

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

**CON REVIEW HG-MME-0313-001  
BAPTIST MEMORIAL HOSPITAL-DESOTO  
ADDITION OF THERAPEUTIC RADIATION EQUIPMENT  
CAPITAL EXPENDITURE: \$0  
LOCATION: SOUTHAVEN, MISSISSIPPI DESOTO COUNTY**

**STAFF ANALYSIS**

**I. PROJECT SUMMARY**

**A. Applicant Information**

Baptist Memorial Hospital-Desoto (BMH-D) is a short-term, general acute care, public, not-for-profit hospital located in Southaven, DeSoto County, Mississippi. The hospital is presently governed by 12 corporate officers and directors. Baptist Memorial Health Care Corporation (BMHCC) is the parent organization of Baptist Memorial Hospital-Desoto. On March 1, 2013, the Secretary of State's Office certified that BMH-DeSoto, Inc. of DeSoto County is in good standing with the State of Mississippi. The facility participates in the Medicaid and Medicare programs, and insurance programs.

Baptist Memorial Hospital-Desoto consists of 339 licensed beds (309 acute and 30 rehabilitation beds).

The occupancy rates, average lengths of stay (ALOS), and the Medicaid utilization rates for the three most recent fiscal years for BMH-D (medical/surgical beds only) are shown below:

Baptist Memorial Hospital-Desoto Utilization Data			
FISCAL YEAR	OCCUPANCY RATE (%)	ALOS (DAYS)	MEDICAID UTILIZATION RATE (%)
<b>2010</b>	77.99	4.38	18.54
<b>2011</b>	81.93	4.45	15.31
<b>2012</b>	80.08	4.69	13.01

**Source:** Division of Health Facilities Licensure and Certification, Mississippi State Department of Health, (MSDH).

**B. Project Description**

Baptist Memorial Hospital-DeSoto requests CON authority to add therapeutic radiation equipment to its existing radiation services at the hospital. BMH-D proposed to increase the number of radiation therapy units that are used for regular service from 1 (linear accelerator 6-15 MV) to 2 (linear accelerator Varian Clinac 21 EX). The project will entail converting the existing backup unit at BMH-D to regular, full-time use.

The applicant asserts that the backup/overflow Varian Clinac 21 EX linear accelerator with a fair market value of \$90,000 is currently designated as backup equipment as referenced in the *Plan*. The applicant submits that based on the historical utilization of radiation therapy services at BMH-D, it is necessary to return the existing backup equipment to regular services. The applicant believes that this project will efficiently and effectively relieve the difficulty in making schedules for patients to received high quality radiation therapy services.

According to the applicant, the proposed project does not involve the establishment of new services, relocation of services, construction, renovation or a capital expenditure. BMH-D provides a three-year projected operating statement.

The applicant has registered the proposed linear accelerator (Varian Clinac 21 EX) with The Mississippi State Department of Health, Division of Radiological Health on November 13, 2012. The application contains a copy of the registration of sources regarding this project.

The applicant asserts that upon CON approval, the expected completion date for this project is approximate June 2013.

**II. TYPE OF REVIEW REQUIRED**

The Mississippi State Department of Health reviews applications to acquire or otherwise control linear accelerator equipment in accordance with Section 41-7-191, subparagraphs 1(f) Mississippi Code 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 of 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 July 15, 2013.

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

#### A. State Health Plan (SHP)

The *FY 2013 Mississippi State Health Plan* contains policy statements, criteria and standards which an applicant is required to meet before receiving Certificate of Need (“CON”) authority for the acquisition or otherwise control of therapeutic radiation equipment. This application is in substantial compliance with applicable criteria and standards.

#### **SHP Police Statement (PS) Regarding Acquisition or Otherwise Control of Therapeutic Radiation Equipment**

**SHP – Policy Statement 4 – Expansion of Existing Services:** This Policy Statement 4 provides that the Department may consider a CON application for the acquisition or otherwise control of an additional therapeutic radiation unit by any existing provider of such services when the applicant’s existing equipment has exceeded the expected level of patient service, i.e., 320 patient per year or 8,000 treatments per year for the two most recent consecutive years as reported in the facility’s “Renewal of Hospital Licenses and Annual Hospital Report.”

Baptist Memorial Hospital-DeSoto is the only current provider of therapeutic radiation services in GHSA 1. Based on the *FY 2013 Plan*, the hospital performed 7,152 treatments in 2010 and 7,187 treatments in 2011. Based on the Annual Survey of Hospitals for FY 2012 and Renewal of Hospital for Calendar Year 2013 and *FY 2012 Annual Hospital Report*, Baptist Memorial Hospital-DeSoto performed 10,161 treatments in 2012.

Based on the applicant’s additional updated utilization data regarding the proposed project, the data shows that for FY 2011, BMH-D’s existing radiation therapy equipment treated 327 patients, and for FY 2012, treated 445 patients. Additionally, for CY 2011, BMH-D’s existing radiation therapy equipment treated 359 patients, and for CY 2012 treated 438 patients. BMH-D asserts that the referenced patient data is somewhat different than the patient volumes provided in the Certificate of Need application, because the referenced patient data includes all the patients who received treatments of BMH-DeSoto’s radiation therapy equipment during the designated years. The applicant states that the information submitted in the CON application did not take into account patients who started their treatment before the commencement of a particular year, and continued to have radiation therapy treatments for that year. As a result, the patient volumes in the CON application were understated.

The applicant asserts that it provided the referenced patient data for both the last two fiscal years and calendar years, in order to comply under either scenario required of this SHP Policy Statement regarding the project.

BMH-D contends that the historical utilization of its existing linear accelerator has exceeded the expected level of patient services as required for this SHP Policy Statement regarding the project.

**SHP – Policy Statement 5 – Equipment Designated for Backup:** Policy Statement 5 states that therapeutic radiation equipment designated by an applicant as “backup” equipment shall not be counted in the inventory for CON purposes. Any treatments performed on the “backup” equipment shall be attributed to the primary equipment for CON purposes.

According to BMH-D, it currently attributes treatments performed on its backup linear accelerator to the primary linear accelerator unit in regular use. This project proposes to convert the existing backup unit at BMH-D to regular, full-time use.

**SHP – Policy Statement 7 – Use of Equipment or Provision of Service:** This Policy Statement 7 states that before the equipment or service can be utilized or provided, the applicant desiring to provide the therapeutic radiation equipment or service shall have CON approval or written evidence that the equipment or service is exempt for CON approval, as determined by the Mississippi State Department of Health.

Baptist Memorial Hospital-DeSoto requests CON approval to designate its current backup linear accelerator as an additional therapeutic radiation unit and to utilize it full-time.

**Certificate of Need Criteria and Standards for the Acquisition or Otherwise Control of Therapeutic Radiation Equipment**

**SHP Criterion 1–Need**

109.02 (1)(c) the applicant shall document a need for therapeutic radiation equipment by demonstrating that the applicant’s existing therapeutic equipment has exceeded the expected level of patients service, i.e., 320 patients per year/unit, or 8,000 treatments per year/unit for the most recent 24- month period.

According to the applicant, the need for the proposed project is demonstrated by the current utilization of its new patients that exceeds 320 for the previous consecutive 24 months. The applicant submits the following utilization data to justify the need for the proposed project:

For Fiscal Years (FY) 2011, BMH-D's current therapeutic radiation equipment provided 7,187 treatments for 284 new patients and others for a total of 299 patients. For FY 2012 the number of treatments provided on a fiscal year basis was 9,824 for 394 new patients and others for a total of 412 patients.

For Calendar Year (CY) 2011, BMH-D provided 7,799 treatments for 317 new patients and others for a total of 337. In CY 2012, BMH-D provided 9,513 treatments for 364 new patients and others for a total of 398.

For Rolling Year 1 (RY, recent 24 consecutive months), BMH-D provided 7,799 treatments for 328 new patients and others for a total of 358. In RY 2, BMH-D provided 9,513 treatments for 359 new patients and others for a total of 386.

According to the applicant, the following chart presents the county source of patient origin for radiation oncology patients at BMH-D regarding the proposed project:

**Radiation Therapy Patient Origin**

County, State	% by County	Cumulative %
DeSoto, MS	47.57	47.57
Shelby, TN	21.08	68.65
Tate, MS	10.04	79.14
Marshall, MS	9.34	88.48
Panola, MS	3.56	92.03
Tunica, MS	2.69	94.72

The applicant asserts that according to actual utilization of therapeutic radiation services at BMH-D, southern Shelby County in Tennessee was the second source of the highest percentage of patient origin regarding the proposed project.

As previously mentioned, BMH-D is the only provider of therapeutic radiation service in GHSA 1 which includes DeSoto, Marshall, Panola, Tate and Tunica Counties. According to the *FY 2013 State Health Plan*, in GHSA 1, Baptist Memorial Hospital-DeSoto performed 7,152 treatments in 2010 and 7,187 treatments in 2011, and based on the *FY 2012 Annual Hospital Report*, Baptist Memorial Hospital performed 10,161 treatments in 2012.

The applicant asserts that by adding the current backup/overflow linear accelerator to regular service it will relieve scheduling difficulties in providing high quality patients services. If only one linear accelerator is available, scheduling becomes inconvenient and difficult to arrange in early morning, late evening or nighttime's. The applicant believes that the

most effective way at this time is to return the existing backup/overflow unit to regular services.

As previously mentioned, based on the applicant's additional updated utilization data regarding the proposed project, the data shows that for FY 2011, BMH-D's existing radiation therapy equipment treated 327 patients, and for FY 2012, treated 445 patients. Additionally, for CY 2011, BMH-D's existing radiation therapy equipment treated 359 patients, and for CY 2012 treated 438 patients. BMH-D asserts that the referenced patient data is somewhat different than the patient volumes provided in the Certificate of Need application, because the referenced patient data includes all the patients who received treatments of BMH-DeSoto's radiation therapy equipment during the designated years. The applicant states that the information submitted in the CON application did not take into account patients who started their treatment before the commencement of a particular year, and continued to have radiation therapy treatments for that year. As a result, the patient volumes in the CON application were understated.

Although, Baptist Memorial Hospital-DeSoto did not perform 8,000 treatments for FY 2011 or CY 2011 required of this SHP Criterion, the hospital exceeded the expected level of 320 patients/unit per year for FY 2011 and CY 2011 based on the applicant's additional updated utilization data regarding the proposed project.

### **SHP Criterion 2 – Access to Diagnostic Services**

The applicant asserts that BMH-D currently provides all the referenced services required of this criterion on the hospital's campus.

### **SHP Criterion 3 – Staffing of Services**

Baptist Memorial Hospital-DeSoto asserts that it currently provides all of the services associated with this criterion. The applicant states that BMH-D currently staffs its existing radiation therapy program with personnel in each of the following full-time dedicated staff: one board-certified radiation oncologist-in-chief, one dosimetrist, one certified radiation therapy technologist certified by the American Registry of Radiation Technologists, and one registered nurse. Also, the hospital has a radiation physicist certified or eligible for certification by the American Board of Radiology.

#### **SHP Criterion 4 – Access to Brachytherapy Staff**

The applicant states that presently BMH-D offers access, as needed, to brachytherapy staff, treatment aides, social workers, dietitians, and physical therapists.

#### **SHP Criterion 5 – Medical Staff’s Residence within 60 Minutes of the Facility**

Baptist Memorial Hospital-DeSoto states that the radiation oncologists at the hospital reside within 60 minutes normal driving time of the facility.

#### **SHP Criterion 6- Simulator Capabilities**

The applicant is a current provider of therapeutic radiation services and complies with the requirements regarding the referenced simulator associated with this criterion.

#### **SHP Criterion 7 - Access to a Computerized Treatment Planning System**

The facility asserts that BMH-D presently provides access to all of the systems and capability requirements associated with this criterion.

#### **SHP Criterion 8- Staffing of a Board Certified/Board Eligible Radiation Oncologist**

Baptist Memorial Hospital-DeSoto affirms that all treatments will be under the control of a board certified or board eligible radiation oncologist.

#### **SHP Criterion 9 - Site, Plan and Equipment Approval by the Division of Radiological Health**

Baptist Memorial Hospital-DeSoto states that it is a licensed Mississippi hospital. Additionally, the current backup linear accelerator which will be converted to full-time use under the proposed project is registered with the MSDH Division of Radiological Health. The application contains documentation regarding the registration of the referenced backup linear accelerator (Varian Clinac 21EX, Serial #1814).

#### **SHP Criterion 10 – Quality Assurance Programs**

Baptist Memorial Hospital-DeSoto asserts that it currently maintains a quality assurance program which meets these requirements.

## **SHP Criterion 11 – Compliance with Criterion 10a and b**

The applicant affirms that Baptist Memorial Hospital-DeSoto will comply with Criterion #10 (a) and (b), and understands and agrees that non-compliance may result in revocation of the CON (after due process) and subsequent termination of authority to provide therapeutic radiation services.

### **B. General Review (GR) Criteria**

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

#### **GR Criterion 1 – Consistency with the State Health Plan**

According to BMH-D, the proposed application for the addition of therapeutic radiation equipment is consistent with the *FY 2013 State Health Plan*.

#### **GR Criterion 2 - Long Range Plan**

According to Baptist Memorial Hospital-DeSoto, the long range plan of the hospital is to meet the needs of the people it serves with the highest quality in a sophisticated, compassionate, caring environment. The applicant believes this project will improve the capacity of radiation therapy services provided to its patients.

#### **GR Criterion 3- Availability of Alternatives**

The applicant considered two (2) alternatives before proceeding with the proposed project:

**Maintain the Status Quo:** BMH-D contends that this option would have been for the hospital to continue operation without change although the number of required treatments exceeds the availability of reasonably available capacity. This alternative was rejected because it would not allow the hospital to effectively meet the needs of the people it serves. The growth in radiation therapy is due to the additional utilization by more patients and the addition of radiation oncologists to the medical staff to accommodate the patients' needs. Travel to other Baptist facilities for treatment is not acceptable for patients requiring transportation for each treatment.



**Conversion of Backup Equipment to Regular Use:** BMH-D contends that this option was determined to be the most logical, cost effective and efficient alternative because it enables Baptist Memorial Hospital-DeSoto to increase its capacity of full-time radiation therapy units without incurring any additional capital cost.

#### **GR Criterion 4 - Economic Viability**

Based on the applicant's projections, this project appears to be economically viable. The applicant provided a three-year projected operating statement and projected that net patient revenue over a three-year period will be \$984,022, \$1,500,026, and \$1,757,576. In addition, the statement shows that the net income will be \$894,022 \$1,408,226, and \$1,663,940 in each of the three years (See Attachment 1).

The applicant states that the cost for a procedure will be \$45 per procedure and the charge to patients will be \$1,661 per procedure for the first year of operation for the project.

BMH-D asserts that the current charges associated with the existing radiation therapy services will not change as a result of utilizing the existing equipment on a regular basis along with the addition of the hospital's existing backup/overflow linear accelerator equipment.

The proposed project does not have a capital expenditure that exceeds \$2,000,000.

#### **GR Criterion 5 - Need for the Project**

Baptist Memorial Hospital-DeSoto is currently providing radiation services at their facility and performed 7,152 treatments in 2010 and 7,187 treatments in 2011, according to the *FY 2013 State Health Plan*. As previously mentioned, BMH-D is the only provider of therapeutic radiation service in GHSA 1 which includes DeSoto, Marshall, Panola, Tate and Tunica Counties. The patient population also includes many medically underserved groups, including racial and ethnic minorities; Medicaid recipients; and the indigent.

According to the applicant, the need for the proposed project is to meet the current utilization needs for therapeutic radiation services in the applicant's service area. The project is a response to an increase in the number of outpatients who need access to therapeutic radiation equipment at reasonable times on a daily schedule.

The applicant contends that the need for additional therapeutic radiation equipment is demonstrated by its current utilization of new patients that have exceeded 320 for the previous consecutive 24 months. In RY1, the new patients totaled 328, which is a consecutive number since the total

number of patients treated exclude those whose treatment was interrupted, was 358 for the proposed project.

According to BMH-D, the primary goal of this project is to provide the residents served by the hospital adequate, high quality services in the most effective manner.

The applicant believes that by returning the existing backup/overflow linear accelerator unit to regular service will not impact other hospitals in the area.

The application received three letters of support regarding the proposed project.

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

**GR Criterion 6- Access to the Facility**

The applicant affirms that radiation therapy services at Baptist Memorial Hospital-DeSoto are accessible to all residents of its service area. The hospital does not exclude patients because of race, age, sex, ethnicity, or ability to pay.

The applicant submits that the percentage of gross patient revenue (GPR), actual and projected dollar amount of health care provided to medically indigent care patients for the last two years, and projections for the next two years of operation are as follows for this project:

**Gross Patient Revenue Amount**

	<b>Medically Indigent/Charity Care (%)</b>	<b>GPR Dollar Amount (\$)</b>
Historical Year 2011	6	\$44,593,304
Historical Year 2012	8	\$48,259,704
Projected Year 1	7	\$50,027,225
Projected Year 2	7	\$51,793,933

According to the applicant, the current linear accelerator (unit #1) is prepared to operate up to 12 hours per day, including weekends as necessary, which is inconvenient and disruptive for patients who are

scheduled in early morning and late evening hours. The applicant contends that by adding BMH-D's existing backup/overflow linear accelerator equipment to regular service will allow scheduling to be more conducive to patient needs and effective operation of the service. The projected schedule will allow each machine to operate 8 hours per weekday with staggering schedules as needed to accommodate patients.

The applicant indicates the expected payor mix by type of payor will be as follows: Medicaid 4%; Medicare 48%; private pay, commercial pay, and self pay, 57% regarding the proposed project. Approximately 67% of radiation therapy patients are at least 60 years of age. However, this project is responsive to those patients who are in need of radiation therapy services. The applicant indicates that BMH-D has the medical staff and population base necessary to support the additional therapeutic radiation equipment/unit.

The applicant asserts that emergency treatments will continue to be accommodated as necessary at all times, 24 hours a day, 7 days a week.

#### **GR Criterion 7- Information Requirement**

Baptist Memorial Hospital-DeSoto affirms that it will record and maintain the information required by this criterion and shall make the data available to the Mississippi State Department of Health within fifteen (15) business days of request.

#### **GR Criterion 8 - Relationship to Existing Health Care System**

Baptist Memorial Hospital-DeSoto is the only provider of therapeutic radiation services in GHSA 1. The hospital currently has 1 linear accelerator (6-15MV) unit. As reported in the *FY 2013 Mississippi State Health Plan* the unit performed 7,152 treatments in 2010 and 7,187 treatments in 2011. Since the proposal is to meet current needs. The applicant believes that the return of an existing linear accelerator unit that is setup as a backup unit to regular service will not encroach on existing providers in GHSA 1.

As previously mentioned, the Department received no letters of opposition concerning the proposed project.

#### **GR Criterion 9 - Availability of Resources**

BMH-D asserts that it is a current provider of therapeutic radiation services and the trained professional staff will continue providing the services. An additional radiation oncologist is joining BMH-D medical staff, which the applicant believes will enhance access to care and support additional treatment utilization. The applicant indicates that 448 full-time equivalents (FTEs) personnel are currently employed at BMH-D

and projects an addition of 0.5 FTE personnel for the proposed project at an annual cost of \$36,000.

The applicant asserts that BMH-D has access to the resources of Baptist Memorial Health Care Corporation for training and recruitment of other qualified personnel.

#### **GR Criterion 10- Relationship to Ancillary or Support Services**

Baptist Memorial Hospital-DeSoto asserts that all necessary support and ancillary service is available for the existing therapeutic radiation service and will be for this proposed project.

#### **GR Criterion 11- Health Professional Training Programs**

According to the applicant, by adding the current backup/overflow accelerator equipment to regular utilization will not affect the educational opportunities for health professional training, which are currently provided by BMH-D.

#### **GR Criterion 16 - Quality of Care**

Baptist Memorial Hospital-DeSoto is in compliance with the *Minimum Standards of Operation for Mississippi Hospitals*, according to the Division of Health Facilities Licensure and Certification, MSDH. The hospital is accredited by the Joint Commission on Accreditation of Healthcare Organizations.

### **IV. FINANCIAL FEASIBILITY**

#### **A. Capital Expenditure Summary**

The applicant indicates that no capital expenditure is associated with this project.

#### **B. Method of Financing**

The applicant states that this project requires no financing.

#### **C. Effect on Operating Costs**

The applicant projects the following expenses, utilization, and results for the first three years of operation for the addition of therapeutic radiation equipment/unit (see Attachment 1).

**D. Cost to Medicaid/Medicare**

<b>Payor</b>	<b>Utilization Percentage</b>	<b>First Year Gross Revenue</b>
<b>Medicaid</b>	7%	\$ 68,882
<b>Medicare</b>	59%	\$580,573
<b>Other</b>	34%	\$334,567
<b>Total</b>	100.0%	<u>\$984,022</u>
Baptist Memorial Hospital-DeSoto projects 7% for Medically indigent and charity care patient for the proposed project.		

**V. RECOMMENDATION OF OTHER AFFECTED AGENCIES**

The Division of Medicaid was provided an opportunity to review and comment on this project. Based on their analysis, the Division states that effective September 1, 2012, the Division changed the methodology by which it reimburse outpatient services so that the cost incurred subsequent to that date will no longer affect outpatients payments. Effective October 1, 2012, the Division changed the methodology by which it reimburse inpatient services so that the cost incurred subsequent to that date will only affect cost outlier payments. The estimated increase in cost outlier payments resulting from this project cannot be determined at this time. The Division of Medicaid opposes this project.

**VI. CONCLUSION AND RECOMMENDATION**

This project is in substantial compliance with the criteria and standards for the acquisition or otherwise control of radiation therapy equipment as contained in the *FY 2013 Mississippi State Health Plan*; Chapter 8 of the *Mississippi Certificate of Need Review Manual, Revised 2011*; and all adopted rules, procedures, and plans of the Mississippi State Department of Health.

The Division of Health Planning and Resource Development recommends approval of this application submitted by Baptist Memorial Hospital-Desoto for the addition of therapeutic radiation equipment.

**ATTACHMENT 1**

<b>Baptist Memorial Hospital-DeSoto Three-Year Projected Operating Statement Project Only</b>			
	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
<b><u>Revenue</u></b>			
Gross Patient Revenue	\$3,348,273	\$5,278,579	6,402,281
Deductions	(2,364,251)	( 3,778,553)	(4,644,705)
<b>Net Revenue</b>	<b>\$ 984,022</b>	<b>\$1,500,026</b>	<b>\$1,757,576</b>
<b><u>Operating Expenses</u></b>			
Salaries	\$ 65,000	\$ 66,300	\$ 67,626
Benefits	15,000	15,300	15,606
Supplies	<u>10,000</u>	<u>10,200</u>	<u>10,404</u>
<b>Total Operating Expenses</b>	<b>\$ 90,000</b>	<b>\$ 91,800</b>	<b>\$ 93,636</b>
<b>Net Income</b>	<b>\$ 984,022</b>	<b>\$1,408,226</b>	<b>\$ 1,663,940</b>
<b><u>Assumptions</u></b>			
No. of Procedures	2,016	3,056	3,564
Cost Per Procedure	\$ 45	\$ 30	\$ 26
Charge Per Procedure	\$ 1,661	\$ 1,727	\$ 1,796