

Technology and Equipment Committee
Agency Report on
An Adjusted Need Determination Petition for
Fixed Cardiac Catheterization Equipment in
New Hanover County
Proposed 2012 State Medical Facilities Plan

Petitioner:

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Request:

New Hanover Regional Medical Center (NHRMC) requests an adjusted need determination to remove the need for one additional fixed cardiac catheterization laboratory in New Hanover County, as shown in the “Proposed 2012 State Medical Facilities Plan (SMFP).”

Background Information:

New Hanover Regional Medical Center is one of two providers that offered fixed cardiac catheterization services in New Hanover County during FY 2010. New Hanover Regional Medical Center had a total of five fixed cardiac catheterization laboratories and Wilmington Medical Center had one fixed unit of cardiac catheterization equipment, for a total of six units of fixed cardiac catheterization equipment in New Hanover County during that time.

Using the standard need determination methodology for fixed cardiac catheterization equipment, Methodology One in the “Proposed 2012 SMFP”, a need determination for one additional fixed unit of cardiac catheterization equipment was generated in New Hanover County, driven by NHRMC’s cardiac catheterization utilization (7,065 diagnostic equivalent procedures). This utilization level indicated a need for 5.89 fixed units based on five fixed units operating at 80% capacity.¹ Wilmington Heart Center showed a need for only 0.76 units of fixed equipment, based on 916 diagnostic-equivalent procedures. In total, cardiac catheterization utilization in New Hanover County resulted in a need determination for 7 fixed units of cardiac catheterization equipment [5.89 + 0.76 = 6.65].

¹ “The North Carolina State Health Coordinating Council defines capacity of an item of cardiac catheterization equipment as 1,500 diagnostic-equivalent procedures per year, with the trigger of need at 80 percent of capacity” (Proposed 2012 SMFP).

However, NHRMC notified the Agency in July of an error in the number of therapeutic cardiac catheterizations reported by the hospital in its 2011 Hospital License Renewal Application. New Hanover Regional submitted corrected data which reduced its number of therapeutic cardiac catheterizations from 2,446 procedures to 2,204 procedures. Because the SMFP values one therapeutic cardiac catheterization procedure at 1.75 diagnostic equivalents, and one diagnostic cardiac catheterization procedure at one diagnostic equivalent procedure, NHRMC's total diagnostic equivalents were 6,641 procedures, instead of 7,065 procedures as shown in the "Proposed 2012 SMFP". This change would have eliminated the need for an additional unit of fixed cardiac catheterization in the county, because it reduced the number of fixed units needed at NHRMC to 5.53, and the county need to 6 units of fixed cardiac catheterization equipment [$5.53 + 0.76 = 6.29$].

However, during the "Proposed 2012 SMFP" comment period, the Agency learned that Duke LifePoint, which acquired Wilmington Heart Center's fixed cardiac catheterization unit in early 2011, had ceased operations in May and was converting the equipment to a mobile unit for use outside of New Hanover County². In keeping with the language of Methodology One, the inventory of fixed cardiac catheterization equipment should include existing equipment in operation "immediately prior to publication of the annual State Medical Facilities Plan." Conversely, equipment no longer in operation, should be excluded from the inventory in the annual plan. By revising the proposed plan to exclude Wilmington Heart Center's fixed cardiac catheterization unit, New Hanover County again shows a need for one additional fixed cardiac catheterization unit based on 5 fixed units and a need for 6.3 fixed cardiac catheterization units [$5.53 + 0.76 = 6.3 - 5 \text{ fixed units} = 1.3 \text{ fixed units needed}$].

New Hanover Regional Medical Center asserts that an adverse effect on providers and consumers will occur without an adjustment to the county need determination. The Petitioner cites research from the Health Care Advisory Board that projects inpatient cardiac catheterization services will experience a 5-year, 15% decrease and a 10-year, 20% decrease in volume. The Petitioner also notes the declining numbers of diagnostic cardiac catheterizations reported in past State Medical Facilities Plan since 2005.

Analysis:

The September 2011 issue of "Consumer Reports" includes an article on the overuse of angioplasty nationally, as follows:

"Overuse of angioplasty has made national headlines this past year, with the Department of Justice and Senate Finance Committee investigating incidences in which hospitals subjected hundreds of patients to needless procedures.

But recent research suggests that the problem is not isolated to a few overzealous practitioners. Only half of procedures that used angioplasty to open narrowed arteries in nonemergency situations were clearly appropriate, according to a study of almost 500,000 cases published in July 2011 in the Journal of the American Medical Association. The researchers also uncovered wide variation among hospitals; the rate of clearly inappropriate procedures varied from less than 6 percent at some to greater than 16 percent at others."

² At this writing, the Agency does not know if the DLP mobile cardiac catheterization unit will be taken out of the state or to another county within the state.

The table below shows an historical downward trend in numbers of total diagnostic equivalent cardiac catheterization procedures performed throughout North Carolina since 2005, and a relatively flat increase in the number of angioplasty (PTCA) therapeutic procedures performed during that time.

Statewide Trend in Numbers of Fixed Cardiac Catheterization Procedures

Fixed Cardiac Catheterization Procedures	2005	2010	Percent Change
Diagnostic	84,662	64,856	-23.4
Therapeutic or Interventional	28,659	28,968	1.1
Total Diagnostic Equivalent Procedures-NC	134,815	115,550	-14.3

In New Hanover County, the combined number of fixed diagnostic equivalent cardiac catheterization procedures by both providers increased by 5.4% from 2005 to 2010, while the number of total diagnostic equivalent procedures performed at NHRMC declined by 7.4%.

New Hanover County Trend in Numbers of Fixed Cardiac Catheterization Procedures

Fixed Cardiac Catheterization	2005	2010	Percent Change
NHRMC			
Diagnostic Procedures	3,943	2,784	-29.4%
Therapeutic Procedures	1,846	2,204	19.4%
Total Diagnostic Equivalents	7,173	6,641	-7.4%
Wilmington Heart Center			
Diagnostic Procedures*	NA	919	--
Therapeutic Procedures* *	NA	NA	--
Total Diagnostic Equivalents	7,173	7,560	5.4%

*Wilmington Heart Center did not perform fixed cardiac catheterizations until 2008.

**Wilmington Heart Center did not perform therapeutic cardiac catheterization procedures.

NHRMC received CON approval to acquire a fifth fixed cardiac catheterization laboratory unit, which was not yet developed as of July of this year. Therefore, the cardiac catheterization utilization reported in NHRMC's 2011 Hospital Licensure Renewal Application was performed on four fixed units in operation at that time. NHRMC is maximizing its use of existing fixed equipment and will be able to absorb additional cardiac catheterization volume that previously would have been performed at Wilmington Heart Center, when the hospital's fifth fixed unit becomes operational.

Agency Recommendation:

The Agency supports the standard methodology for fixed cardiac catheterization equipment in the "Proposed 2012 SMFP". However, in consideration of the above, the Agency has determined that New Hanover Regional Medical Center has demonstrated "unique" or "special attributes" which are not appropriately addressed by the standard methodology. The Agency recommends approval of the petition to adjust the projected need determination for an additional unit of fixed cardiac catheterization equipment to zero (0) in New Hanover County in the Final 2012 SMFP.