

**Division of Health Planning and  
Resource Development  
August 2006**

**CON REVIEW HG-NIS-0606-018  
Magnolia Regional Health Center  
The Offering of Open-Heart Surgical Services  
Capital Expenditure: \$2,883,142  
Location: Corinth, Mississippi**

**STAFF ANALYSIS**

**I. PROJECT SUMMARY**

**A. Applicant Information**

Magnolia Regional Health Center (Magnolia) is a public acute care facility, owned jointly by the City of Corinth, and Alcorn County, Mississippi. The facility is governed by a five-member Board of Trustees. Two members are appointed by the Alcorn County Board of Supervisors, two are appointed by the City of Corinth Board of Aldermen, and one is appointed jointly by both groups. The 164-bed JCAHO-accredited facility is composed of 145 acute care beds and 19 psychiatric beds.

The occupancy rates, average lengths of stay (ALOS), and the Medicaid utilization rates for the three most recent fiscal years are as follows:

**Magnolia Regional Health Center  
Utilization Data**

<b>Year</b>	<b>Occupancy Rate (%)</b>	<b>ALOS (Days)</b>	<b>Medicaid* Utilization Rate (%)</b>
2003	52.63	4.40	16.98
2004	48.53	3.97	18.04
2005	50.49	4.02	17.09

**Source:** Division of Health Facilities Licensure and Certification, MDH

**B. Project Description**

Magnolia Regional Health Center requests Certificate of Need (CON) authority to expand its heart services program by adding open-heart surgical services. The facility currently offers both diagnostic and therapeutic cardiac catheterization services. The applicant states that the open-heart surgical unit will be located in approximately 3,800 square feet of space in the newly constructed first floor tower, which was approved as part of Magnolia's 2006 expansion CON.

The applicant states that currently, residents in Magnolia's service area requiring open-heart surgery are accessing care at North Mississippi Medical

Center in Tupelo or other tertiary care facilities outside of the hospital's service area. The applicant further states that there are no open-heart surgery programs available in Magnolia's primary service area.

The applicant states that the final objective of the proposed project is for Magnolia to offer a full service coronary intervention program, with a full range of the highest quality cardiovascular care services, including both diagnostic and interventional cardiac catheterization services and open-heart surgery.

The applicant indicates that any increase in ancillary or support services will be appropriately accommodated.

The applicant projects an addition of 30.3 FTEs at an estimated annual cost of \$1,541,995.

The MDH Division of Health Facilities Licensure and Certification has approved the site for offering of Open-Heart Surgery services. The applicant expects to obligate funds for the project by October 1, 2006.

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

This project for the establishment of open-heart surgery services is reviewed in accordance with Section 41-7-191, subparagraphs (1)(d)(i) and (1)(f), Mississippi Code of 1972, Annotated, as amended, and duly adopted rules, procedures, plans, criteria and standards of the Mississippi 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 on September 5, 2006.

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

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

The *FY 2006 State Health Plan* addresses policy statements, criteria and standards which an applicant is required to meet before receiving CON authority for the acquisition and/or otherwise control of open-heart surgery equipment and the offering of open-heart surgery services. The application submitted by Magnolia Regional Health Center is in substantial compliance with applicable criteria and standards contained in the *Plan*.

### **SHP Criterion 1 – Need**

The applicant shall document a minimum population base of 100,000 in the Cardiac Catheterization/Open-Heart Surgery Planning Area (CC/OHSPA) where the open-heart surgery equipment/service is to be located. Magnolia Regional Health Center is located in CC/OHSPA 1, which has a total projected 2010 population of 735,381 and three current open-heart surgery providers. When two or more existing cardiac catheterization programs are located within the same planning area, the population of the area may be apportioned to each provider according to the patient origin of the patients discharged from each facility. This methodology includes all counties in the planning area and all counties outside the planning area from which the facility receives the majority of its patients. The MDH Quarterly Patient Origin Surveys of the discharges from Magnolia for the period January 2005 to October 2005 reveal that the facility discharged the majority of its patients (5% or greater) from Alcorn, Prentiss, Tippah, and Tishomingo counties in Mississippi.

Magnolia submits that it conducted a market share analysis, consistent with the MDH policies, to determine the population base for its proposed open-heart surgery program. Based on patient origin data for the period of January 2005 through October 2005, Magnolia determined its market share of CC/OHSPA 1 to be 63,721. In addition, the applicant states that Magnolia serves seven counties in Tennessee with a combined population of 38,480. According to the applicant, the projected population of the applicant's service area, including Tennessee, is 102,201.

Staff examined patient origin reports for the period of January 2005 to October 2005 for Magnolia Regional Health Center for all 26 counties which make up CC/OHSPA 1. Based on this review, staff determined that during the indicated period, the majority of Magnolia's patients came from the following counties for the stated period: Alcorn – 57.39%, Prentiss – 9.28%, Tippah – 9.28% and Tishomingo – 12.46%. For 2005, 91% of Magnolia's 1,167 patients came from the four counties above and 9% came from Tennessee (See Attachment 2).

Staff further examined the patient origin reports for Baptist Memorial Hospital-Golden Triangle (BMH-Golden Triangle), Baptist Memorial Hospital-North Mississippi (BMH-North Mississippi), and North Mississippi Medical Center for the stated period to determine the market share of each of the hospitals within CC/OHSPA 1. The data revealed that for the specified period, an average of 80% of Alcorn County residents; 37% of Prentiss County residents; 45% of Tippah County residents; and 49% of Tishomingo County residents who used one of the four named hospitals, used Magnolia for the stated period.

Applying the given statistics to the 2010 Population Projections for the 26 counties in CC/OHSPA 1 yields the market share of each of the four hospitals. Magnolia Regional Health Center's market share was determined by staff to be 64,161 for counties located in Mississippi. According to the Patient Origin

Studies for the period stated in this staff analysis, 105 of Magnolia's patients came from Tennessee. Therefore, staff accepted the applicant's projection of 38,480 residents for Tennessee. Consequently, staff determined a total population base of 102,641(See Attachment 3).

In addition, the application contained an analysis conducted by Health Care Visions documenting Magnolia's population base. In its analysis, Health Care Visions used a Total Cardiovascular Target Market (TCTM) model to determine the geographic draw area. In this analysis, the primary service area consists of selected zip codes in Alcorn, Prentiss, Tippah, Tishomingo, Hardin and McNairy counties. The secondary service area consists of the remaining zip codes in those counties and all of Hardeman County. Under this model, Health Care Visions determined Magnolia's 2005 TCTM population to be 179,469.

### **SHP Criterion 2 - Minimum Procedures**

The applicant submits that based on the study and analysis conducted by Health Care Visions, the proposed open-heart surgery program at Magnolia will perform between 152 and 274 procedures by the third year of operation.

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

An applicant proposing to acquire or otherwise control open-heart surgery equipment and/or offer open-heart surgery services shall document that each facility offering open-heart surgery services which is (a) in the CC/OHSPA and (b) within 45 miles of the applicant, has performed a minimum of 150 procedures per year for the two most recent years as reflected in data supplied to and/or verified by the MDH. According to the applicant, the closest program is located at North Mississippi Medical Center, Tupelo, which is approximately 50 miles away. There are currently three providers of open-heart surgery located in CC/OHSPA 1; however, none of these providers of open-heart surgery are located within 45 miles of Magnolia (see table below).

Therefore, the applicant is in compliance with this criterion.

**Open-Heart Surgery Procedures  
CC/OHSPA 1**

<b>Facility</b>	<b>Location</b>	<b>Miles from Magnolia</b>	<b>Open-Heart Procedures 2004</b>	<b>Open-Heart Procedures 2005*</b>
BMH-Golden Triangle	Columbus	111.08	35	72
BMH-North Mississippi	Oxford	98.97	143	43
North Mississippi	Tupelo	51.88	1,067	857

Source: FY 2006 *State Health Plan*, Applications for Renewal of Hospital License, 2005, and Map Quest.

**SHP Criterion 4 - Staffing Standards**

Magnolia certified that it has, or can obtain, the ability to administer the proposed services, provide sufficiently trained and experienced professional staff, and evaluate the performance of the programs. The applicant states that it will recruit additional personnel to the extent necessary to staff the proposed service, and will provide additional training as necessary.

**SHP Criterion 5 - Staffing Residency**

Magnolia certified that medical staff performing open-heart surgery procedures shall reside within 45 minutes normal driving time of the facility. They further certify that proposed open-heart surgery procedures shall not be performed by traveling teams.

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

The applicant certified that it shall provide, as required under licensure standards, written assurance that it will record and maintain utilization data for open-heart surgeries (e.g. morbidity data, number of open-heart surgeries performed, and mortality data, all reported by race, sex and payor status) and make such data available to the Mississippi Department of Health annually.

**SHP Criterion 7 - Regulatory Approval**

Magnolia Regional Health Center is requesting regulatory approval for open-heart surgery services and equipment through this application.

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

Chapter 8, *Mississippi Certificate of Need Review Manual*, revised 2000, contains general criteria by which all applications for Certificate of Need are reviewed. This project is in substantial compliance with applicable criteria.

**GR Criterion 1 – State Health Plan**

The application is in compliance with the *FY 2006 State Health Plan*. The *FY 2006 State Health Plan* requires that a facility proposing to offer therapeutic cardiac catheterization services must also provide open-heart surgery program. This facility began providing therapeutic cardiac catheterization services around 1978, and is “grand-fathered” under the current Plan.

**GR Criterion 2 - Long Range Plan**

The applicant states that Magnolia’s long range plan includes the implementation of a comprehensive heart services program, including open-heart surgery services. The facility currently has both diagnostic and therapeutic cardiac catheterization programs. The applicant’s proposal to add open-heart surgery services is consistent with its long range plan.

**GR Criterion 3 - Availability of Alternatives**

The applicant states that the only alternative to the proposed project would be for Magnolia to decline to implement open-heart surgery services. Magnolia Regional Health Center determined that this alternative would not be in the best interest of its patients or the residents of its service area. The applicant states that referral of heart patients to other programs located many miles away is an unnecessary burden and cost to the patients and their families.

According to the applicant, Magnolia’s implementation of an open-heart surgery program most effectively benefits the health care system by providing a full service continuum of high quality cardiac care to its service area. Patients can receive all diagnostic and therapeutic catheterization services without fear of being referred to another hospital many miles away for open-heart surgery, when such surgery is indicated.

According to the applicant, the proposed project fosters improvements in the delivery of health services and promotes health care quality assurance and cost effectiveness by bringing open-heart surgery services directly to the residents of Magnolia’s service area. If the proposed program is approved, patients will be able to receive all heart-related treatment in a single facility with a full continuum of care. The applicant states that this is both clinically efficient and cost effective.

The applicant states that if approved, the project will allow patients with cardiovascular disease to receive all of their cardiac care within the community in which they live. According to the applicant, the proposed facility also allows for improvements in health care delivery and quality of care by providing a continuum of care through a comprehensive cardiovascular program.

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

Financial projections indicate net incomes of \$1,801,549 the first year, \$3,081,330 the second year, and \$3,462,621 the third year. Therefore, the project appears to be economically viable.

According to the applicant, the proposed charges for the service and the profitability of the proposed service are in line with other similar services in the state.

The applicant proposes to perform 109 procedures the first year, 137 the second year and 152 the third year. Utilization of facilities in the applicant's service area ranged from 43 to 857 procedures for FY 2005.

The application contains a feasibility study conducted by Health Care Visions, Ltd. attesting to the feasibility of this project.

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

The applicant indicates that all residents of the area, including all racial and ethnic minorities, women and handicapped persons have access to the services provided by Magnolia Regional Health Center and will have access to the proposed open-heart surgery service.

The applicant proposes to offer open-heart surgery at the facility. No services or beds are being relocated.

As stated earlier, utilization of facilities in the applicant's service area ranged from 43 to 857 procedures for FY 2005. Updated data to the *FY 2006 State Health Plan* indicates that utilization of open-heart surgery programs statewide declined from 4,308 procedures in FY 2004 to 4,036 procedures in FY 2005.

A letter of opposition was received from North Mississippi Medical Center, Tupelo, (NMMC) which addresses the reductions in volume of open-heart services over the last two years and points out that if approved, this project will significantly dilute volume at NMMC and could jeopardize the "quality derived from quantity" surgical procedures.

This application included three letters of support/comment from physicians in the area.

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

Applicant asserts that Magnolia does not discriminate against the poor, the handicapped, women, the elderly and members of racial and ethnic minorities.

The applicant indicates that the facility has no existing obligations under any federal regulation requiring provision of uncompensated care, community service, or access by minority/handicapped persons.

The applicant presents the following historical patient revenue percentages and dollar amounts for care to medically indigent patients:

	Gross Patient Revenue (percent)	Gross Patient Revenue (dollar amount)
Historical Year 2004	3.0%	\$ 5,094,000
Historical Year 2005	2.58	4,931,610

The applicant submits that Magnolia is located in Corinth, Mississippi, and is accessible to the residents of its service area by U.S. Highways 45 and 72. The applicant believes that approval of this program will enhance geographic accessibility by making open-heart surgery services more immediately available to these residents.

**GR Criterion 7 - Information Requirement**

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

**GR Criterion 8 - Relationship to Existing Health Care Systems**

The applicant submits that while there are other hospitals that perform open-heart surgeries within CC/OHSPA1, these hospitals are greater than 45 miles from Magnolia. The applicant further states that residents within Magnolia's service area must drive significant distances when they require open-heart surgery services.

**GR Criterion 9 - Availability of Resources**

Applicant states that Magnolia plans to recruit any new personnel required for implementation of this project from its present recruiting efforts and affiliation arrangements.

The applicant affirmed that it has sufficient management and financial resources necessary to carry forward with this project.



**GR Criterion 10 – Relationship to Ancillary or Support Services**

The applicant affirmed that all necessary support and ancillary services for the proposed project are available and that any increase in the use of ancillary or support services as a result of this project will be accommodated through existing facilities and resources.

**GR Criterion 16 - Quality of Care**

Magnolia Regional Health Center is in compliance with the *Minimum Standards of Operation for Mississippi Hospitals*, according to the Division of Health Facilities Licensure and Certification. The hospital is accredited by the Joint Commission on Accreditation of Health Care Organizations.

The applicant submits that Magnolia has a long history of providing a high standard of quality care.

**IV. FINANCIAL FEASIBILITY**

**A. Expenditure Summary**

		Percent
Construction Cost -- New	\$0	0
Construction Cost -- Renovation	0	0
Capital Improvements	0	0
Total Fixed Equipment Cost	0	0
Total Non-Fixed Equipment Cost	2,883,142	100.00
Land Cost	0	0
Site Preparation Cost	0	
Fees (Architectural, Consultant, etc.)	0	
Contingency Reserve	0	
Capitalized Interest	0	0
Other	0	0
<b>Total Proposed Capital Expenditure</b>	<b>\$2,883,142</b>	<b>100.00</b>

The above expenditure is proposed for the purchase of open-heart surgery and related equipment necessary to provide open-heart surgery services at Magnolia Regional Medical Center.

**B. Method of Financing**

The applicant proposes to finance the project with cash reserves. The audited financial statements contained in the application indicate that sufficient cash was available to fund the project at the end of 2005.

**C. Effect on Operating Cost**

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

**D. Cost to Medicaid/Medicare**

The impact of the project on third party payers is as follows:

<u>Payor</u>	<u>Utilization Percentage</u>	<u>First Year Cost</u>
Medicaid	6.0	\$412,800
Medicare	70.0	4,815,998
Other Payo*	24.0	1,651,199
<b>TOTAL</b>	<b>100.0</b>	<b>\$6,879,997</b>

**V. RECOMMENDATIONS OF OTHER AFFECTED AGENCIES**

The Division of Medicaid was provided a copy of this application for comment. The Division requested additional information on the project. No further comments were received from the Division of Medicaid.

**VI. CONCLUSION AND RECOMMENDATION**

This project is in substantial compliance with criteria and standards for the acquisition or otherwise control of open-heart surgery equipment and the offering of open-heart surgery services, as contained in the *2006 State Health Plan*; the *Mississippi Certificate of Need Review Manual, revised 2000*; and all adopted rules, procedures and plans of the Mississippi State Department of Health.

Currently, there are no providers of open-heart surgery services within CC/OHSPA 1 that are located within a 45-mile radius of Magnolia Regional Health Center. The applicant currently provides therapeutic cardiac catheterization services. The FY 2006 Plan requires that any new provider proposing to offer therapeutic cardiac catheterization services must also provide open-heart surgery services.

Therefore, the Division of Health Planning and Resource Development recommends approval of this application submitted by Magnolia Regional Medical Center for the acquisition or otherwise control of open-heart surgery equipment and the offering of open-heart surgery services.

**Attachment 1**

Magnolia Regional Health Center Income Statement (Project Only)			
	Year 1	Year 2	Year 3
<b>Revenue</b>			
Patient Revenue:			
Inpatient	\$9,691,389	\$12,336,841	\$13,847,405
Outpatient			
<b>Gross Patient Revenue</b>	<b>\$9,691,389</b>	<b>\$12,336,841</b>	<b>\$13,847,405</b>
Charity Care			
Deductions from Revenue	<u>1,009,843</u>	<u>1,285,499</u>	<u>1,442,900</u>
<b>Net Patient Revenue</b>	<b><u>\$8,681,546</u></b>	<b><u>\$11,051,342</u></b>	<b><u>\$12,404,505</u></b>
<b>Expenses</b>			
Operating Expenses:			
Salaries	\$ 1,541,995	\$1,603,675	\$1,712,815
Benefits	493,666	513,413	550,597
Supplies	2,133,084	2,897,235	3,469,505
Services	577,000	592,764	630,464
Lease			
Depreciation	688,628	688,628	688,628
Interest			
Other	<u>1,445,624</u>	<u>1,674,297</u>	<u>1,889,875</u>
<b>Total Expenses</b>	<b><u>\$6,879,997</u></b>	<b><u>\$ 7,970,012</u></b>	<b><u>\$8,941,884</u></b>
<b>Net Income (Loss)</b>	<b><u>\$ 1,801,549</u></b>	<b><u>\$ 3,081,330</u></b>	<b><u>\$3,462,621</u></b>
<b>Assumptions</b>			
Inpatient days	NA	NA	NA
Outpatient days	NA	NA	NA
Procedures	109	137	152
Charge per outpatient day	NA	NA	NA
Charge per inpatient day	NA	NA	NA
Charge per procedure	\$ 88,912	\$ 90,050	\$ 91,101
Cost per inpatient day	NA	NA	NA
Cost per outpatient day	NA	NA	NA
Cost per procedure	\$ 63,119	\$ 58,175	\$ 58,828

**Attachment 2**

January 2005 - October 2005 Aggregate Patient Origin Study  
Discharges by Hospital by County of Residence

Magnolia Regional Health Center

Res_co	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Alabama	5	0.43	5	0.43
Alcorn	668	57.39	673	57.82
Benton	5	0.43	678	58.25
Chickasaw	2	0.17	680	58.42
Coahoma	1	0.09	681	58.51
Itawamba	2	0.17	683	58.68
Lafayette	1	0.09	684	58.76
Lee	5	0.43	689	59.19
Marshall	3	0.26	692	59.45
Monroe	1	0.09	693	59.54
Other	2	0.17	695	59.71
Prentiss	108	9.28	803	68.99
Tennessee	105	9.02	908	78.01
Tippah	108	9.28	1016	87.29
Tishomingo	145	12.46	1161	99.74
Union	2	0.17	1163	99.91
Unknown	1	0.09	1164	100.00

**Source: Patient Origin Study, January 2005 – October 2005, MSDH.**

Ninety-seven percent (1,134) of Magnolia's 1,164 patients came from Alcorn, Prentiss, Tippah, and Tishomingo counties in Mississippi, and Tennessee for the above stated period.

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Attachment 3

<u>County</u>	<u>Pop</u>	<b>BMH - Golden Triangle</b>		<b>BMH-North Mississippi</b>		<b>Magnolia Regional</b>		<b>North MS Medical Ctr</b>		<b>TOTAL</b>
		<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	
Alcorn	37,440			0.01	374	0.80	29,952	0.19	7,114	37,440.00
Benton	8,257			0.52	4,294	0.16	1,321	0.32	2,642	8,257.00
Clay	23,106	0.45	10,398					0.55	12,708	23,106.00
Calhoun	15,522			0.57	8,848			0.43	6,674	15,522.00
Chickasaw	19,618			0.04	785	0.01	196	0.95	18,637	19,618.00
Choctaw	10,552	0.29	3,060					0.71	7,492	10,552.00
Grenada	25,027			0.86	21,523			0.14	3,504	25,027.00
Itawamba	24,407					0.01	244	0.99	24,163	24,407.00
Lafayette	42,230			0.96	40,541			0.04	1,689	42,230.00
Lee	86,614	0.00		0.00		0.00		100.00	86,614	86,614.00
Lowndes	62,538	0.95	59,411	0.01	625			0.04	2,502	62,538.00
Marshall	36,810			0.45	16,565	0.02	736	0.53	19,509	36,810.00
Monroe	40,858	0.18	7,355	0.02	818			0.80	32,686	40,858.00
Noxubee	12,642	0.94	11,883					0.06	759	12,642.00

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Oktibbeha	44,345	0.54	23,946	0.04	1,774		0.42	18,625	44,345.00	
Panola	39,425			0.94	37,060		0.06	2,365	39,425.00	
Pontotoc	31,019			0.20	6,204		0.80	24,815	31,019.00	
Prentiss	27,577			0.01	276	0.37	10,203	0.62	17,098	27,577.00
Tate	28,696			100.00	28,696				28,696.00	
Tippah	23,504			0.10	2,350	0.45	10,577	0.45	10,577	23,504.00
Tishomingo	21,163			0.01	211	0.49	10,370	0.50	10,582	21,163.00
Union	28,120			0.42	11,810	0.02	562	0.56	15,747	28,120.00
Webster	11,213	0.16	1,794	0.02	224			0.82	9,195	11,213.00
Winston	20,866	0.78	16,275					0.22	4,591	20,866.00
Yalobusha	14,128			0.96	13,563			0.04	565	14,128.00
<b>TOTALS- Mississippi</b>	<b>735,677</b>		<b>134,122</b>		<b>196,541</b>		<b>64,161</b>		<b>340,853</b>	<b>735,677.00</b>
Tennessee									38,480	
<b>TOTALS</b>									<b>102,641</b>	

Source: January 2005 - October 2005 Aggregate Patient Origin Studies, MDH