

**DIVISION OF HEALTH PLANNING  
AND RESOURCE DEVELOPMENT  
FEBRUARY 2004**

**CON REVIEW HG-NIS-1203-031  
PHC-CLEVELAND, INC. DBA BOLIVAR MEDICAL CENTER  
ESTABLISHMENT OF DIAGNOSTIC CARDIAC CATHETERIZATION SERVICES  
CAPITAL EXPENDITURE: \$324,152  
LOCATION: CLEVELAND, MISSISSIPPI**

**STAFF ANALYSIS**

**I. PROJECT SUMMARY**

**A. Applicant Information**

PHC-Cleveland, Inc. dba Bolivar Medical Center (BMC) is a 165-bed general acute care, short-term medical and surgical facility. BMC is a for-profit hospital owned by Province Healthcare Company, a publicly traded for-profit healthcare corporation located in Brentwood, Tennessee. PHC-Cleveland is a wholly owned for-profit subsidiary of Province Healthcare, and is governed by an eleven (11) member Board of Trustees. BMC is licensed for 35 long term care beds and 24 short-term skilled nursing beds.

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

**Bolivar Medical Center  
Utilization Data**

| <b>Fiscal Year</b> | <b>Occupancy Rate (%)</b> | <b>ALOS (Days)</b> | <b>Medicaid Utilization Rate (%)</b> |
|--------------------|---------------------------|--------------------|--------------------------------------|
| 2000               | 37.64                     | 4.27               | 46.64                                |
| 2001               | 38.24                     | 3.94               | 44.72                                |
| 2002               | 40.49                     | 3.93               | 41.60                                |

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

**B. Project Description**

PHC-Cleveland, Inc. dba Bolivar Medical Center requests Certificate of Need (CON) authority to establish diagnostic cardiac catheterization services at its facility. The applicant asserts that the proposed diagnostic cardiac catheterization services will be located in the existing

upgraded interventional radiology laboratory, which has **(CON #R-0506, establishment of an interventional radiology lab)** approval. No significant construction will be required. The appropriate changes will be cosmetic only for the proposed project .

The applicant proposes to purchase the following diagnostic heart catheterization equipment system:

|                        | <b>Vendor</b> |
|------------------------|---------------|
| Phillips cath upgrade  | Phillips      |
| Datascope balloon pump | Datascope     |
| Cardiac hemodynamic    | GE            |
| Coagulation tuner      | Hemochron     |

According to BMC all the above equipment has met FDA approval for the proposed project.

According to the applicant, all diagnostic heart catheterizations will be performed on an outpatient basis for feasibility purposes. Therefore, all associated patient services will be of an ancillary nature. From the projections, in the first year, costs will increase by \$763,983. This increase is projected to be covered by the projected patient volumes and revenue per payor.

BMC asserts that the proposed project will require the addition of 3.3 FTE personnel at an estimated annual cost of \$169,969.

The total proposed capital expenditure is \$324,152 , and of that amount, approximately 89 percent is for fixed equipment upgrade, 9 percent for contingency reserve, and 2 percent for capitalized interest for the proposed project. The applicant indicates that the proposed capital expenditure will be paid for with capital from Bolivar Medical Center and Province Healthcare.

The applicant indicates that upon CON approval the proposed project is expected to start May 2004. From that point, installation of the required equipment and initiation of the proposed service can be anticipated by August 2004.

## **II. TYPE OF REVIEW REQUIRED**

Projects which propose the establishment of cardiac catheterization services are reviewed in accordance with Section 41-7-191, subparagraphs (1) (d)(ii), and (f) 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 During the Course of Review" expires on March 4, 2004.

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

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

The **FY 2004 State Health Plan** addresses policy statements, criteria and standards which an applicant is required to meet before receiving CON authority to provide diagnostic cardiac catheterization services. The application submitted by PHC-Cleveland, Inc. dba Bolivar Medical Center is not in substantial compliance with these criteria.

**SHP Criterion 1 - Need**

BMC is proposed to be located in CC/OHSPA 2, which is made up of the following 13 counties: Bolivar, Carroll, Coahoma, DeSoto, Holmes, Humphreys, Leflore, Montgomery, Quitman, Sunflower, Tallahatchie, Tunica, and Washington. According to the 2005 Population Projections, these counties had a total 2005 projected population of 420,937.\*

**Source:** Mississippi Population Projections for 2005, 2010, and 2015, Center for Policy Research and Planning, Mississippi Institutions of Higher Learning, March, 2002, herein after referred to as "2005 Population Projections"

Based on a referral factor of BMC, the applicant has defined a 20-mile service area which touches upon six Mississippi counties: Bolivar, Sunflower, Coahoma, Tallahatchie, Leflore and Washington, which have a total population of 217,633. Of that total, 69.3 percent are black, 12.5 percent are 65 and older in age, and 34.1 percent are Medicaid eligible. The BMC believes the referenced facts far exceed the minimum population base standard of 100,000. The applicant asserts that the proposed project's availability at the BMC will allow for appropriate patient accessibility from the defined service area and strengthen the full Mississippi delivery system to those under-served, poor, and realistically most in need.

There are currently four existing providers of cardiac catheterization services in CC/OHSPA 2. The providers and their utilization for the past three fiscal years are as follows:

**Number of Cardiac Catheterization Procedures\***

| <b>Providers</b>                     | <b>FY 2000</b> | <b>FY 2001</b> | <b>FY 2002</b> |
|--------------------------------------|----------------|----------------|----------------|
| Baptist Memorial Hospital-DeSoto     | 36             | 1,129*         | 2,353*         |
| Delta Regional Medical Center        | 662            | 1,823          | 2,661*         |
| Greenwood Leflore Hospital           | 142            | 194            | 106            |
| Northwest Ms Regional Medical Center | 156            | 1,379          | 1,527          |

\*Includes diagnostic procedures and PTCAs.

\*\*Includes pediatric procedures.

The **State Health Plan** provides that "At its discretion, the Department of Health may use market share analysis and other methodologies in the analysis of a CON application for the acquisition or otherwise control of cardiac catheterization equipment and/or the offering of cardiac catheterization services." Market share analysis is a methodology utilized by the MSDH to determine the population base of an applicant when more than one provider of a service exists in a General Hospital Planning Area. Patient origin data, submitted to the Department by all hospitals for four two-week periods annually, are relied upon to determine the specific service area of a given hospital. A hospital's service area would be the counties in which 95 percent or more of the hospital's patients reside. Based upon the Market Share Analysis conducted by the Department for CC/OHSPA 2, the majority of the applicant's patients came from Bolivar County for the period of October 2002 to July 2003. The Market Share Analysis revealed that Bolivar Medical Center has a population base of only 49,222 for the given period (See Attachment 1). This population base falls far short of the minimum required population base of 100,000.

**SHP Criterion 2 - Minimum Procedures**

Bolivar Medical Center projects the following utilization for the cardiac services at the hospital for the first three years:

| Year  | Catheterization |
|-------|-----------------|
| One   | 735             |
| Two   | 757             |
| Three | 780             |

**SHP Criterion 3 - Impact on Existing Providers**

Bolivar Medical Center submits that there are three other providers within 45 miles of the proposed services in CC/OHSPA which offer cardiac catheterization services: **For FY 2001** Delta Regional Medical Center in Washington County performed 1,600 diagnostic and 223 therapeutic cardiac cath, Greenwood Leflore Hospital in Leflore County performed only 194 diagnostic cardiac cath, and Northwest Mississippi Regional Medical Center in Coahoma County performed 1,379 diagnostic cardiac cath.

**For FY 2002** Delta Regional Medical Center in Washington County performed 2,301 diagnostic and 360 therapeutic cardiac catheterization procedures, Greenwood Leflore Hospital in Leflore County performed only 106 diagnostic cardiac cath procedures, and Northwest Mississippi Regional Medical Center in Coahoma County performed 1,527 diagnostic and 3 therapeutic cardiac catheterization procedures.

Applicant acknowledges that Greenwood Leflore Hospital, approximately 45 miles away, has not performed the required minimum of 450 procedures, but submits that Greenwood Leflore Hospital has experienced difficulties throughout the hospital. Applicant submits that as of November 2003, the Greenwood program is inactive. Applicant makes allowances for the Greenwood Leflore Hospital by projecting a target market population of only 5 percent in Coahoma, Washington, and Leflore counties.

However, since the Greenwood Leflore cardiac catheterization program has not been inactive for the past 12 months, it must be counted when determining additional need for cardiac

catheterization programs in CC/OHSPA 2. Therefore, the application is not in compliance with this criterion.

#### **SHP Criterion 4 - Staffing Standards**

According to the applicant, the standards of Province Healthcare will be utilized. In addition, quality standards and strict patient protocols will be adhered to with reference to the 2001 American College of Cardiology/Society for cardiac angiography and intervention clinical expert consensus document on cardiac catheterization laboratory standards.

#### **SHP Criterion 5 - Staff Residency**

According to the applicant, all cardiologists with privileges to perform diagnostic heart catheterizations at Bolivar Medical Center will reside within 45 miles of the hospital. In addition, those cardiologists approved by the medical staff and Board of Trustees will be expected to work collaboratively and cooperatively with the other CON approved heart programs of CC/OHSPA and their attending heart specialists.

#### **SHP Criterion 6 - Recording and Maintenance of Data**

According to BMC, the hospital will comply with this criterion as required.

#### **SHP Criterion 7 - Referral Agreement**

Bolivar Medical Center's proposed application contains transfer agreements between BMC and the following hospitals: Delta Regional Medical Center; North Sunflower Hospital; Regional Medical Center, Memphis, TN; Northwest Mississippi Regional Medical Center; LeBonheur Children, Memphis, TN; and Kings Daughters Greenville.

#### **SHP Criterion 8 - Patient Selection**

BMC asserts that the hospital commits to establish and enforce specific criteria and protocols that will assure that only appropriate diagnostic heart catheterization candidates are catheterized at the hospital and that the high risk unstable patients are referred to other facilities, preferably the full service heart programs in Region 2 CC/OHSPA or in Jackson or Memphis.

#### **SHP Criterion 9 - Regulatory Approval**

By this application, Bolivar Medical Center requests the approval for the addition of a diagnostic cardiac catheterization program.

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

Chapter 8 of the Mississippi Certificate of Need Review Manual, revised May 13, 2000, addresses general criteria by which all CON applications are reviewed. This project is not in substantial compliance with applicable criteria.

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

BMC asserts that since entering into a 40-year long term lease for the hospital with the Bolivar County Board of Supervisors, Province Healthcare has sought to enhance the primary

care base, promote a broader range of quality services, and support the diagnostic, surgical, and therapeutic skills of its medical staff to all residents of the county and region. The proposed project is consistent with BMC commitment in addressing the tragic incidence/prevalence of heart disease in the service area. The applicant believes that the proposed services will directly enhance the diagnostic, acute, and post acute heart service as well as the cardiac emergency room response team.

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

According to the applicant, the proposed project is compatible with the hospital's long range plans to provide its patients access to quality care and to respond whenever possible to the under-served needs of the service area in the central Delta. There is also a desire to actively recruit appropriate physician specialists and sub-specialists to compliment the primary care providers. For these reasons, the hospital rejected the alternative of doing nothing. The proposed project will undoubtedly enhance a broad range of cardiovascular services available for the county and service area of the central Delta.

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

Based on the applicant's financial projections, the economic viability of this project appears to be good. Based on the applicant's three year projections, this project will be economically viable the first three years of operation with net incomes of \$775,189, \$767,003, and \$791,958 the first, second, and third years, respectively.

### **GR Criterion 5 - Need for Services**

According to the applicant, all residents of the defined six-county service area and target market population will have access to the diagnostic heart catheterization services at Bolivar County Medical Center. Specific studies have been carried out by BMC, with consideration of population, race, sex, Medicare eligibles, Medicaid eligibles, etc. BMC asserts that further consideration has also been given to the historical socio-economic and accessibility challenges that are clearly present in the central Delta region. Based on these factors and the acknowledged under-served needs of those with heart disease, the availability of the new diagnostic heart catheterization service can be expected to support the heart delivery system in Region 2.

Based on a Market Share Analysis prepared by the MSDH, Bolivar Medical Center has a market share of 49,222 population in CC/OHSPA 2. Additionally, CC/OHSPA 2 currently has one program per 100,000 population (420,937 divided by four cardiac cath programs). Therefore, staff is concerned that an additional program in this area will create an unnecessary duplication of health services and is not needed.

This application included 38 affidavits from physicians and two affidavits from certified family practitioners indicating the number of patients they will refer, and 19 letters of support from politicians, community leaders, health care providers, and businesses.

### **GR Criterion 6 - Access to the Facility or Service**

Applicant asserts that BMC is committed to serve all groups regardless of race, age, creed, sex, or ethnic origin to abide by its admission policy. All residents of the defined six county service area that is part of GHSA 2, including Medicaid recipients, charity/medically indigent, racial and ethnic minorities, women, handicapped persons, and the elderly have access to

the services of Bolivar Medical Center and will certainly have appropriate access to the proposed diagnostic heart catheterization service.

The applicant indicates that the following table gives BMC's percentage of gross patient revenue of health care provided to medically indigent patients for the last three years:

| <b>Fiscal Year</b> | <b>Percentage of Gross Patient Revenue</b> |
|--------------------|--|
| 2001               | 6.89%                                      |
| 2002               | 7.03%                                      |
| 2003               | 8.46%                                      |

The applicant projects that approximately five (5) percent of its patients will be medically indigent for the proposed project.

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

Bolivar Medical Center affirms that it will record and maintain the requested information and make it available to the Mississippi State Department of Health within 15 days of request.

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

Bolivar Medical Center submits that the heart centers at Delta Regional Medical Center, Greenville, and Northwest Mississippi Regional Medical Center, Clarksdale, are well above the health planning standards, and the program at Greenwood Leflore Hospital, Greenwood, is currently inactive. BMC asserts that at such time as their program components are secured, the program should thrive in its given market. Since 1995, the heart centers have greatly benefitted from the referrals and overall heart delivery programs of the "stand alone" hospital-based diagnostic heart catheterization centers. The applicant believes such will be the case in Cleveland, which is part of the region 2 CC/OHSPA.

The applicant believes that the proposed project will have no adverse impact on any of the existing providers in the service area.

The application received a detailed letter from an attorney representing Northwest Mississippi Regional Medical Center, Cleveland and Greenwood Leflore Hospital, Greenwood, opposing the proposed project.

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

Bolivar Medical Center asserts that the number of full time employees at BMC is within acceptable ranges required to assure quality health care. The staffing standards, personnel policies, and operational policies of the Province Healthcare are available to support the standards of the hospital as needed and requested. The applicant submits that the hospital will be successful for the recruitment of all necessary nursing, allied health, and support staff through its established personnel policies and recruitment locally, regionally, and throughout the South.

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

BMC is in compliance with the **Minimum Standards of Operation for Mississippi Hospitals** according to the Division of Health Facilities Licensure and Certification.

**IV. FINANCIAL FEASIBILITY**

A. Capital Expenditure Summary

|   |                  |
|---|------------------|
| Fixed Equipment (upgrade)                 | \$289,918        |
| Contingency Reserve (10%)                 | \$ 28,992        |
| <b>Capitalized Interest</b>               | <b>\$ 5,242</b>  |
| <b>Total Proposed Capital Expenditure</b> | <b>\$324,152</b> |

The above capital expenditure is proposed for acquisition of fixed equipment (upgrade), contingency reserve, and capitalized interest for the proposed project.

B. Method of Financing

According to the applicant, the proposed capital expenditure will be funded with capital from Bolivar Medical Center and Province Healthcare.

C. Effect on Operating Cost

The applicant projects the following expenses, utilization, and results from operation for the first three years following completion of the project:

| <b>Expenses</b>       | <b>Year 1</b>    | <b>Year 2</b>    | <b>Year 3</b>    |
|-----------------------|------------------|------------------|------------------|
| Salaries/Benefits     | \$169,969        | \$175,068        | \$180,320        |
| Supplies              | 14,700           | 15,141           | 15,595           |
| General/Admin.        | 382,286          | 393,754          | 405,567          |
| Other Indirect        | 175,600          | 180,868          | 186,294          |
| Depreciation          | 32,415           | 64,830           | 64,830           |
| <b>Total Expenses</b> | <b>\$774,970</b> | <b>\$829,661</b> | <b>\$852,606</b> |

| <b>Revenues</b>    | <b>First Year</b> | <b>Second Year</b> | <b>Third Year</b> |
|--------------------|-------------------|--------------------|-------------------|
| Gross patient Rev. | \$7,350,000       | \$ 7,570,500       | \$7,797,615       |
| Deductions         | \$(5,799,841)     | \$(5,973,836)      | \$(6,153,051)     |
| Net Patient Rev.   | \$1,550,159       | \$ 1,596,664       | \$ 1,644,564      |
| <b>Net Income</b>  | <b>\$ 775,189</b> | <b>\$ 767,003</b>  | <b>\$ 791,958</b> |

|                      | First Year | Second Year | Third Year |
|----------------------|------------|-------------|------------|
| Number of Procedures | 735        | 757         | 780        |
| Cost/Procedure*      | \$1,054    | \$1,096     | \$1,093    |
| Charge/Procedure     | \$10,000   | \$10,000    | \$10,000   |

D. Cost to Medicaid/Medicare

| Patient Mix by Type of Payor | Utilization Percentage | First Year Cost   |
|------------------------------|------------------------|-------------------|
| Medicaid                     | 31                     | \$ 240,241        |
| Medicare                     | 41                     | \$ 317,738        |
| Other Payor*                 | 28                     | \$ 216,992        |
| <b>Total</b>                 | <b>100</b>             | <b>\$ 774,970</b> |

\*The applicant projects 1 percent of gross patient revenues to be provided to charity, 6.5 percent to bad debt, and 1 percent to be provided to medically indigent patients.

V. **RECOMMENDATIONS OF OTHER AFFECTED AGENCIES**

The Division of Medicaid was provided a copy of this application for comment. However, no written comments were received.

VI. **CONCLUSION AND RECOMMENDATION**

The project is not in substantial compliance with the criteria and standards for establishment of diagnostic cardiac catheterization services, as contained in the **FY 2004 State Health Plan**, and the **Mississippi Certificate of Need Review Manual**, revised 2000. Specifically, the application does not meet the minimum population base of 100,000 in the CC/OHSPA where it is to be located. In addition, one of the facilities located within 45 miles of the applicant was utilized for less than the required 450 cardiac cath procedures. Furthermore, CC/OHSPA 2, wherein the applicant facility is located, currently has one provider per 100,000 population. Therefore, the application submitted by PHC-Cleveland, Inc. dba Bolivar Medical Center is an unnecessary duplication of health services and is not needed.

The Division of Health Planning and Resource Development recommends disapproval of this application submitted by PHC-Cleveland, Inc. dba Bolivar Medical Center for the establishment of diagnostic cardiac catheterization services..

**Attachment 1**

**Market Share of Hospitals in CC/OHSPA 2 with Existing or Proposed Cath Labs**

| CC/OHSPA 2    |                | BMH-DeSoto |                | Bolivar MC |               | Delta RMC |               | Greenwood LH |                | KDH-Greenville |               | NWMS RMC |               |
|---------------|----------------|------------|----------------|------------|---------------|-----------|---------------|--------------|----------------|----------------|---------------|----------|---------------|
| County        | Pop            | %          | #              | %          | #             | %         | #             | %            | #              | %              | #             | %        | #             |
| Bolivar       | 39,945         | 0.34       | 136            | 77.39      | 30,913        | 11.36     | 4,538         | 3.71         | 1,482          | 0.67           | 267           | 6.52     | 2,604         |
| Carroll       | 11,385         | -          | -              | -          | -             | -         | -             | 100.00       | 11,385         | -              | -             | -        | -             |
| Coahoma       | 30,491         | 0.90       | 274            | 0.39       | 119           | 1.16      | 354           | 0.90         | 274            | -              | -             | 96.66    | 29,473        |
| DeSoto        | 127,388        | 99.78      | 127,108        | -          | -             | -         | -             | -            | -              | -              | -             | 0.22     | 280           |
| Holmes        | 21,936         | -          | -              | -          | -             | -         | -             | 100.00       | 21,936         | -              | -             | -        | -             |
| Humphreys     | 10,798         | -          | -              | -          | -             | 16.39     | 1,770         | 81.97        | 8,851          | 1.64           | 177           | -        | -             |
| Leflore       | 37,883         | -          | -              | 0.39       | 148           | 1.03      | 390           | 98.33        | 37,250         | 0.26           | 98            | -        | -             |
| Montgomery    | 12,381         | -          | -              | -          | -             | -         | -             | 100.00       | 12,381         | -              | -             | -        | -             |
| Quitman       | 9,721          | 2.94       | 286            | -          | -             | 0.98      | 95            | 0.98         | 95             | -              | -             | 95.10    | 9,245         |
| Sunflower     | 33,792         | 0.54       | 182            | 50.67      | 17,122        | 23.06     | 7,792         | 19.03        | 6,431          | 3.49           | 1,179         | 3.22     | 1,088         |
| Tallahatchie  | 14,657         | 2.90       | 425            | 3.49       | 512           | 1.74      | 255           | 30.23        | 4,431          | 0.58           | 85            | 61.05    | 8,948         |
| Tunica        | 9,695          | 70.39      | 6,824          | -          | -             | -         | -             | -            | -              | -              | -             | 29.60    | 2,870         |
| Washington    | 60,865         | -          | -              | 0.67       | 408           | 69.85     | 42,514        | 0.53         | 323            | 28.90          | 17,590        | 0.07     | 43            |
| <b>TOTALS</b> | <b>420,937</b> |            | <b>135,235</b> |            | <b>49,222</b> |           | <b>57,708</b> |              | <b>104,839</b> |                | <b>19,396</b> |          | <b>54,551</b> |

Source: October 2002 - July 2003 Aggregate Patient Origin Studies, MSDH.

Note: Market share analysis is a methodology utilized by the Mississippi State Department of Health to determine the population base of an applicant when more than one provider of a service exists in a General Hospital Planning Area. Patient origin data, submitted to the Department by all hospitals for four two-week periods annually, are relied upon to determine the hospital specific service area of a given hospital. This can be done by county and zip codes. A hospital's service area would be the counties in which 95 percent or more of the hospital's patients reside. Once the hospital's specific service area is identified, additional analysis is necessary to determine what other may

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offer the same service. Then, the patient origin information is used to determine the percentage of patients who utilize potentially competing facilities. These percentages are then applied to the county population to allocate market share of the population for each hospital offering or proposing the same service.