH-NMS states that that the expanded infusion center will be part of the network established for collaboration and discussion of clinical issues with other professionals throughout the Baptist Health Care System. The facility is involved as part of the hospital in programs for students.

GR Criterion 14 - Construction Projects

- a. **Cost Estimate:** The application contains a cost estimate prepared by Earl Swensson Associates, Inc., a professional corporation, licensed to do business in Mississippi.
- b. **Schematic Drawing:** The application contains a schematic drawing of the proposed project.
- c. **Space Allocations:** The applicant submits that space will conform to applicable local and state licensing standards.
- d. **New Construction Projects:** This project involves 12,000 square feet of new construction and 2,300 square feet of renovated space.

- e. **Cost per Square Foot:** The proposed project involves approximately 12,000 square feet of new space at an estimated cost of \$292.46 per square foot and 2,300 square feet of renovation at an estimated cost of \$74.74 per square foot (see Attachment 2).

GR Criterion 16 - Quality of Care

Baptist Memorial Hospital-North Mississippi is in compliance with the *Minimum Standards for the Operation of Mississippi Hospitals*, according to the Division of Health Facilities Licensure and Certification, MSDH. The facility is accredited by the Joint Commission and certified for participation in the Medicare and Medicaid programs.

IV. FINANCIAL FEASIBILITY

A. Capital Expenditure Summary

The total estimated capital expenditure is allocated as follows:

	Item	Cost (\$)	Percent (%) of Total
a.	Construction Cost -- New	\$2,727,546	65.67
b.	Construction Cost -- Renovation	100,000	2.41
c.	Capital Improvements	300,000	7.22
d.	Total Fixed Equipment Cost	0	0
e.	Total Non-Fixed Equipment Cost	224,866	5.41
f.	Land Cost	0	0
g.	Site Preparation Cost	166,820	4.02
h.	Fees (Architectural, Consultant, etc.)	197,588	4.76
i.	Contingency Reserve	249,503	6.01
j.	Legal and accounting fees	15,000	0.36
k.	Other	172,000	4.14
	Total Proposed Capital Expenditure	\$4,153,323	100.00

The above capital expenditure is proposed for construction and renovation of the Infusion Services Addition at Baptist Memorial Hospital Oxford Cancer Center. The proposed project involves approximately 12,000 square feet of new space at an estimated cost of \$292.46 per square foot and 2,300 square feet of renovation at an estimated cost of \$74.74 per square foot (see Attachment 2). The costs for hospital construction projects listed in *The Means Building Construction Cost Data, 2013 Edition*, ranged from \$196 to \$335 per square foot, with a median cost of \$246 per

square foot. The *Means Building Construction Cost Data* does not compare costs of renovation projects.

The application contains a letter signed by the Chief Financial Officer, attesting to the financial feasibility of the project.

B. Method of Financing

The applicant proposes to finance the proposed capital expenditure from accumulated cash reserves.

The applicant provided financial statements documenting the ability to fund the project.

C. Effect on Operating Cost

The Hospital's three-year projected operating statement is presented at Attachment 1.

D. Cost to Medicaid/Medicare

The applicant projects the cost to third party payors as follows:

Payor Mix	Utilization Percentage (%)	First Year Revenue (\$)
Medicare	56	\$ 2,917,495
Medicaid	10	520,981
Commercial	31	1,615,042
Self Pay	1	51,056
Charity Care	<u>2</u>	<u>105,238</u>
Total	100	\$ 5,209,812

V. RECOMMENDATIONS OF OTHER AFFECTED AGENCIES

The Division of Medicaid was provided a copy of this application for review and comment. Effective September 1, 2012, the Division of Medicaid changed the methodology by which outpatient services are reimbursed so that the cost incurred subsequent to that date will no longer affect outpatient payments. Also, effective October 1, 2012, the Division changed the methodology by which it reimburses inpatient services so that the cost incurred subsequent to that date will only affect cost outlier payments. The Division further states that the estimated increase in cost outlier payments resulting from this CON cannot be determined at this time. The Division of Medicaid opposes the project.

VI. CONCLUSION AND RECOMMENDATION

This project is in substantial compliance with the criteria and standards for construction, renovation, expansion, or capital improvements involving a capital expenditure in excess of \$2,000,000 contained in the *FY 2013 Mississippi State Health Plan*; the *Mississippi Certificate of Need Review Manual, 2010 Revision*; and duly adopted rules, procedures, and plans of the Mississippi State Department of Health.

The Division of Health Planning and Resource Development recommends approval of the application submitted by Baptist Memorial Hospital-North Mississippi for Hospital Infusion Services Addition.

Attachment 1

Baptist Memorial Hospital – North Mississippi Three-Year Operating Statement (Project Only)			
	Year 1	Year 2	Year 3
Revenue			
Patient Revenue:			
Inpatient	\$ -	\$ -	\$ -
Outpatient	5,209,812	5,470,303	5,743,818
Gross Patient Revenue	\$ 5,209,812	\$ 5,470,303	\$ 5,743,818
Charity Care	105,238	110,500	116,025
Deductions from Revenue	3,521,312	3,750,439	3,981,902
Net Patient Revenue	\$ 1,583,262	\$ 1,609,363	\$ 1,645,891
Expenses			
Operating Expenses:			
Salaries	\$ -	\$ -	\$ -
Benefits	-	-	-
Supplies	1,120,110	1,176,115	1,234,921
Services			
Lease			
Depreciation	136,631	273,262	273,262
Interest			
Other	234,442	246,164	258,472
Total Expenses	\$ 1,491,182	\$ 1,695,541	\$ 1,766,655
Net Income (Loss)	\$ 92,080	\$ (86,178)	\$ (120,764)
Assumptions			
Inpatient days*	NA	NA	NA
Outpatient days*	2,330	2,377	2,424
Procedures			
Charge per outpatient day	\$ 2,236	\$ 2,302	\$ 2,369
Charge per inpatient day	\$	\$	\$
Charge per procedure	\$	\$	\$
Cost per inpatient day	\$	\$	\$
Cost per outpatient day	\$640	\$713	\$729
Cost per procedure	\$	\$	\$

Attachment 2

Baptist Memorial Hospital – North Mississippi

<u>Cost Component</u>	<u>Total</u>	<u>New Construction</u>	<u>Renovation</u>
New Construction Cost	\$2,727,546	\$2,727,546	
Renovation Cost	\$100,000		\$100,000
Total Fixed Equipment Cost	\$0	\$239,935	
Total Non-Fixed Equipment Cost	\$224,866	\$0	
Capital Improvement	\$300,000	0	
Legal and Accounting Fees	\$15,000	0	
Land Cost	\$0	\$0	
Site Preparation Cost	\$166,820	\$166,820	
<i>Fees (Architectural, Consultant, etc.)</i>	\$197,588	\$165,816	\$31,772
<i>Contingency Reserve</i>	\$249,503	\$209,383	\$40,120
<i>Capitalized Interest</i>	\$0	\$0	\$0
<i>Other</i>	\$172,000		
Total Proposed Capital Expenditure	\$4,153,323	\$3,509,500	\$171,892
Square Footage	14,300	12,000	2,300
<i>Allocation Percent</i>		83.92%	16.08%
Costs Less Land, Non-Fixed Eqt. Cap. Improvement & Other	\$3,928,457	\$3,509,500	\$171,892
Cost Per Square Foot	\$274.72	\$292.46	\$74.74

Source: FY 2013 Mississippi State Health Plan