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PETITION

Petition for Change to Cardiac Catheterization Need Determination Methodology

PETITIONER

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INTRODUCTION

UNC REX Healthcare (Rex) respectfully petitions the State Health Coordinating Council (SHCC) to change the Cardiac Catheterization Need Determination Methodology in the *2017 State Medical Facilities Plan* (*2017 SMFP*). This request is the most recent in a series of petitions over the last three years from Rex including both methodology change and adjusted need determination petitions. Rex's goal throughout this process has been to be able to provide exceptional patient care. Today, and for the last three years, Rex's cardiac catheterization capacity is insufficient to care for the needs of its patients. Specifically, using the capacity definitions in the SMFP, Rex currently has a deficit of 1.78 cardiac catheterization labs, which means that its labs are operating at 116 percent of capacity. While there are significant operational and logistical challenges to operating at these utilization levels, Rex would encourage the SHCC to consider that these challenges also impact the lives of patients. High utilization levels mean that patients wait longer (hours and days) to get the care they need, or that a patient must be removed from a room in the middle of a scheduled procedure in order to accommodate an emergency, or that patients and their families spend a night in the hospital, instead of at home. Scheduled procedures, while not emergency cases, are needed to improve the health of these patients and the delays that may result from overcapacity equipment results in delays in their recovery and return to normal life. In addition, while the SHCC may view this issue as being limited to cardiac catheterization equipment, and certainly that is the scope of Rex's petition, it is important to understand that cardiac care for even a single patient is rarely limited to cardiac catheterization procedures, as explained in further detail below. Cardiac catheterization is part of

comprehensive cardiac care which rarely starts and ends in the cath lab. Thus, delays in providing cardiac catheterization services has negative effects on multiple other services, impacting additional patients, families, physicians and staff.

As the SHCC is aware, WakeMed's CEO, Donald Gintzig, sent a letter to Rex to discuss collaboration on these issues and copied each member of the council. Rex responded and has begun the process of setting up a meeting between the two parties. Rex welcomes the opportunity to meet with WakeMed and determine a positive solution. However, Rex is committed to pursuing all avenues to better serve its patients and so it has not prematurely assumed that the discussions with WakeMed will result in meeting the need that clearly exists: additional cardiac catheterization capacity at Rex. As such, Rex is submitting the proposed petition and strongly encourages the SHCC to consider it on its merits and to also not assume that the discussions with WakeMed will correct the imbalance in the allocation of cardiac catheterization equipment in Wake County.

In particular, the SHCC should recognize that these issues are not confined to WakeMed and Rex but exist county-wide. Both WakeMed Cary and Duke Raleigh are significantly underutilized, as shown below. In fact, Duke Raleigh's surplus of machines is nearly identical to that of WakeMed.

Wake County Cardiac Catheterization Utilization

	Total Planning Inventory	*Percent Utilization*	*Machines Required Based on 80% Utilization*	*Deficit/(Surplus)*
Rex Hospital	4	116%	5.78	1.78
WakeMed	9	56%	6.31	(2.69)
WakeMed Cary	1	14%	0.17	(0.83)
Duke Raleigh	3	10%	0.39	(2.61)
Total	**17**		**13**	**(4.36)**

Source: 2016 Hospital License Renewal Applications.

Thus, even if WakeMed were to agree to sell Rex two of its excess machines, Duke Raleigh's sizable surplus could soon become an obstacle to the ability to develop new capacity. While it may be reasonable for WakeMed Cary to operate a sole unit of equipment for access in case of emergency, it is unclear why Duke Raleigh requires three units of cardiac catheterization equipment. In fact, Duke Raleigh added its third unit in 2013 through the use of grandfathered equipment outside of the CON process even though it was already significantly underutilized.

The specifics of Rex's current petition are provided later in this document, but first, this document will address several issues raised during deliberations of the SHCC on previous Rex petitions for this service. While Rex believes that approving its petitions are the best thing for patients, and though Rex's petitions are consistent with the Basic Principles of the *SMFP*, it is clear that Rex's opponents have attempted to politicize the petition process, providing some SHCC members with incorrect information that has surfaced in the SHCC meetings. Rex does not believe that providing such misinformation, particularly outside of public forums, is helpful to the patients it serves and would urge the SHCC to focus on the salient facts before it. However, given that some SHCC members have raised secondary issues, Rex believes that these should be addressed. As detailed below, Rex believes that approval of its petitions would be:

1. Similar to past SHCC actions and not precedent-setting;
2. A positive impact on the cost of care based on independent reimbursement data and other factors; and,
3. The most effective solution given physician privileges and the need to provide access across the region.

Each of these issues is addressed below.

Precedent

In opposing Rex's petitions, several SHCC members have stated that an approval would be precedent-setting. Based on its interpretation of those comments, Rex believes that some SHCC members were concerned about approving additional capacity outside of the standard methodologies in the *SMFP*. The *SMFP* specifically outlines an annual petition process for changing basic policies and methodologies and for adjusted need determinations. In other words, the petition process is expressly designed to allow for changes outside of the standard methodologies or changes to the methodology. In fact, Rex would argue that the petition process actually strengthens the *SMFP* planning process, by allowing the SMFP to evolve to meet the ever-changing needs of the healthcare community. Therefore, Rex's petitions are consistent with the process outlined in the *SMFP*, as well as many other petitions approved in the past.

In an attempt to resolve its ongoing capacity issues, Rex has submitted petitions for methodology changes and for adjusted need determinations without success. During the development of *2016 SMFP*, the SHCC received six petitions for basic policies and methodologies and 11 petitions for adjusted need determinations. The SHCC approved nine of those 17 total petitions, either directly or indirectly.

Rex believes its petitions should not be treated any differently from the dozens of petitions that are filed every year. In the past, Rex has requested modest changes to the cardiac catheterization methodology, just as dozens of other petitioners have requested changes to other *SMFP* methodologies. Similarly, Rex has requested adjusted need determinations, just as dozens of other petitioners do every year. In each instance, either the methodology is found to no longer be as responsive as it once was, and it needs to be changed, or the methodology does not consider a particular need that exists in a specific area. There is nothing precedent-setting about Rex's petitions.

More specifically, some SHCC members appear to be concerned a precedent would be set if they approved additional capacity when surplus capacity exists in the service area, particularly when those needs are related to physician affiliation activity. Other SHCC members have expressed concern about setting a precedent by becoming involved in the "business decisions" within a particular county. Rex does not believe that the approval of its petitions would set a precedent. The SHCC has historically approved numerous petitions where surplus capacity exists and, frequently, those needs are related to physician affiliation activity, even if that activity is unknown. The SHCC has also historically approved petitions have involved competitive situations between providers within counties. Further, as shown below, the SHCC has revised methodologies so that need can be created as a result of physician affiliation in service areas where surplus capacity exists. In other words, the SHCC has approved many petitions in the past with similar circumstances to Rex. In the context of the examples below, Rex believes that the approval of its petitions would be similar to many of these SHCC actions; thus, the approval of Rex would not in any way be precedent-setting.

Please note this list is not comprehensive but is used to demonstrate the similarity of Rex's petitions to other SHCC actions.

- The SHCC approved a 2015 petition by Raleigh Radiology for an adjusted need determination for one additional fixed MRI unit in Wake County, despite the standard methodology showing a small surplus of capacity. The SHCC created the opportunity for Raleigh Radiology to develop fixed MRI capacity so that it could end a business relationship with Alliance for the lease of its existing unit. Raleigh Radiology argued that the growth in its practice was due to its selection as preferred provider to the Key IPA and WakeMed accountable care organization, a physician-hospital affiliation.

- The SHCC approved a 2015 petition by J. Arthur Dosher Memorial Hospital (Dosher) for an adjusted need determination for one additional MRI unit in Brunswick County in the *2016 SMFP*, despite the standard methodology showing a surplus of capacity. The SHCC created the opportunity for Dosher to develop fixed MRI capacity because its existing business relationship with Alliance for the lease of an MRI was not optimal for providing excellent patient care at a low cost.

- The SHCC approved a 2013 petition by Duke Raleigh Hospital for an adjusted need determination for one additional linear accelerator in Service Area 20 (Wake and Franklin counties) in the *2014 SMFP*. The SHCC acted specifically to alleviate Duke Raleigh's lack of linear accelerator capacity despite the absence of an overall need in the service area and in spite of the underutilization of multiple providers and approved but not yet developed capacity. Duke Raleigh's growth was due to significant investment in the recruitment of cancer physicians to Wake County.

- The SHCC approved a 2010 petition by Brookdale Senior Living for an adjusted need determination for 240 nursing care beds in Wake County. The SHCC created additional capacity despite the existence of underutilized capacity in the service area which prevented need from being generated under the standard methodology.

- The SHCC approved a 2010 petition by Graystone Eye Surgery Center for an adjusted need determination for one additional operating room in Catawba County. The SHCC created additional capacity despite the existence of underutilized capacity in the service area which prevented a need from being generated under the standard methodology.

- In 2010, the SHCC approved a revised acute care bed methodology which changed the growth rate factors to use a county-specific growth rate instead of a statewide average growth rate. This change, combined with the existing calculation of need by facility rather than for a service area in total, allows the creation of need determinations as a result of the need expressed by a single facility or group of hospitals under common ownership without regard for other potentially underutilized capacity in the service area.

- The SHCC approved a 2008 petition by Hospice of Wake County for an adjusted need determination for ten inpatient hospice beds in Wake County in the *2009 SMFP*. The SHCC acted to create additional capacity despite the existence of underutilized capacity in the county which prevented need from being generated under the standard methodology. The demand for hospice services was related, in part, due to an affiliation between Hospice of Wake County and Rex Hospital.

- In 2007, the SHCC approved a revised operating room methodology that excluded chronically underutilized licensed facilities, defined as facilities operating at less than 40 percent utilization for the past two fiscal years, from the planning inventory so that they would not suppress the need for additional capacity. As such, the SHCC revised a methodology to allow for the creation of additional need determinations, through whatever cause including physician affiliation, without regard for other underutilized capacity in the service area.

Given the examples above, it is clear that the approval of Rex's petitions would not be precedent setting. Moreover, Rex believes that the SHCC should give greater consideration to the need for additional cardiac catheterization capacity due to emergency, life-saving nature of the service than the needs for diagnostic or non-emergent services such as MRIs or linear accelerators.

Impact on Cost of Care

In opposing Rex's petitions, several SHCC members have argued that an approval would result in an increase in the cost of care and that no analysis of the value of Rex's proposal has been presented. Rex believes just the opposite for several reasons.

Contrary to the statements made by some SHCC members, Rex is not an academic medical center and as such, does not receive additional reimbursement for medical training. Rex is a member of UNC Health Care, and as part of that system, provides lower cost services to patients through economies of scale. Hospital affiliation across the state and more regionally is occurring as formerly independent hospitals recognize the need to lower their expenses in a national and local environment which has reduced reimbursement to providers. Further, UNC Health Care's physician affiliations, particularly with cardiologists, most relevant in this instance, reduce the cost of care and expand access across the region. In fact, due to its relationship with cardiologists, Rex is able to bill

globally for cardiac catheterization procedures, resulting in lower costs and simplified billing (something that would not be possible if these cardiologists performed the procedures elsewhere). Rex has been successful in building physician relationships[1], in part due to its ability to realize these affiliation benefits, and should not be penalized for it.

Rex's sister hospital, UNC Hospitals in Chapel Hill, is an academic medical center and receives additional reimbursement based on that status. Rex does use its cath labs for teaching with the recent launch of a fellow program for UNC-Chapel Hill School of Medicine, with fellows in each of Rex's four labs five days each week. However, Rex does not receive any additional reimbursement related to these teaching programs or any other academic teaching status.

Further, Rex and its affiliated physician have the lowest average reimbursements for cardiac catheterization in the region. The table below presents data Blue Cross Blue Shield of North Carolina's "Estimate Your Health Care Costs" tool[2] comparing the average costs for catheterization procedures for providers in Raleigh.

Blue Cross Blue Shield of North Carolina – Estimate Your Health Care Costs

	Left Heart Cath*	***Coronary Bypass with Cardiac Cath***
Rex Hospital	$5,747	$66,975
WakeMed	$8,560	$84,706
Duke Raleigh	$10,883	
Lowest Cost Physicians for Each Hospital		
James Zidar, Rex Hospital	$5,139	
Joseph Guzzo, Rex Hospital	$5,292	
Joseph Falsone, Rex Hospital	$5,301	
Robert Bruner, Rex Hospital	$5,478	
George Adams, Rex Hospital	$5,454	
J. Richard Daw, WakeMed	$7,698	
Maitreya Thakkar, WakeMed	$8,022	

1 In arguing against Rex's petition, one SHCC member cited the development the Rex-Raleigh Orthopaedic Clinic joint venture ambulatory surgery center (ASC), Raleigh Orthopaedic Surgery Center (ROSC). Contrary to those statements, ROSC is a freestanding ASC which provides a low-cost surgical alternative to existing hospital-based options in Wake County. The Rex-Raleigh Orthopaedic Clinic relationship is a mutually beneficial partnership that provides significant value to patients.

2 Accessed at http://www.bcbsnc.com/content/providersearch/treatments/index.htm#/ on February 23, 2016.

Jimmy Locklear, WakeMed	$8,237	
Siddhartha Rao, WakeMed	$8,274	
Pratik Desai, WakeMed	$8,294	
Mark Leithe, Duke Raleigh	$10,468	
James Mills, Duke Raleigh	$12,114	

Note: The costs for Blue Options, Blue Advantage are shown for comparison purposes. Please see Attachment 1 for the complete data available from Blue Cross Blue Shield of North Carolina tool. *Only data for "Left heart cath" and "coronary bypass with cardiac cath" is provided by the Blue Cross Blue Shield of North Carolina tool for cardiac catheterization services. Left and right heart catheterization costs are not available.

At the March 2, 2016 SHCC public hearing, Dr. James Zidar, speaking on behalf of Rex's petition noted that Rex's Medicare reimbursement was lower than other providers in the region for the reasons cited above. However, he misspoke when discussing Blue Cross Blue Shield reimbursement. As the data clearly show, Rex and its affiliated physicians are reimbursed at a lower rate than other area providers.

As shown, Rex and its affiliated providers have significantly lower costs per procedure for Blue Cross Blue Shield patients than Duke Raleigh or WakeMed and its providers. In fact, the highest cost at Rex is lower than the lowest cost at WakeMed or Duke Raleigh. Of note, WakeMed receives additional reimbursement due to its status as a teaching hospital and for disproportionate share payments. For Medicare reimbursement, this amounts to 25.7 percent higher reimbursement than Rex. Rex is not arguing the merits of Duke Raleigh or WakeMed's reimbursement; nonetheless, the evidence simply does not support that argument that the approval of Rex would increase the cost of care, but that it would, in fact, lower it

Finally, Rex's plan to add cardiac catheterization capacity is to upgrade the software of a peripheral vascular lab for approximately $30,000. Due to its capacity constraints, Rex has contracted with a mobile cardiac catheterization lab since May 2015 at a cost of $16,000 per month. Clearly, a lower cost solution would be a one-time upgrade for $30,000 rather than a monthly expense of $16,000, or 192,000 per year.

The information provided above and in past petitions demonstrates that Rex's proposed petitions would lower the cost of care and provide value to Wake County area residents. Rex believes that it is has provided the SHCC with significant information and data to support its petitions in contrast with many past petitions approved by the SHCC that do not provide estimates of capital cost, monthly expenses, or reimbursement impact.

Physician Privileges

In the SHCC's prior discussions of Rex's petitions, some SHCC members have asked if the physicians using Rex's cardiac catheterization labs could begin using other labs in the county where capacity exists. Rex and its physician partners do not believe that this would be an effective solution to its capacity constraints as it would require a significant duplication of existing resources, a reduction in access for patients in nearby counties, as discussed below.

Following the affiliation, the cardiologists in question, now part of North Carolina Heart & Vascular, relocated their clinic and patients to the Rex Hospital campus, and along with that shift, much of its hospital-related patient care, including cardiac catheterizations. Today, North Carolina Heart & Vascular's sole Raleigh office is in the Medical Office Building adjacent to Rex Hospital's Emergency Department. North Carolina Heart & Vascular patients can visit one site of care for all of their physician visits, diagnostic testing, pre-procedure testing, cardiac catheterizations, cardiac surgery, etc. The benefits of this centralized site of care are substantial. North Carolina Heart & Vascular's team (physicians, nurses, catheterization lab technicians, and other ancillary staff) is able to standardize care for its patients to ensure that the care is high quality, consistent, and cost effective for each patients. Patient care processes are streamlined and supplies and technology are standardized, improving safety and throughput, improving patient care. Patients can be seen in the office, any emerging issues can be diagnosed through testing such as echo or ultrasound, and if needed, the patient can be scheduled for a cardiac catheterization that same day, depending on acuity and lab availability. Images from all of the patient's tests are stored on the UNC Health Care's PACS system so that interventionalists and surgeons can review them prior to a case. North Carolina Heart & Vascular employs a team of advanced practice providers (nurse practitioners and physician assistants) that admit to the hospital, round, consult, follow-up on testing, and discharge patients which greatly increases the efficiency and effectiveness of the physicians. North Carolina Heart & Vascular physicians working at Rex have one Raleigh hospital for emergency call; and their Raleigh patients do not have to guess where their physicians are available for emergency or routine care. Finally, as partners, Rex and North Carolina Heart & Vascular are actively engaged together in decision making (for purchasing, policies, and protocols), in research and innovation (for care redesign and technology), and in achieving excellent patient experiences and outcomes and low costs.

In order to begin using WakeMed's cath labs, North Carolina Heart & Vascular physicians would need to obtain privileges at WakeMed and meet the medical staff bylaw's requirements for emergency department and inpatient coverage. Further, extra time and effort would be required to transition from one culture of care to another, which slows down work flow and processes impeding patient throughput and outcomes. North Carolina Heart & Vascular physicians could not meet WakeMed's coverage requirements without redeploying physicians currently providing care across the practice's service area, thereby reducing access to patients in other counties across the region. Specifically, these cardiologists currently provide services in Johnston, Franklin, Harnett, Nash, Sampson, Wayne, and Wilson counties.

WakeMed has a robust medical staff with more than sufficient cardiologist coverage currently: according to its website, WakeMed Heart & Vascular Physicians employs more than 30 physicians. Thus, if North Carolina Heart & Vascular physicians obtain privileges at WakeMed, WakeMed would have a surplus of cardiologists, and North Carolina Heart & Vascular would be covering two hospitals in Wake County, instead of one, at the expense of patients in nearby counties. This action would thus create another surplus—a surplus of cardiologists at WakeMed—while creating a deficit of cardiologists at Rex and other hospitals throughout the region. While this surplus at WakeMed may not be obvious to the SHCC as the surplus of cardiac catheterization equipment at WakeMed and Duke Raleigh, it would still exist and create access issues as great as those that exist due to the need for additional cardiac catheterization capacity at Rex.

In addition to duplicating its physician call, North Carolina Heart & Vascular would need to unnecessarily duplicate its support staff team. Two sites of interventional and inpatient care would require two different teams doing the same things, but unable to create efficiencies and economies of a scale by caring for a critical mass of patients. For example, North Carolina Heart & Vascular would need to double its number of advanced practice providers in order to maintain the required 24 hours a day, seven days a week coverage for its inpatients. North Carolina Heart & Vascular would not be able to control all the required ancillary hospital staff at another facility in order to meet desired quality and cost standards. Another hospital would be reluctant to share decision-making with an outside physician group, particularly given the number of cardiologists from other groups that already practice at WakeMed. As a result, the practice overall would be less efficient and less cost-effective.

In order to support patients at WakeMed, North Carolina Heart & Vascular would need to duplicate its PACS system or manually create and exchange CDs

containing the images taken during procedures that are saved on the UNC Health Care PACS system. While UNC Health Care (including Rex) and WakeMed are both on the EPIC electronic health system, that record that does not include the actual images from procedures. EPIC only includes the written reports. Using non-technical terms, a physician with access to the PACS system can see the X-ray and can therefore make an interpretation relevant to the patient's care at that moment. If the physician only has access to EPIC, only the written report from the initial evaluation of the procedure is available. Access to these images is most vital in emergency situations, when a patient presents with chest pain and the physician can immediately review images from previous procedures to assess and provide treatment.

Rex and its physician partners do not believe that the most effective solution to its capacity constraints is to duplicate its call, its staff, and its system at a tremendous addition to its operating costs when instead, with the permission of the SHCC and the CON Section, it could quickly and cost-effectively add capacity by purchasing a $30,000 software upgrade to an existing vascular lab.

Notably, even if North Carolina Heart & Vascular physicians were to practice at other hospitals, their patients could be prevented from receiving care at those other sites or made to pay higher out of pocket costs depending on their health care insurance. Many insurers are utilizing "narrow networks" which direct patients to a network of low cost, high quality providers and hospitals in order to better control costs. Thus, some of North Carolina Heart & Vascular's patients may not be able to receive their care at other facilities or may have to pay high out of pocket costs.

Finally, while Rex appreciates that the SHCC is looking for alternative solutions to these problems, it does not believe that the SHCC's purview includes directing where physicians should practice or, more importantly, where patients should receive care. Rex believes it has created the leading cardiovascular program in the Triangle through a system of care that includes a seamless coordination between physicians, staff, and hospital. Patients are choosing North Carolina Heart & Vascular and Rex due to this offering. Rex does not believe the SHCC should tell patients, effectively, that their decisions are wrong or that because of their choice of provider they will have to wait longer for treatment.

STATEMENT OF THE PROPOSED CHANGE

Rex requests that the threshold for additional cardiac catheterization equipment in the Cardiac Catheterization Need Determination Methodology be applied to

each hospital, or in the case of hospitals under common ownership in the same service area, to each group of commonly-owned hospitals. Need determinations would be granted once equipment is appropriately utilized irrespective of the utilization of other hospitals in the same service area. Rex proposes the changes described below to Chapter 9: Cardiac Catheterization Need Determination Methodology, Methodology 1 (Fixed Cardiac Catheterization Equipment). Please note the Steps 1 to 4 remain unchanged.

Step 5: ~~Sum the number of units of fixed cardiac catheterization equipment required for all facilities in the same cardiac catheterization equipment service area as calculated in Step 4. (NOTE: The sum is rounded to the nearest whole number.)~~

Subtract the total planning inventory for each facility from the number of units of fixed cardiac catheterization equipment required as calculated in Step 4. The difference is the surplus or deficit of units of fixed cardiac catheterization equipment. (*Note: Deficits will appears as positive numbers; surpluses, as negative numbers.)*

Step 6: ~~Subtract the number of units of fixed cardiac catheterization equipment required in each cardiac catheterization equipment service area from the total planning inventory for each cardiac catheterization equipment service area. The difference is the number of units of fixed cardiac catheterization equipment needed.~~

The number of units of fixed cardiac catheterization equipment needed in a service area is determined as follows:

a) For each facility, the number of units of fixed cardiac catheterization equipment needed is equal to the deficit as calculated in Step 5 rounded to nearest whole number. If a facility has a surplus, there is no resulting need determination.

b) The number of units of fixed cardiac catheterization equipment needed is calculated for each hospital, and a need determination is generated irrespective of surpluses at other hospitals in the service area, unless there are other hospitals in the service area under common ownership.

c) If two or more hospitals in the same service area are under common ownership, the surpluses and deficits for those hospitals are totaled as calculated in Step 5. The number of units of fixed cardiac catheterization equipment needed for hospitals under common ownership is equal to the summed total deficit rounded to nearest whole number. If hospitals under common ownership have a surplus in total, there is no resulting need determination.

d) The projected need determinations of all facilities and owners in the service area will be summed to determine the total number of units of fixed cardiac catheterization equipment needed in the service area. Any pending CONs in the service area should be subtracted from the total number of units needed.

IMPACT OF THE PROPOSED CHANGE

Based on Rex's review of the 2016 Hospital License Renewal Applications and Inventory of Medical Equipment Forms, the impact of the proposed change is limited to Wake County, in which a need determination for two units of fixed cardiac catheterization equipment for the *2017 SMFP* would be generated. Both of these units would be based on the utilization at Rex, which currently shows a deficit of 1.78 units. Please note that Rex's proposed change, while having an immediate impact in only Wake County, would only ever have the possbililty of impacting six counties statewide where there are two or more providers of cardiac catheterization services not under common ownership. For example, the proposed change would have no impact on the projected need determination in Cumberland County, where Cape Fear Valley Medical Center will generate a need with or without Rex's proposed change. Please see Attachment 2 for detailed tables comparing the results of the current methodology and the proposed methodology for the six impacted counties. As discussed below, Rex believes the proposed change is needed in order to provide access to cardiac

catheterization services, and that it will not have adverse effects on providers or consumers, will not result in unnecessary duplication, and is consistent with the Basic Principles of the *SMFP*.

BACKGROUND

The various methodologies in the *SMFP* generally consider need based either on the entire service area or each individual provider. The current cardiac catheterization methodology determines need based on the entire service area, and as a result, individual providers may have a significant deficit, but no need is determined to exist in the area because of the surplus at other providers.

A service area approach for allocating capacity may be reasonable for certain services, particularly those for which the service is merely one adjunct to the overall diagnostic process and treatment plan. For example, a patient needing an MRI scan to support a diagnosis may choose an MRI provider separate from his physician or hospital, without it negatively impacting his diagnosis or treatment, particularly on an outpatient basis, as the vast majority of MRI scans are provided.

Other services, however, are much more central to the overall process of diagnosis and treatment, require a physician present to perform the procedure, and may be performed more often on an inpatient basis than other procedures. Such is the case for cardiac catheterization services. The cardiology practice, which is comprised a team of providers, including medical, invasive, interventional and surgical cardiologists, has been chosen by the patient to provide his or her care. This team is central to the diagnosis and treatment, and the interventional cardiologist is directly involved with performing the procedure on the patient. Since those physicians have been chosen by the patient to provide his or her care, the notion of the physician referring the patient to a physician at another facility, just because there may be more cardiac catheterization capacity available there, is extraordinarily unlikely, as well as being disruptive to the continuity of care. Although cardiologists may be privileged at multiple hospitals, they typically choose a single facility at which to perform most of their procedural work for efficiency, as discussed above with regard to North Carolina Heart & Vascular. The utilization of a particular facility is thus driven primarily by physician and patient preference, not the deficit or surplus at a facility. Therefore, a facility-specific methodology for cardiac catheterization is more appropriate than a service area-based methodology.

As noted above, other methodologies within the *SMFP* use a facility-specific approach, consistent with the proposed change, including the methodologies for acute care beds and PET scanners. In contrast, the existing fixed cardiac catheterization need determination methodology calculates projected need based on the aggregate need within each service area. However, since cardiac catheterization services are limited to hospital providers, and since most service areas include only one hospital, the vast majority of facilities have a need methodology that is, in essence, facility-based. Specifically, in the 39 cardiac catheterization service areas, all but seven (7) of them have only one fixed cardiac catheterization provider. In each of these service areas, the need methodology bases its calculation on the utilization of a single facility, and so the methodology is effectively facility-specific for the majority of state. In the remaining seven service areas in which there are two or more providers of fixed cardiac catheterization services, the need methodology calculates projected need based on the aggregate need of all providers in the service area. As such, the utilization of a single facility is subordinate to overall utilization. Please note, however, that the Durham/Caswell Service Area includes two hospitals under the common ownership of Duke University Health System; thus, as a result, the proposed methodology will have no impact on this service area.[3] Therefore, only six (6) service areas would ever be affected by the proposed change in the methodology.

Rex believes that for services such as cardiac catheterization, a service area-based methodology can perpetuate imbalances between highly utilized and underutilized providers. Underutilized equipment offsets the need expressed by well-utilized equipment and prevents the creation of additional need determinations which would allow high utilization providers to acquire more capacity and operate at more appropriate utilization levels. Even some methodologies which determine need on a service area basis attempt to mitigate this imbalance by excluding chronically underutilized facilities. By failing to adjust the methodology as proposed, well-utilized facilities may be forced to operate above appropriate utilization levels and may not be able to deliver optimal care consistent with the Basic Principles of the *SMFP*, as discussed below.

Although Rex believes the proposed change is important, and though it will change the methodology statewide, it does not believe it will have a far-reaching impact. As the SHCC is aware, since 2003, cardiac catheterization volume has

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[3] Under the proposed methodology change, if two or more hospitals in the same service area are under common ownership, their surplus or deficit of equipment is totaled and then evaluated against the threshold for a need determination. Please see the revised Step 6.c above for the specific language.

decreased statewide, although it does appear to have stabilized in recent years. Given this trend, it is unlikely that many providers will generate a need in the near future. However, Rex believes the methodology should evolve to reflect changes in healthcare, including the increasing alignment between physicians and hospitals in single systems of care, which has led to substantial shifts of patients among providers. In this context, the cardiac catheterization methodology must be more flexible in responding to the needs of specific facilities and the patients and physicians who choose to utilize them.

Prior Responses from the SHCC and the Medical Facilities Planning Section

Rex proposed changes to the cardiac catheterization methodology in its 2014 methodology change petition. The SHCC denied that petition following the recommendation of the Medical Facilities Planning Section in its Agency Report. Rex believes that the following discussion responds to the issues raised by the Medical Facilities Planning staff in recommending denial of Rex's 2014 methodology change petition.

The Agency Report for Rex's 2014 methodology change petition stated that "[w]*hile the petitioner's proposed methodology change did not make specific changes to Step 1 of the methodology, the proposal would have an impact on pending CONs . . .* [u]*nder the suggested methodology change it would be possible for a need determination to be generated without regard to a pending CON review.*" In order to remedy this potential issue, Rex has added language to Step 6d indicating that pending CONs be subtracted for the need determination calculation for the service area. Please note that acute care bed methodology has historically managed pending CON awards in this manner with success.

The Agency Report for Rex's 2014 methodology change petition stated that "*there is the potential for one facility in a service area to generate a need but the CON is awarded to a different facility in the service area. Thus, additional need determinations for the service area could again be generated the next year due to the procedures performed at the facility that initially generated the need. This would increase the service area's capacity unnecessarily but would not benefit the facility that triggered the need. Seven service areas in the state have multiple cardiac catheterization service providers that could generate this scenario.*"

First, Rex believes it is important to note that this hypothetical scenario would not be unique to cardiac catheterization equipment. A repeated need determination, as suggested in this example, is possible for all multi-provider service areas under the acute care bed and PET methodologies, as a need determination could be generated by one facility and awarded to a different

facility with the original facility generating another need in subsequent years. In practice, this scenario would occur very infrequently and only as a result of unique circumstances because the different facility would need to demonstrate to the CON Section why the need for additional capacity is located at its facility rather than the facility that generated the need.

Further, unlike acute care beds, cardiac catheterization has special CON rules that only allow for the approval of providers that have historically operated their cardiac catheterization equipment at 80 percent of capacity. The acute care bed rules have no historic performance standard, thus, a historically underutilized provider could be approved to add capacity. Finally, an applicant proposing to add cardiac catheterization capacity must demonstrate to the CON Section that the projected utilization of its existing and proposed equipment will be 60 percent of equipment. Specifically, 10A NCAC 14C . 1603 states, as excerpted below:

(a) An applicant proposing to acquire cardiac catheterization equipment shall demonstrate that the project is capable of meeting the following standards:

(1) each proposed item of cardiac catheterization equipment, including mobile equipment but excluding shared fixed cardiac catheterization equipment, shall be utilized at an annual rate of at least 60 percent of capacity excluding procedures not defined as cardiac catheterization procedures in 10A NCAC 14C .1601(5), measured during the fourth quarter of the third year following completion of the project;

(c) An applicant proposing to acquire cardiac catheterization equipment excluding shared fixed and mobile cardiac catheterization shall:

(1) demonstrate that its existing items of cardiac catheterization equipment, except mobile equipment, located in the proposed cardiac catheterization service area operated at an average of at least 80 percent of capacity during the twelve month period reflected in the most recent licensure renewal application form on file with the Division of Health Service Regulation;

(2) demonstrate that its existing items of cardiac catheterization equipment, except mobile equipment, shall be utilized at an average annual rate of at least 60 percent of capacity, measured during the fourth quarter of the third year following completion of the project; and

Thus, if one facility in a service area generates a cardiac catheterization need, the CON could only be awarded to a different facility in the service area, if that different facility demonstrates to the CON Section that its historical and projected utilization meets these performance standards.

The 2014 Agency Report stated that "*a facility specific calculation is used for acute care bed needs. However, in determining need for acute beds (both licensed and pending) all projected deficits and surpluses for each facility are total for the service area and can offset each other.*" The Agency Report was mistaken in this statement. Under the acute care bed methodology, the projected deficits and surpluses for each facility under common ownership are totaled and can offset one another. However, the total deficit for one group of facilities under common ownership creates a need determination regardless of any other facilities in the service area. Please see the Mecklenburg County service area in the *2013 SMFP* as an example where the Carolinas HealthCare System deficit of 40 beds (identified as Carolinas Medical Center Total) resulted in a need determination without regard for Novant Health's surplus of 44 beds (identified as Presbyterian Hospital Total). Similar examples exist in the Wake County service area in the *2011 SMFP* and the Mecklenburg County service area in both the *2008* and *2009 SMFPs*.

The 2014 Agency Report stated that under Rex's proposal "*need is generated at a considerably lower threshold than with the current methodology.*" Rex now proposes to leave that threshold unchanged at a deficit of 0.5 units, rounded to the nearest whole number.

The 2014 Agency Report noted that "*the total volume of cardiac catheterization procedures performed with fixed equipment in North Carolina has declined steadily since 2005*" and suggests that the proposed change is unnecessary in light of this decline and could result in the over-projection of need. It is Rex's belief that the proposed change is necessary due to the nature of cardiac catheterization services. Specifically, cardiac catheterization is central to the overall process of diagnosis and treatment. Please see the discussion above for greater detail on the reasons why the need for cardiac catheterization should be evaluated by facility rather than across a service area. In this context, Rex does not believe the statewide trend is relevant in evaluating its proposed methodology change. The SHCC should not ignore potential improvements to the *SMFP* if volume trends suggest that they are unlikely to impact a significant number of providers.

REASON FOR THE REQUESTED ADJUSTMENT

Rex believes that the cardiac catheterization methodology should determine need on a facility-specific basis, which would provide an equitable approach and only impact a minority of the hospitals across the state. Highly utilized providers would be able to generate need determinations, regardless of underutilized providers in the same service area. It should be noted any need determination generated under the proposed change would still be subject to Certificate of

Need review, whereby any qualified provider could apply for, and demonstrate the need to acquire, additional cardiac catheterization equipment. Underutilized providers could not be approved to develop capacity created by these need determinations as they would not meet the historical performance standards in the special CON rules.

The proposed change will further the efforts of those healthcare systems that are working to improve their quality and continuity of care. As noted above, Rex also believes this change would be consistent with other recommendations from the SHCC delineated above.

The approval of this methodology change will provide a clear and consistent path for highly utilized providers to generate need determinations and thus prevent potentially repetitive special need adjustment requests from the facilities in the service areas that are inequitably treated in the current methodology.

The benefits of a change in the need methodology are evident in considering Rex's growing need for capacity. In 2015, Rex's cardiac catheterization utilization indicated a deficit of one unit of equipment. While the Agency Report recommended approval of a special need adjustment for the one unit requested by Rex, the SHCC ultimately failed to approve the petition. One year later, Rex's cardiac catheterization utilization indicates a deficit of two units of equipment, so that even if the previous special need adjustment had been approved, Rex would face a deficit of another unit and another capacity need. A revised methodology would have appropriately allocated additional capacity as Rex's volume has grown.

ADVERSE EFFECTS IF PETITION IS NOT APPROVED

As noted above, the current fixed cardiac catheterization need determination methodology can perpetuate imbalances between highly utilized and underutilized providers in the same service area. An underutilized provider diminishes the need demonstrated by a highly utilized provider. A provider could operate above the utilization standards indefinitely and not be able to acquire additional capacity, if another provider in its community was sufficiently underutilized. There is no remedy for the patients, physicians, and providers in such a situation for cardiac catheterization services outside of a methodology change, as proposed, or a special need adjustment.

As a result, the greatest adverse effect of the failure to approve the petition is the negative impacts that continuing capacity constraints have on patient safety,

quality, and convenience. As volume continues to increase at highly utilized providers, the *SMFP* methodology will not provide additional capacity. The ability to provide timely emergency procedures, high quality and convenient outpatient diagnostic procedures, and seamless care within a system of care will increasingly be more challenging.

ALTERNATIVES CONSIDERED

File a Petition for a Special Need Adjustment

As noted above, Rex has chosen this alternative in 2014 and 2015 and was denied by the SHCC. One of the reasons provided by a SHCC member for voting against the most recent petition is that the current SMFP methodology for cardiac catheterization addresses need for all providers, not just a single facility. Notwithstanding the fact that the SHCC has approved petitions in similar circumstances many times, Rex is proposing to change the methodology in light of the SHCC member's suggestion that the methodology should be changed before a need is generated in Wake County. Regardless, the current cardiac catheterization methodology is unequitable and perpetuates imbalances between providers. A petition in the summer for a special need adjustment would, at best, result in a one-time allocation and would fail to address the problematic aspects of the current methodology. While Rex believes a special need determination can remedy the growing issues for cardiac catheterization capacity in Wake County, it would not address potential issues in other counties or issues that arise in future years. Again, Rex's recent experience demonstrates, a provider experiencing continuing growth could result in repetitive special need adjustments without the proposed change to the methodology.

Exclude Chronically Underutilized Facilities

The operating room methodology excludes chronically underutilized facilities in order to remedy the imbalances between highly utilized and underutilized providers. Rex does not believe this approach is appropriate for the cardiac catheterization methodology for several reasons. First, there is no consensus around an appropriate definition of a chronically underutilized cardiac catheterization provider. Such a definition would need to account for the emergency, life-saving nature of the service and its subsequent vital importance in many communities, regardless of utilization. More importantly, the majority of the state is already treated with a facility-specific methodology, effectively, and an extension of that approach to the remainder of the state would provide the needed remedy. Finally, the number of cardiac catheterization units in each

service area is much lower than the number of operating rooms, and most providers have at least modest utilization levels. Thus, the exclusion of chronically underutilized facilities would not be as useful for this methodology. It should be noted, however, that in Wake County, if the 40 percent underutilization threshold were applied to cardiac catheterization as it is to operating rooms, four of the 17 units in Wake County (nearly one-quarter) would be excluded: three at Duke Raleigh Hospital and one at WakeMed Cary. Such a step would still not correct the imbalance in the county; however, it demonstrates that the issues concerning cardiac catheterization in Wake County go beyond just Rex and WakeMed's main campus.

UNNECESSARY DUPLICATION

Rex does not believe the proposed change will result in unnecessary duplication of health resources. The current acute care bed and PET methodologies use facility-specific methodologies consistent with the change proposed by Rex for cardiac catheterization. Need determinations for acute care beds and PET scanners are generated by facilities regardless of the utilization of other facilities within the same service area. Based on its adoption of these methodologies, it is clear that the SHCC understands that this approach to healthcare planning does not result in the unnecessary duplication of health resources. In fact, as discussed above, this approach provides a more specific and flexible methodology for allocating healthcare resources, as needed, across the state.

BASIC PRINCIPLES

If the SHCC is committed to developing an *SMFP* in accordance with the Basic Principles of Safety and Quality, Access, and Value, then it must recognize that the status quo fails to meet the needs of the citizens of North Carolina under these standards, and it should therefore approve Rex's petition, which would positively impact these principles.

Safety and Quality

The proposed methodology change will provide a process for facilities to generate cardiac catheterization capacity regardless of the utilization of other providers. Without this methodology change, a provider could indefinitely operate its cardiac catheterization equipment at high levels of utilization without any possibility of acquiring additional capacity through the current methodology. In such a situation, a facility may not be able to provide optimal safety and quality of care. Cardiac catheterization services must be available

immediately for patients who present to a hospital with certain cardiology issues. These emergency situations inevitably delay scheduled patients or cause rescheduling. If the demand for cardiac catheterization services at a facility exceeds its reasonable capacity, then these delays and reschedules result in patients beginning their procedures late in the day, thus requiring a more expensive and inconvenient overnight stay, or waiting until a later scheduled time. Overutilized catheterization labs must operate in the evenings and on weekends. Scheduled procedures, while not emergency cases, are needed to improve the health of these patients and the delays that may result from overcapacity equipment results in delays in their recovery and return to normal life. Increased utilization also causes stress on the cardiac catheterization equipment leading to increased maintenance issues. The downtime needed to address these maintenance issues can cause additional delays in treatment and further exacerbates the overutilization of the equipment. If patients and physicians are forced to access care at another facility which has available capacity, they may encounter disruptions in the continuity of care. Physicians and providers work every day to improve the systems of care which leverage information technology, multidisciplinary teams, and processes of care to deliver the right care at the right time to the right person. A facility under the control of another healthcare system cannot provide that same system of care to an unfamiliar physician and patient. As a result, safety and quality may be reduced without the proposed change in the methodology.

Access

The proposed change will enable the development of additional access to cardiac catheterization equipment, as needed throughout the state. Seven service areas are inequitably treated under the current methodology. Any potential need within these service areas could be indefinitely suppressed by underutilization, for whatever reason, at another provider in the same service area. In these areas, access to care for patients of all types is impacted.

More specifically, the SHCC's denial of Rex's petitions limits access to Rex's patient who have chosen to receive care at Rex. Rex is a leading provider of care to the elderly population in Wake County. Rex provides a greater percentage of its inpatient and emergency services care to the Medicare population than any other facility in the county. Elderly patients, in particular, need sufficient access to cardiac catheterization services. Moreover, North Carolina Heart & Vascular physicians see patients in 15 offices in nine counties. Increasing these physicians' access to cardiac catheterization capacity at Rex, rather than duplicating coverage at WakeMed, allows them to continue providing access for these patients across a large region, including areas where no interventional cardiac catheterization

capacity exists . For example, patients in Franklin, Harnett, and Sampson counties who see North Carolina Heart & Vascular physicians in local offices will have greater access to cardiac catheterization services which are not available in their home county. Instead of expanding access, the suggestion by some SHCC members that North Carolina Heart & Vascular begin practicing at WakeMed would result in duplicating coverage at WakeMed, forcing the physicians to reduce access in these suburban counties.

Value

The proposed change will enable providers throughout the state to provide greater healthcare value. As noted above, facilities that have a process to add capacity as needed will be able to provide safer and higher quality services than if forced to operate overcapacity. Delays in needed treatment or unanticipated overnight stays at the hospital add to healthcare expenditures. Overutilized equipment requires greater maintenance which creates additional expenses.

In the specific circumstances of Wake County, the proposed change would provide additional capacity to Rex, which has significantly lower costs per procedure for Blue Cross Blue Shield patients than Duke Raleigh or WakeMed and its providers as well as lower Medicare reimbursement. As noted above, Rex's plan to add cardiac catheterization capacity is to upgrade the software of a peripheral vascular lab for approximately $30,000. Due to its capacity constraints, Rex has contracted with a mobile cardiac catheterization lab since May 2015 at a cost of $16,000 per month. Clearly, a lower cost, value-driven solution would be a one-time upgrade for $30,000 rather than a monthly expense of $16,000, or 192,000 per year.

CONCLUSION

In conclusion, Rex requests that the SHCC approve the petition to change the cardiac catheterization need determination methodology. The proposed change would extend the facility-specific approach to cardiac catheterization need determinations to the entire state, rather than just to the majority of providers, and ensure the a need determination is generated when additional capacity is needed. As such, the methodology will become more specific and flexible to the changing needs of the citizens of North Carolina.

Thank you for your consideration.

Attachment 1

NC

Estimated Treatment Cost Results

Coronary bypass with cardiac cath, 10 miles from raleigh, nc - Modify Your Search

Cost estimates are averages based on historical BCBSNC claims data. Amounts listed typically include physician fees, facility fees and costs for things like anesthesia, drugs, medical supplies – as well as customer responsibility (deductible, co-pay and co-insurance). Your actual costs may be different based on variations in these factors as well as your health plan design, deductibles/co-insurance and out-of-pocket limits.

Rex Hospital

4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$54,998

Blue Options, Blue Advantage
$66,975

Wakemed Raleigh Campus

3000 New Bern Ave
Raleigh, NC 27610

Blue Value
$63,963

Blue Options, Blue Advantage
$84,706

Data last Updated [illegible]

Sort By:

Cost

Sort

IMPORTANT INFORMATION: The information provided in this tool is **FOR INFORMATIONAL PURPOSES ONLY**. The estimates listed are averages and your actual costs may be different based on factors such as your health plan design, deductibles/co-insurance and out-of-pocket limits.

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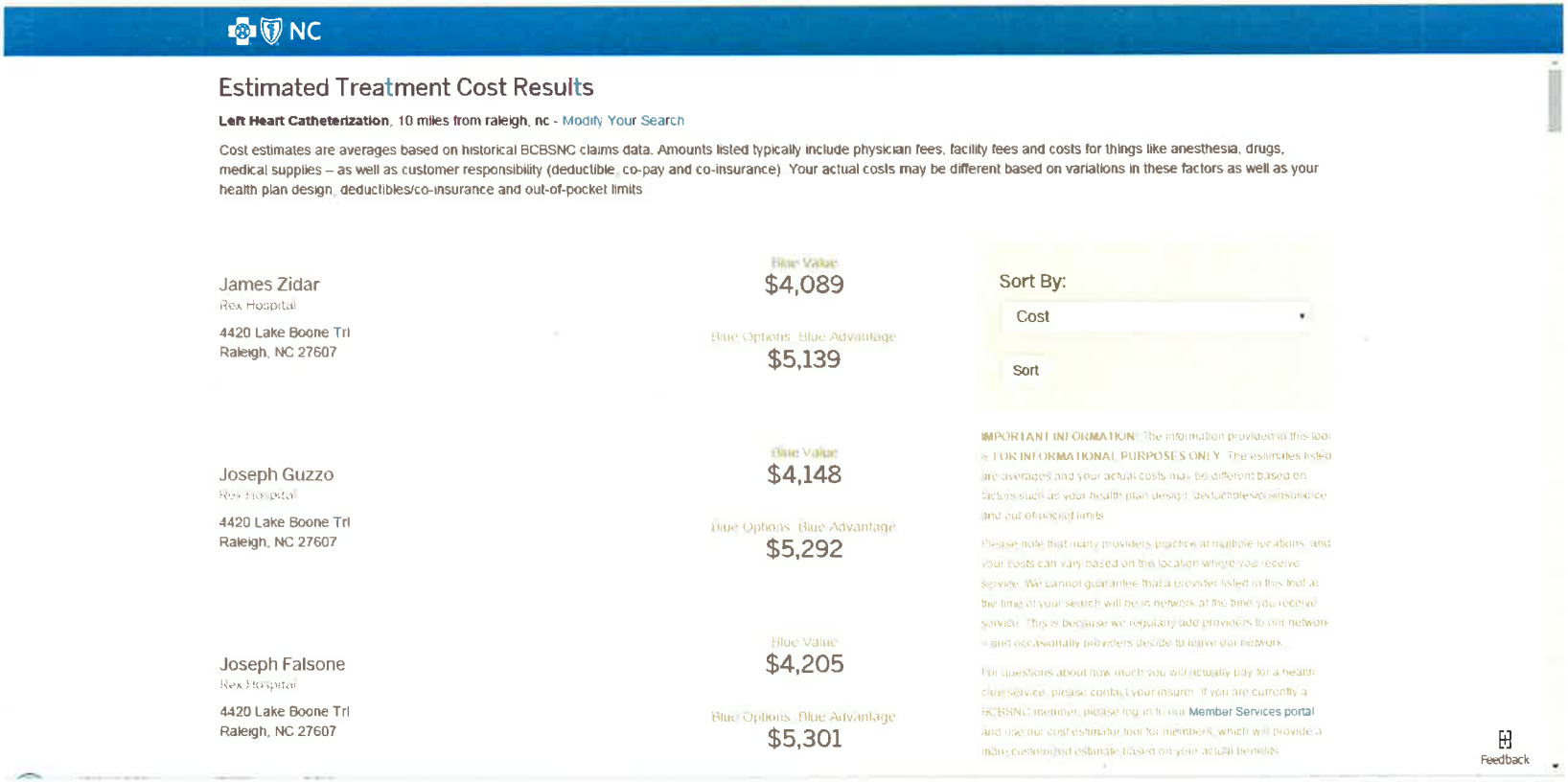
Feedback


NC
Estimated Treatment Cost Results
Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search
Cost estimates are averages based on historical BCBSNC claims data. Amounts listed typically include physician fees, facility fees and costs for things like anesthesia, drugs, medical supplies – as well as customer responsibility (deductible, co-pay and co-insurance). Your actual costs may be different based on variations in these factors as well as your health plan design, deductibles/co-insurance and out-of-pocket limits
James Zidar
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607
Blue Value
$4,089
Blue Options Blue Advantage
$5,139
Joseph Guzzo
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607
Blue Value
$4,148
Blue Options Blue Advantage
$5,292
Joseph Falsone
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607
Blue Value
$4,205
Blue Options Blue Advantage
$5,301
Sort By:
Cost
Sort
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Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Robert Bruner Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,294 Blue Options, Blue Advantage $5,478	Sort By: Cost Sort
George Adams Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,333 Blue Options, Blue Advantage $5,454	
Bruce Usher Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,508 Blue Options, Blue Advantage $5,677	

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Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Deepak Pasi Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,515 Blue Options, Blue Advantage $5,692	
James Scanlan Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,521 Blue Options, Blue Advantage $5,722	
Mateen Akhtar Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,535 Blue Options, Blue Advantage $5,709	

Sort By:

Cost

Sort

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Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Rex Hospital

4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$4,555

Blue Options, Blue Advantage
$5,747

Matthew Hook

Rex Hospital

4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$4,577

Blue Options, Blue Advantage
$5,784

Mohit Pasi

Rex Hospital

4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$4,586

Blue Options, Blue Advantage
$5,793

Sort By:

Cost

Sort

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Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Sameh Mobarek
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$4,633

Blue Options, Blue Advantage
$5,810

Gregory Rose
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$4,633

Blue Options, Blue Advantage
$5,816

Robert Jobe
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$4,652

Blue Options, Blue Advantage
$5,870

Sort By:

Cost

Sort

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Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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David Walker Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,774 Blue Options, Blue Advantage $6,030	Sort By: Cost Sort
William Newman Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,832 Blue Options, Blue Advantage $6,099	
Ravish Sachar Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $4,845 Blue Options, Blue Advantage $6,092	

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Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Sagir Ahmed Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $5,054 Blue Options, Blue Advantage $6,461	
Willis Wu Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $5,121 Blue Options, Blue Advantage $6,490	
Benjamin Atkeson Rex Hospital 4420 Lake Boone Trl Raleigh, NC 27607	Blue Value $5,360 Blue Options, Blue Advantage $6,795	

Sort By:

Cost

Sort

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NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Joel Schneider
Rex Hospital
4420 Lake Boone Trl
Raleigh, NC 27607

Blue Value
$5,510

Blue Options: Blue Advantage
$6,969

J. Richard Daw
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options: Blue Advantage
$7,968

Maitreya Thakkar
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options: Blue Advantage
$8,022

Jimmy Locklear
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options: Blue Advantage
$8,237

Sort By:

Cost

Sort

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Feedback

NC

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Siddhartha Rao
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,274

Pratik Desai
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,294

Franklin Wefald
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,294

Islam Othman
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,297

James Nutt

Blue Options, Blue Advantage

Sort By:

Cost

Sort

IMPORTANT INFORMATION: The information provided in this tool is FOR INFORMATIONAL PURPOSES ONLY. The assembled/estimated prices and your actual costs may be different based on factors such as your health plan design, deductibles/co-insurance, and out-of-pocket limits.

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NC

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Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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James Nutt WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,378
Robert Jobe WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,407
Virgil Wynia WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,434
John Kelley WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,437
Joel Schneider		

Sort By:

Cost

Sort

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[–]
Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization 10 miles from raleigh, nc - Modify Your Search

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Joel Schneider
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,465

Dhirenkumar Shah
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,481

Shalendra Varma
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,499

Matthew Hook
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,554

WakeMed

Blue Options, Blue Advantage

Sort By:

Cost

Sort

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[+] Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,560

Willis Wu
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,572

Sumeet Subherwal
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,653

Mateen Akhtar
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$8,677

Jack Noneman
WakeMed
3000 New Bern Ave

Blue Options, Blue Advantage
$8,787

Sort By:
Cost
Sort

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[+] Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization 10 miles from raleigh, nc - Modify Your Search

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Jack Noneman WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,787
Pavlo Netrebko WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,836
Amarendra Reddy WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,879
Rama Garimella WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$8,917
Priyavadan Shah	Blue Options, Blue Advantage	

Sort By:

Cost

Sort

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[–]
Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

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Priyavadan Shah WakeMed 3000 New Bern Ave Raleigh, NC 27610	Blue Options, Blue Advantage	$10,013
Mark Leithe Duke Raleigh Hospital 3400 Wake Forest Rd Raleigh, NC 27609	Blue Options, Blue Advantage	$10,468
Duke Raleigh Hospital 3400 Wake Forest Rd Raleigh, NC 27609	Blue Options, Blue Advantage	$10,883
James Mills Duke Raleigh Hospital 3400 Wake Forest Rd Raleigh, NC 27609	Blue Options, Blue Advantage	$12,114
John Sinden WakeMed	Blue Options, Blue Advantage	[illegible]

Sort By:

Cost

Sort

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[+] Feedback

NC

Estimated Treatment Cost Results

Left Heart Catheterization, 10 miles from raleigh, nc - Modify Your Search

Cost estimates are averages based on historical BCBSNC claims data. Amounts listed typically include physician fees, facility fees and costs for things like anesthesia, drugs, medical supplies – as well as customer responsibility (deductible, co-pay and co-insurance). Your actual costs may be different based on variations in these factors as well as your health plan design, deductibles/co-insurance and out-of-pocket limits.

Duke Raleigh Hospital
3400 Wake Forest Rd
Raleigh, NC 27609

Blue Options, Blue Advantage
$10,883

James Mills
Duke Raleigh Hospital
3400 Wake Forest Rd
Raleigh, NC 27609

Blue Options, Blue Advantage
$12,114

John Sinden
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$12,160

Brian Go
WakeMed
3000 New Bern Ave
Raleigh, NC 27610

Blue Options, Blue Advantage
$12,247

Data Last Updated 07/23/2015

Sort By:
Cost
Sort

IMPORTANT INFORMATION: The information provided in this tool is **FOR INFORMATIONAL PURPOSES ONLY**. The estimates listed are averages and your actual costs may be different based on factors such as your health plan design, deductibles/co-insurance and out-of-pocket limits.

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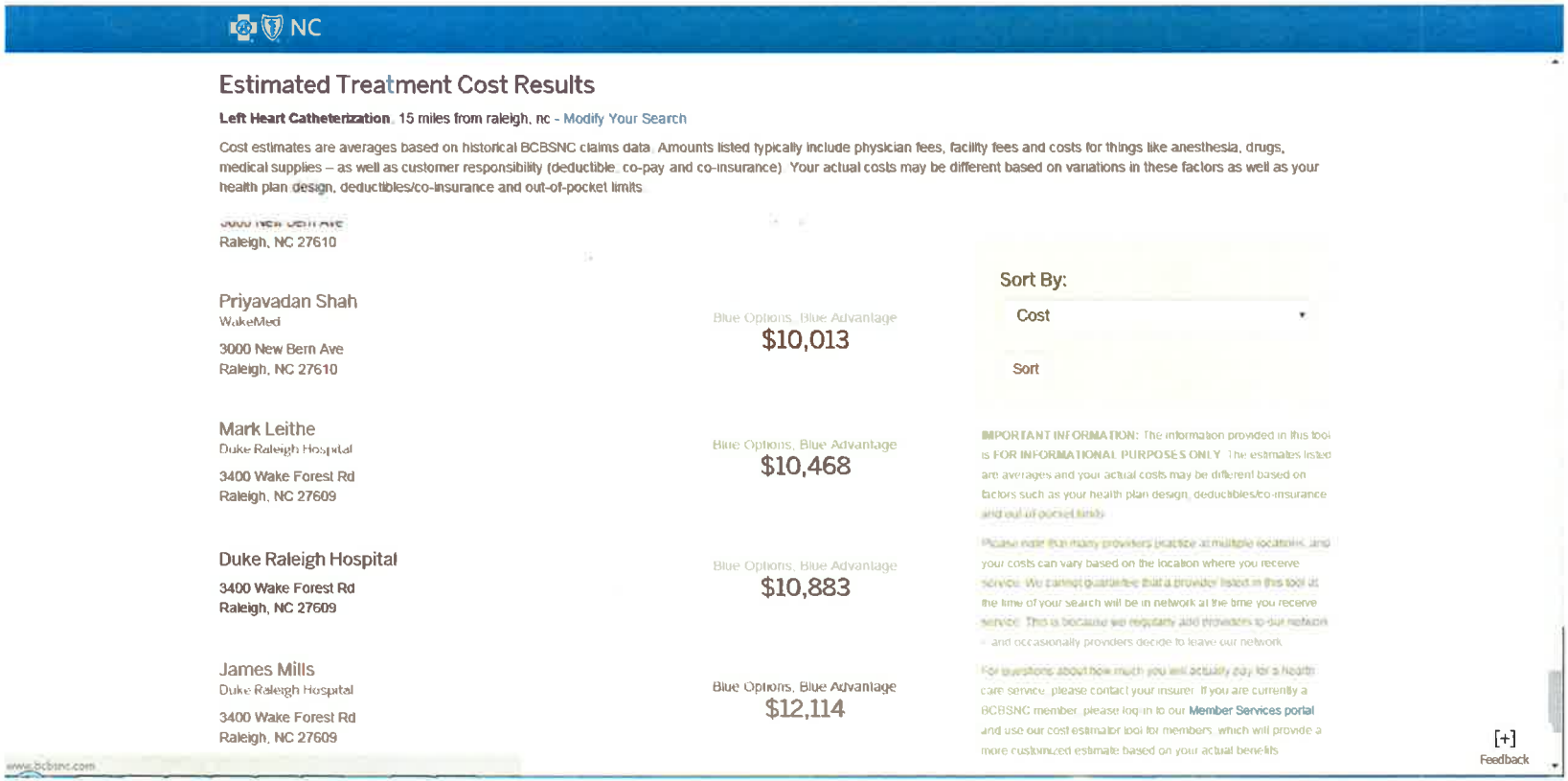
[+] Feedback


NC
Estimated Treatment Cost Results
Left Heart Catheterization, 15 miles from raleigh, nc - Modify Your Search
Cost estimates are averages based on historical BCBSNC claims data. Amounts listed typically include physician fees, facility fees and costs for things like anesthesia, drugs, medical supplies – as well as customer responsibility (deductible, co-pay and co-insurance). Your actual costs may be different based on variations in these factors as well as your health plan design, deductibles/co-insurance and out-of-pocket limits.
Raleigh, NC 27610
Priyavadan Shah
WakeMed
3000 New Bern Ave
Raleigh, NC 27610
Blue Options, Blue Advantage
$10,013
Mark Leithe
Duke Raleigh Hospital
3400 Wake Forest Rd
Raleigh, NC 27609
Blue Options, Blue Advantage
$10,468
Duke Raleigh Hospital
3400 Wake Forest Rd
Raleigh, NC 27609
Blue Options, Blue Advantage
$10,883
James Mills
Duke Raleigh Hospital
3400 Wake Forest Rd
Raleigh, NC 27609
Blue Options, Blue Advantage
$12,114
Sort By:
Cost
Sort
IMPORTANT INFORMATION: The information provided in this tool is FOR INFORMATIONAL PURPOSES ONLY. The estimates listed are averages and your actual costs may be different based on factors such as your health plan design, deductibles/co-insurance and out-of-pocket limits.
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www.bcbsnc.com

Attachment 2

Cardiac Catheterization Equipment Service Areas	Facility	Total Planning Inventory	2015 Procedures (Weighted Totals)	Machines Required Based on 80% Utilization	Total No. of Additional Machines Required by Facility	No. of Machines Needed
Catawba	Catawba Valley Medical Center	1	1,108	0.92	0	
	Frye Regional Medical Center	4	3,026	2.52	0	
	TOTAL	**5**		**3**		**0**
Forsyth	Novant Health Forsyth Medical Center	8	4,730	3.94	0	
	N.C. Baptist Hospital	5	3,775	3.15	0	
	TOTAL	**13**		**7**		**0**
Guilford	High Point Regional Health System	4	3,124	2.60	0	
	Cone Health	7	4,987	4.16	0	
	The Cardiovascular Diagnostic Center*	1	661	0.55	0	
	TOTAL	**12**		**7**		**0**
Iredell	Iredell Memorial Hospital	1	982	0.82	0	
	Davis Regional Medical Center	1	462	0.38	0	
	Lake Norman Regional Medical Center*	1	63	0.05	0	
	TOTAL	**3**		**1**		**0**
Mecklenburg	Carolinas Medical Center/Mercy	8	6,846	5.71	0	
	CHS Pineville	3	2,642	2.20	0	
	Novant Health Presbyterian Medical Center	4	2,933	2.44	0	
	Carolinas Medical Center-University	1	34	0.03	0	
	Novant Health Matthews Medical Center	1	1,156	0.96	0	
	TOTAL	**17**		**11**		**0**
Wake	Rex Hospital	4	6,934	5.78	2	
	WakeMed	9	7,567	6.31	0	
	WakeMed Cary	1	205	0.17	0	
	Duke Raleigh Hospital	3	463	0.39	0	
	TOTAL	**17**		**13**		**0**

*2014 data was utilized as the 2016 License Renewal Applications for these facilities could not be obtained.

Grey colored cells indicate changes from current methodology

Cardiac Catheterization Equipment Service Areas	Facility	Total Planning Inventory	2013 Procedures (Weighted Totals)	Machines Required Based on 80% Utilization	Total No. of Additional Machines Required by Facility	No. of Machines Needed	Need Determinations
Catawba	Catawba Valley Medical Center	1	1,108	0.92	(0.08)	0	
	Frye Regional Medical Center	4	3,026	2.52	(1.48)	0	
	TOTAL	**5**					**0**
Forsyth	N.C. Baptist Hospital	5	3,775	3.15	(1.85)	0	
	Novant Health Forsyth Medical Center	8	4,730	3.94	(4.06)	0	
	TOTAL						**0**
Guilford	The Cardiovascular Diagnostic Center*	1	661	0.55	(0.45)		
	Cone Health	7	4,987	4.16	(2.84)		
	Cone Health Total				***(3.29)***	***0***	
	High Point Regional Health System	4	3,124	2.60	(1.40)	0	
	TOTAL						**0**
Iredell	Davis Regional Medical Center	1	462	0.38	(0.62)	0	
	Iredell Memorial Hospital	1	982	0.82	(0.18)	0	
	Lake Norman Regional Medical Center*	1	63	0.05	(0.95)	0	
	TOTAL						**0**
Mecklenburg	Carolinas Medical Center/Mercy	8	6,846	5.71	(2.29)		
	CHS Pineville	3	2,642	2.20	(0.80)		
	Carolinas Medical Center-University	1	34	0.03	(0.97)		
	Carolinas HealthCare System Total				***(4.07)***	***0***	
	Novant Health Matthews Medical Center	1	1,156	0.96	(0.04)		
	Novant Health Presbyterian Medical Center	4	2,933	2.44	(1.56)		
	Novant Health Total				***(1.59)***	***0***	
	TOTAL			**11**			**0**
Wake	WakeMed	9	7,567	6.31	(2.69)		
	WakeMed Cary	1	205	0.17	(0.83)		
	WakeMed Total				***(3.52)***	***0***	
	Duke Raleigh Hospital	3	463	0.39	(2.61)	0	
	Rex Hospital	4	6,934	5.78	1.78	2	
	TOTAL						**2**

*2014 data was utilized as the 2016 License Renewal Applications for these facilities could not be obtained.