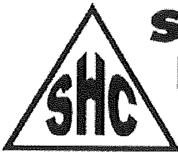
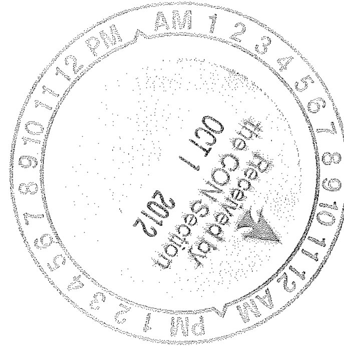


Strategic Healthcare Consultants



October 1, 2012

Mr. Craig Smith
Certificate of Need Section
Division of Facility Services
2704 Mail Service Center
Raleigh, NC 27699-2704

Re: Comments Regarding CON Project Applications
Project ID # J-10018-12 WakeMed Inpatient Rehabilitation
Project ID # J-10021-12 Duke Raleigh Hospital Inpatient Rehabilitation

Dear Mr. Smith:

The attached written comments are submitted on behalf of UNC Hospitals. Thank you for your consideration of these comments.

Sincerely,

David French
Consultant to UNC Hospitals

Cc: Dee Jay Zerman, UNC Hospitals

P.O. Box 2154
Reidsville NC 27323

Comments Regarding WakeMed Project ID # J-10018-12

WakeMed proposes to add 12 inpatient rehabilitation beds to its existing facility for a total of 110 inpatient rehabilitation beds at completion of the project. The scope of the project includes new construction of a 69,794 S.F. addition to house the 12 new beds and 29 existing beds currently located in semi-private rooms. Also, the facility includes adult day treatment, outpatient treatment and pediatric treatment areas and transitional living space on each floor. The total capital cost of the project is projected to be $25,230,051.

Criterion 3 Comments

The WakeMed application fails to conform to CON review criterion 3 because its methodology is based on unreasonable assumptions regarding market share. WakeMed uses 5-year average market share percentages for all its service area counties, including Wake and Johnston. These 5-year averages are vastly different from the most recent 9 months' annualized data seen in the tables below. Furthermore, WakeMed shows a dramatic long-term decline in the actual numbers of patient that it serves from Wake and Johnston Counties. WakeMed's 2012 market share percentages for Johnston and Wake Counties are 57.85% and 75.93% respectively. These are far less than the five year average.

WakeMed Most Recent 9 Months Annualized	WakeMed Cases 2012 Based on 9 months Annualized *	Total 2012 Rehab Cases**	Market Share %			WakeMed 5 Year Average Method
Johnston County Cases	151	261	57.85%		Johnston County Cases	80.63%
Wake County Cases	915	1,205	75.93%		Wake County Cases	88.12%
* WakeMed Application Page 111 Table IV.8					*** WakeMed Application Page 112 Table IV.10	
** WakeMed Application Pages 109-110 Table IV.7						

	2007	2008	2009	2010	2011	2012 (9 mth annualized)
WakeMed Cases from Johnston	219	212	201	170	184	151
WakeMed Market Share Johnston Cases	84.56%	83.79%	80.08%	78.70%	76.03%	57.85%
WakeMed Cases from Wake	970	1057	991	978	935	915
WakeMed Market Share Wake Cases	88.67%	90.11%	88.88%	87.24%	85.70%	75.93%

In 2007 WakeMed's inpatient rehabilitation unit provided care to 219 patients from Johnston County. This utilization has declined 31% to the 151 patients reported based on 9 months' annualized data for 2012. WakeMed's market share percentages for Johnston County show this steep decline.

WakeMed's inpatient rehabilitation beds briefly surpassed 1,000 Wake County patients per year in 2008 but have declined steadily in the four subsequent years. The 9 months' annualized volume of 915 patients from Wake County represents only a 75.93 percent market share.

Table IV.11 seen on page 113 demonstrates how the 5-year average methodology creates overstated projections for Johnston and Wake Counties. The information from Table IV.11 is summarized below to demonstrate that WakeMed's projections result in overstated one year increases for the projected numbers of patients from Johnston and Wake Counties.

	2012 (9 mth annualized)	2013	% Increase
Johnston	151	214	41.72%
Wake	915	1,084	18.47%
Other	558	609	9.14%
Total	1,624	1,907	17.43%

There is no explanation in the WakeMed application for why this huge surge in patients from Johnston and Wake County will occur in 2013. This unjustified increase in cases at WakeMed far exceeds any single year increase that has occurred in WakeMed's historical experience.

Over the past five years, WakeMed has experienced a decline in the numbers of rehabilitation inpatients from Johnston County, dropping from 219 patients in 2007 to 151 patients for 2012 (annualized). Only one year did WakeMed shows a gain of 14 patients but that was followed by a decrease of more than twice that amount. Therefore it is unreasonable to project a one year increase in 2013 of 63 patients for a 41.72 percent increase.

The unbelievable leap from 915 Wake County patients in Year 2012 to 1084 patients in 2013 equals a one year gain of 169 patients. This far exceeds the one year increase of 87 patients from Wake County that occurred from 2007 to 2008. WakeMed's historical trend data shows a decline in Wake County patients with the two most recent years far below the utilization for the preceding four years.

The application projects an increase from 88 cases from "Out of Area" in Year 2012 to 103 cases from "Out of Area" in 2013 for a 17 percent one year increase. This growth projection is unjustified and unreasonable because WakeMed fails to demonstrate that existing inpatient rehabilitation providers throughout North Carolina are unwilling or unable to provide care for these patients. The 2012 State Medical Facilities Plan documents that existing inpatient rehabilitation beds have abundant capacity to serve patients in the counties that are listed by WakeMed as "Out of Area."

The 2013 utilization projections for the unjustified increase in patients and days of care is unreasonable because WakeMed will not have use of 98 licensed inpatient rehabilitation beds for the entirety of 2013. The WakeMed application states that the previously-approved CON # J-8631-11 is currently in design development and is projected to be completed in "early 2013." Therefore, it is reasonable to assume that WakeMed will only have 84 licensed inpatient rehab beds available for the period from October 1, 2012 through December 31, 2012 and some portion of the early months of 2013. WakeMed will continue to have facility constraints throughout 2013 because the facility will continue to utilize semi-private rooms. Page 77 of the application states that semi-private rooms have been the chief patient compliant.

In addition to the mathematical flaws in the methodology, the WakeMed application fails to demonstrate the need to construct new space on the ground floor and first floor for the day treatment program and outpatient therapy services including physical therapy, occupational therapy and speech therapy. The application fails to describe any current facility problems or limitations for these outpatient services in their present locations. No historical utilization or future utilization projections are provided for these outpatient services. While these services are described as part of the proposed project, the staffing section fails to identify the positions for these departments separately from the staffing for the inpatient rehabilitation beds. Pages 575 and 576 provide the facility plans showing that the outpatient rehabilitation services occupy a large portion of the ground and first floor areas which by themselves would easily exceed $2 million in capital costs. The omission of utilization projections, staffing projections and financial projections for the day treatment program and outpatient therapy services makes this application unapprovable.

The WakeMed application includes patient origin projections for the proposed inpatient rehabilitation unit but fails to include patient origin for its day treatment program and outpatient rehabilitation services. This also causes the application to be non-conforming to criterion 3.

Criterion 4 comments:

The WakeMed application is nonconforming to criterion 4 because the operational projections are inaccurate and incomplete. The proposal fails to demonstrate that the proposed project is a cost effective alternative. WakeMed omits the utilization projections, staffing projections and financial projections for the day treatment program and outpatient therapy services even though these services are included in the scope of services and the facility plans. The applicant states that these outpatient services are currently available. However, WakeMed fails to explain the future use of the space that will be vacated by the relocation of outpatient therapy services to the proposed ground floor and first floor of the new addition.

The WakeMed application fails to demonstrate the proposed $25 million expansion project is a reasonable alternative to gain 12 inpatient rehabilitation beds and increase the number of private patient rooms. Furthermore, the application fails to demonstrate the need to relocate and replace day treatment and outpatient therapy services and administrative offices. A more reasonable and cost effective alternative would be to leave these services in their present locations.

Criterion 5 comments:

The project application is nonconforming to criterion 5 because the operational projections are unreasonable and incomplete. As discussed previously, WakeMed's methodology is based on the 5-year average market share calculations that attempt to obfuscate the steep decline in patient admissions from Wake and Johnston Counties.

The WakeMed inpatient rehabilitation utilization projections for 2013 that relate to the proposed project (based on 5-year market share percentages) are certainly inconsistent with WakeMed's own internal operational projections and actual budget figures for FY 2013. This is due to multiple factors:

- WakeMed does not utilize 5-year market share projections for its actual FY 2013 operating budget because the health system puts far greater emphasis on the utilization for the most recent year.
- WakeMed's current market share percentages and inpatient rehab volumes are based on present day referral patterns and relationships, not those that existed four to five years ago.
- A large percentage of WakeMed's inpatient rehabilitation admissions originate from WakeMed acute care discharges; WakeMed does not project a 17 percent increase in acute care discharges in 2013.

Financial projections are unreliable as these are based on the overstated utilization projections. The financial statements fail to include the revenue projections and expenses for the day treatment program and outpatient therapy services.

The Financial Statement and Form B assumptions are unreliable and inconsistent with the projected number of cases in Sections III and IV. The following table shows the inconsistent information.

	FY 2017	FY 2018	FY 2019
Page 188 Financial Assumptions			
Cases	2,042	2,019	2,023
Change from previous year	1.60%	-1.10%	1.60%
Page 120 Table IV.22	2,042	2,075	2,109
Variance in Numbers of Cases		-56	-86

The variance of 56 cases in Year 2 and 86 cases in Year 3 demonstrates that the financial projections are based on inconsistent and unreliable assumptions. The financial assumptions on page 188 cannot be explained as a typographic error because the financial assumptions table includes the Year 2 and Year 3 numbers of cases that differ from page 120 and also the percentages for the change from the previous years.

The financial proforma statements for the project omit the revenues and operational expenses for the day treatment program and outpatient therapies. These are described in the scope of services and included in the facility plans. Therefore the financial proforma statements do not accurately reflect all of the hospital-based services that are included within the scope of the proposed project.

Criterion 6 comments:

The WakeMed application fails to conform to criterion 6 because the proposed project will add inpatient rehabilitation beds that are unjustified and duplicative of the existing and approved beds at WakeMed. As discussed in the criterion 3 comments, the projected numbers of cases for Johnston County and Wake County patients are overstated and unreasonable. The applicant's projections do not adequately consider the downturn in the numbers of cases from these counties that has occurred in the most recent years.

The proposed project will construct unjustified and duplicative spaces for the day treatment program and outpatient therapies. WakeMed states that these existing services will relocate to new locations in the new addition. No utilization projections are provided to demonstrate that additional spaces are needed for these services in addition to the current facility space these departments now occupy.

Criterion 7 comments

The application fails to provide staffing information for the day treatment program and outpatient therapies that are included in the scope of the proposed project. Page 30 of the application states that WakeMed Rehab is organized according to a continuum of care model. Even if these positions are shared and included in the staffing projections for the proposed expansion, the applicant fails to explain how these staffing projections are based on reasonable assumptions. No operational projections are provided for day treatment and outpatient therapies. Therefore it is impossible to determine the adequacy of the proposed staff.

Criterion 12 comments:

The WakeMed proposal fails to conform to criterion 12. The capital cost for the proposed project is not based on reasonable cost projections. The application is deficient because it does not adequately describe the square footage of the various departments and spaces. The capital cost certification in Exhibit 30 on page 518 describes the project as a 41-bed inpatient rehab project but fails to document if the capital cost includes the new construction for outpatient therapy services and all of the spaces depicted in the facility plans.

The facility plans in the application are incomplete and fail to show the location(s) of the 5,000 square feet of space that will be renovated within the scope of the project. Also, the application fails to describe what services will be displaced by the renovation of the 5,000 square feet.

The application fails to describe the potential renovation costs and future use of the spaces that are currently utilized by the day treatment program, outpatient therapies and WakeMed Rehabilitation Hospital Administration. All of these services are described as existing services and must have a current physical location. Once these services move to the proposed new spaces, vacant space will result.

Criterion 18a comments:

The WakeMed application fails to conform to criterion 18a because the proposed project is based on unreliable operational projections and the project lacks adequate justification. WakeMed operates 84 existing inpatient rehab beds and holds CON approval to add 14 new beds. This capacity is more than sufficient to serve the needs of WakeMed and its current referral sources for the foreseeable future.

WakeMed controls the majority of existing inpatient rehabilitation beds in Health Service Area IV which does not enhance patient choice or promote positive competition. The proposed project will not result in a greater depth of inpatient rehabilitation services.

Comments Regarding Duke Raleigh Hospital Project ID # J-10021-12

Duke Raleigh Hospital proposes to develop 12 inpatient rehabilitation beds at its existing facility in Raleigh. The scope of the project involves renovation of 15,025 square feet to develop 10 private patient rooms and 1 semi-private patient room. The proposed project will require the relocation of infusion services and the ostomy clinic to leased facility space. The total capital cost of the project is budgeted at $4,172,000.

Criterion 3 comments:

The Duke Raleigh Hospital (DRAH) application fails to conform to CON review criterion 3 because the methodology and assumptions are flawed in several ways:

On page 63 the applicant discusses Step 1 of the methodology with the statement "Therefore DRAH estimates that 50 percent of the patients from Wake, Johnston and Franklin Counties historically transferred from DUH (with a diagnoses appropriate for the proposed DRAH inpatient rehabilitation unit) would be transferred to DRAH's proposed unit." However, the applicant includes no rationale or explanation to support the reasonableness of the 50 percent assumption.

DRAH's market share projections for Wake County are unreasonable and overstated because existing rehabilitation units at WakeMed and UNC Hospitals already provide a greater depth and scope of services.

The in-migration assumption of 15 percent is unreasonable because it is inconsistent with the applicant's historical acute care patient origin on page 91 which shows only 12.2 percent. It is highly unlikely that a large percentage of patients from outside of HSA IV would be willingly transferred to a small and newly-opened inpatient rehabilitation unit that offers a limited scope of services.

The applicant's projections of 86.6% annual occupancy in Year 2 is unreasonable based on a comparison to the historical utilization of the inpatient rehabilitation beds at Durham Regional Hospital. This existing 30 bed has remained at less than 80 percent occupancy for the past four years. Furthermore, Duke University Health System has previously operated and closed inpatient rehabilitation units in Durham.

Criterion 4 comments:

The Duke Raleigh Hospital application is nonconforming to criterion 4 because the operational projections are inaccurate and overstated. DRAH projects to only serve adult patients with a limited scope of services. On page 13, the application states that DRAH does not expect to serve patients with major trauma, traumatic brain injury or burns.

Duke University Hospital and DRAH have the option to refer patients to the inpatient rehabilitation unit at Durham Regional. The low occupancy level at this 30-bed facility demonstrates that the Duke Health System has no genuine unmet need.

The proposed project does not offer improved geographic access because all of the inpatient rehabilitation services proposed by DRAH are currently available to patients in Wake County.

Also, DRAH fails to demonstrate that the proposed project is a cost effective alternative because the staffing levels are substandard for nursing assistant positions. Furthermore, the staffing table and financial projections omit the salary for the Executive Director of Rehabiltation.

The proposed project is not a cost effective alternative because DRAH proposes to relocate infusion services and the ostomy clinic to leased space. No lease agreement is provided in the application to demonstrate that this component of the project is feasible.

Criterion 5 comments:

The DRAH application is nonconforming to criterion 5 because the operational projections are unreasonable and overstated. Financial deficiencies of the application include:

DRAH projects to serve no patients with traumatic injuries, major trauma or burns. Accordingly one would expect low gross charges and net revenue. Instead, the patient charges and gross revenue projections are greatly overstated

Expenses are understated and unreliable because some positions are excluded. Form B Statement of Revenue and Expenses states that salaries do not include the Executive Director of Rehabiltation because it is an existing position. It is incorrect to totally exclude this position from the expenses because page 134 states that the Executive Director <u>will have direct responsibility</u> for the unit.

The application fails to include a lease agreement for the space that is to be utilized to accommodate the relocation of infusion services and the ostomy clinic. This size of the facility space and the cost per square foot for this lease are not disclosed.

The applicant states on pages 148 and 149 that some financial projections are based on the historical experience of Durham Regional Hospital's inpatient rehabilitation unit. However, the applicant fails to demonstrate that Durham Regional Hospital inpatient rehabilitation unit is comparable to the proposed project. The website for Durham Regional Hospital states that the existing inpatient unit serves patients with major trauma and traumatic brain injury. These types of patients are not included in the DRAH proposal. Furthermore, the average length of stay for inpatient rehabilitation at Durham Regional Hospital is not the same as the average length of stay at DRAH. Differences in the average length of stay cause significant variance in the average cost per patient day. Therefore, the differences in the types of services and lengths of stay make it is unreasonable to use the DRH historical costs for supplies, drugs and purchased services as a basis for projecting the expenses for the DRAH project.

Criterion 6 comments:

The proposed project by DRAH represents unnecessary duplication of healthcare services because the Duke Health System has access to the underutilized inpatient rehabilitation beds located at Durham Regional Hospital. These licensed beds are leased and operated by Duke Health System. The application fails to provide the projected utilization and occupancy of the inpatient rehabilitation beds at Durham Regional Hospital in order to demonstrate conformity with criterion 6. This is necessary because the applicant uses market share projections as the basis of demonstrating need for the proposed project. Durham Regional Hospital's inpatient rehabilitation serves patients from throughout HSA VI and has existing market share for multiple counties that would certainly be affected by the changes in referral patterns that are proposed by DRAH.

Criterion 7 comments:

The DRAH application fails to conform to criterion 7 because the staffing level of 4.8 FTEs for nursing aide positions is not adequate to provide continuous care for an average daily census of 10 to 11 patients per day. The 4.8 FTEs equals 9,984 annual hours or 2.63 hours per patient day (HPPD). This low level of staffing is far below the mean of 4.07 HPPD that is published in Rehabiltation Nursing[1].

This level of staffing does not provide sufficient staff to provide care to the patients because it means that some shifts have only one nursing assistant to care for 10 to 11 patients. The inpatient rehabilitation patient population requires higher levels of assistance and support with activities of daily living.

The staffing table and financial statements omit the Executive Director of Rehabiltation. This omission is incorrect because this position is directly involved in the operation and management of the unit.

Criterion 12 comments:

The DRAH application is nonconforming to criterion 12 because the capital cost to upfit leased space for relocation of infusion services and the ostomy clinic are not adequately explained. In Exhibit 10, the letter from the project architect, Dawn Gum includes $445,000 for the displacement move upfit. However, the architect's letter and the application fail to document the location and square footage of space that will be renovated to allow infusion services and the ostomy clinic to be relocated.

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[1] Nelson A, Powell-Cope G, Palacios P., et al., Nurse Staffing and Patient Outcomes in Inpatient Rehabiltation Settings, Rehabilitation Nursing, V 32, pp 179-202.

The application fails to provide a lease and a basic floor plan for the infusion services and the ostomy clinic that will be relocated as part of this project proposal. These areas are subject to review by the DHSR Construction Section because this will remain under the hospital's license and multiple patients will be served at this new location.

Criterion 13c comments

The DRAH application is nonconforming to criterion 13c because DRAH projects substantially lower percentages of Medicaid (9.8%) as compared to existing providers WakeMed and UNC Hospitals. In addition, DRAH projects to serve no patients with traumatic injuries, major trauma or burns. Hospital trauma centers recognize that the patient population that suffers traumatic injuries, major trauma or burns includes much high percentages of Medicaid and uninsured as compared to the high Medicare and insured patient population that have orthopedic procedures, neurological procedures and strokes. The DRAH application offers a narrow scope of services to target the patient population with optimal healthcare coverage and thus reimbursement.

Criterion 18a comments:

The DRAH fails to conform to criterion 18a because the proposed project is based on unreliable operational projections. The proposed 12-bed inpatient rehabilitation unit offers no new services and no special attributes that will enable the applicant to achieve its unreasonably high utilization projections. The applicant's high revenue projections combined with low staffing levels maximizes DRAH's profit but delivers poor value to the patient population.

Comparative Analysis

Location Analysis

WakeMed's project application # J-8631-11 obtained CON approval to add 14 beds to its existing 84 beds for a total of 98 beds allocated to Wake County. This assigns 58 percent of the inpatient rehab beds inventory to Wake County, which has only 50 percent of the population of HSA IV. Consequently the proposals by WakeMed and Duke Raleigh Hospital are least effective regarding geographic location

It would be incorrect to analyze and compare the current and proposed number of rehabilitation beds for UNC Hospitals based on the population of Orange County because UNC Hospitals is designated by the North Carolina Legislature as a public academic medical center operated by and for all the people of North Carolina. The patient origin for UNC Hospitals' acute care and inpatient rehabilitation demonstrates that patients from throughout the state are being served. The proposal by UNC Hospitals to add 12 inpatient beds to its existing facility in Orange County is superior to the WakeMed and DRAH applications.

Types of Inpatient Rehabilitation of Services

The following table compares shows the variation of inpatient rehabilitation offered by UNC Hospitals, WakeMed and Duke Raleigh Hospital.

Scope of Services	Major Trauma w Brain or Spinal Cord Injury	Major Trauma wo Brain or Spinal Cord Injury	Traumatic Brain Injury	Traumatic Spinal Cord Injury	Amputation	Burn	Pediatric
UNC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WakeMed	Yes	Yes	Yes	Yes	Yes	No	Yes
DRAH	No	No	No	No	No	No	No

The DRAH proposal provides the least range in the types of inpatient rehabilitation patients that are projected to obtain services. WakeMed provides a broad array of services except it projects to serve no burn patients. UNC Hospitals is comparatively superior because it projects to serve all of the above types of rehabilitation, including burn rehabilitation.

Comparison of Staffing Levels Based on RN and Nursing Aide Hours per Patient Day

The three following tables provide the comparison of the Year 2 FTE staffing for RN and Nurse Aide (or Nursing Assistant) positions for the three applications. UNC Hospitals' application is comparatively superior because it projects the highest RN hours per patient day and the highest nursing aide hours per patient day.

UNC	Staff Positions	YR 2 FTEs	Annual Hours	Yr 2 Pt Days	Paid hrs per Pt Day
	RN	37.8	78,624	12428	6.33
	Nurse Aides	27.8	58,102	12428	4.68

WakeMed		YR 2 FTEs	Annual Hours	Yr 2 Pt Days	Paid hrs per Pt Day
	RN	86.22	179,338	33366	5.37
	Nurse Aides	60.31	125,445	33366	3.76

DRAH		YR 2 FTEs	Annual Hours	Yr 2 Pt Days	Paid hrs per Pt Day
	RN	9.6	19,968	3791	5.27
	Nurse Aides	4.8	9,984	3791	2.63

The DRAH application is the least effective because the applicant projects the lowest RN and Nurses Aides hours per patient day.

Payor Mix Percentages

The following table shows the payor percentages for the three listed applicants.

	Medicaid	Medicare	Self Pay Charity
UNC	22.09%	44.85%	7.44%
WakeMed	15.36%	55.54%	2.54%
DRAH	9.80%	58.60%	3.00%

UNC Hospitals' proposal is superior because it projects the highest Medicaid and Self Pay / Charity Care percentages. The DRAH proposal is the least effective because it shows the lowest Medicaid percentage and the second lowest Self Pay / Charity Care percentage.

Comparison of Financial Statistics

The following tables compare the key financial statistics for the three named applications.

YR 2 Gross Revenue per Pt Day

	Total Gross Revenue	Patient Days	Gross Rev. per Pt Day
UNC	$19,486,439	12,428	$1,568
WakeMed	$174,058,940	32,509	$5,354
DRAH	$13,388,780	3,791	$3,532

YR 2 Net Revenue per Pt Day

	Total Net Revenue	Patient Days	Net Revenue per Pt. Day
UNC	$13,447,044	12,428	$1,082
WakeMed	$51,911,051	32,509	$1,597
DRAH	$5,349,414	3,791	$1,411

Year 2 Total Expense per Pt Day

	Total Expenses	Patient Days	Expense Per Patient Day
UNC	$13,298,277	12428	$1,070
WakeMed	$41,237,888	32509	$1,269
DRAH	$3,462,976	3791	$913

The UNC Hospitals application is comparatively superior with the lowest average gross revenue per patient day and the lowest average net revenue per patient day based on reasonable operational and financial projections.

The WakeMed application is the least effective application regarding gross revenue per patient day and net revenue per patient day because its projections are the highest.

The DRAH application projects the lowest costs per patient day. However, its expenses are unreliable due to understated and omitted salary expenses. The UNC Hospitals application is comparatively superior because it provides the lowest expense per patient day based on reasonable assumptions and projections.