

PETITION

Petition for Positron Emission Tomography

PETITIONER

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STATEMENT OF REQUESTED ADJUSTMENT

Randolph Hospital respectfully requests that a methodology for mobile Positron Emission Tomography (PET) be established. Specifically, we request that the methodology include the following components for the *2015 State Medical Facilities Plan*:

1. When a mobile scanner reaches 2,080 procedures in any single year, a need is generated for one additional mobile scanner.
2. No more than two mobile scanners can be approved in the state in a single year.
3. The restrictions that the existing mobile PET scanners limit their service to a single planning area should be eliminated.

In addition, if the SHCC determines that providers with fixed PET scanners may convert those to mobile PET scanner, Randolph Hospital requests that either of the following two standards be applied:

- a) Providers with fixed PET scanners who wish to convert multiple fixed PET scanners to a mobile scanner may do so; however, the approval of a converted mobile PET scanner shall not be considered to meet the need generated by the utilization of existing mobile PET scanners; or,
- b) Providers with fixed PET scanners who wish to convert multiple fixed PET scanners to a mobile scanner must include in their CON application at least one mobile PET host site that does not currently provide fixed PET services.

BACKGROUND

Randolph Hospital is a 145-bed acute care hospital in Asheboro, Randolph County. Since 2010, Randolph Hospital has provided PET services through a mobile vendor, one of the two existing mobile PET scanners in the state. In 2013, Randolph Hospital requested that the SHCC consider developing a mobile PET methodology that would allow additional scanners to be developed. While we recognize the need to balance the need for access with the potential for oversupply, particularly at a statewide level, we

firmly believe that additional mobile PET capacity is needed, as demonstrated by the analysis in this petition.

We appreciate the SHCC's response to the petitions and letters that have been filed in the past regarding the need for a mobile PET methodology, and we understand that a stakeholder meeting was held earlier this year to allow discussion of the various issues surrounding PET. While we anticipate that others may file petitions to create a need methodology for mobile PET or otherwise modify the way in which additional capacity is generated, we expect that some of these petitions will focus on the need of the larger health systems in the state. We believe that it is vital that any methodology consider the needs of independent hospitals like Randolph and others that fill a vital role in the healthcare system in this state.

REASON FOR THE REQUESTED ADJUSTMENT

Before presenting our analysis, it may be helpful to understand the challenges Randolph Hospital has experienced with its mobile PET service. As the SHCC is aware, the existing PET scanner methodology was established for fixed equipment only and there is no methodology in place to increase the number of mobile PET scanners. North Carolina is currently served by two mobile PET scanners—one in the western region (including Health Service Areas I, II, and III) and one in the eastern region (including Health Service Areas IV, V, and VI), and the mobile scanners may not serve sites outside their respective region. The mobile provider, Alliance Imaging, has 18 mobile PET sites in the western region and 11 sites in the eastern region. Randolph Hospital is one of the 18 mobile PET sites currently served in the western region. Of note, when initially trying to establish our mobile PET service, the service was delayed for a number of months because there was no available capacity on the mobile PET scanner serving the western region. Although there was available capacity on the mobile PET scanner in the eastern region, which borders Randolph County, we were unable to take advantage of that capacity because of the restriction that mobile providers limit their service to a single planning area. It should be noted that Alliance Imaging, our mobile provider, has clearly worked with host sites to provide broad geographic access and unlike other mobile services, mobile PET is not dominated by host sites in urban areas, which we believe has been helpful in expanding access throughout the state. However, given the hospital's current arrangement with the mobile provider, the patients of Randolph County have very limited access to mobile PET scanning services locally. The service is available one morning every other week, and the mobile service must end at a set time in order to travel to another site. In order to allow our patients access to this service in their community, there have been occasions when we have had to ask patients to arrive for their scan at 4:30 AM in order to accommodate the travel schedule of our mobile service. In addition, while we have inquired about expanding our service coverage to include one morning every week, our mobile provider cannot accommodate our request due to capacity constraints. As a result of the current arrangement, coupled with the fact that we do not want to delay important cancer staging and treatment planning for our patients, it is not uncommon for us to refer patients to neighboring counties for their PET services. We acknowledge that this is often a hardship for patients facing a cancer

diagnosis and would very much like to offer continuity of care for our patients in their community. To have the cancer treatment available locally, but a vital part of the diagnostic process available on such a limited basis is clearly detrimental to these patients.

It is also peculiar that the capacity calculation for PET scanners states that Randolph Hospital is at four percent of capacity. However, comparing case volume, which occurs one morning every other week, to the total capacity of a single mobile PET scanner does not accurately describe our utilization. In fact, the capacity of the PET scanner based on its time at Randolph Hospital is a small fraction of the 2,600 procedure capacity shown in the 2014 SMFP. As such, we do not believe that the capacity calculation for each individual mobile site is helpful as it is currently stated, and although this is not a central tenet to this petition, we believe the table might be more helpful if it were revised to be similar to Table 9X for mobile cardiac catheterization sites, which shows the capacity for each site based on the availability of the mobile unit at that particular location.

EXPANSION OF PET IN NORTH CAROLINA AND CURRENT ISSUES

Since 2001, the PET methodology has evolved to support a gradual but needed expansion of geographic access for PET. In addition to the allocation of fixed dedicated PET scanners as described in the 2014 SMFP, the first and only two mobile dedicated PET scanners were allocated in the 2002 SMFP. Thus, even assuming that additional mobile PET capacity is available in the 2015 SMFP, it will have been 13 years since the last need determinations for mobile PET scanners appeared in the SMFP. Although the development of additional fixed PET scanners in the intervening time period has delayed the need for additional mobile capacity as mobile sites initiated fixed service, we believe that there is clear evidence of the need for more mobile capacity at this time.

There are several issues with the existing PET scanner inventory and utilization that we have identified, which are as follows:

1. Both existing mobile PET scanners are highly utilized.

Although the volume has fluctuated over the past few years, since 2009, the mobile PET scanner volume has grown at a compound annual growth rate (CAGR) of 1.9 percent, as shown below.

Year	Total Mobile PET Volume	Total Capacity (2 x 2,600)	Percent Utilization
FY 2009	5,258	5,200	101%
FY 2010	5,138	5,200	99%
FY 2011	5,716	5,200	110%
FY 2012	5,571	5,200	107%
CAGR	1.9%		

While the growth rate has not been extraordinary, it is significant when compared to the decline in the number of procedures performed on the state's fixed PET scanners. The growth rate may also be hampered by the geographic limitations on both scanners and the fact that they serve so many sites, as well as the overall high utilization of the scanners.

Although it may be argued that the current definition of 2,600 procedures per mobile unit is too low, given that in three of the last four years the scanners have exceeded this utilization, we do not believe that it should be increased. Ideally, the capacity of a mobile scanner should be lower than that of a fixed scanner, since it must relocate often to different sites. Moreover, some of the historical volume performed on these scanners occurred at suboptimal times (early mornings, weekends, etc.), and providing service at times that are best for patients may normalize the capacity of the scanners.

In addition, as stated above, we have repeatedly asked for additional time from the mobile vendor, and have repeatedly been told that no more time is available. We understand that many other providers have voiced the same concerns. Thus, the existing mobile scanners are clearly at their practical capacity, and have been for some time.

2. No methodology for additional mobile PET scanners exists.

Even with the high utilization of both existing scanners, and even if the volume continues to grow, no need determination would be triggered, since no methodology exists. Both units exceeded the defined capacity in FY 2012, but no avenue currently exists for an applicant to apply for a CON for an additional scanner.

There is also no methodology for "converting" from a mobile site to a fixed site. From 1999 to 2004, the MRI methodology included a trigger for a need determination for a fixed unit once a mobile site reached a certain threshold. While this methodology may not be needed for PET given the low utilization of most sites, the lack of such a trigger further hampers the availability of the mobile scanners, as high volume mobile sites are not developing fixed scanners and freeing up capacity on the mobile scanners.

3. Most fixed PET scanners are not well utilized.

As shown clearly by Table 9L in the 2014 SMFP, the existing fixed PET scanners in the state have generally not achieved effective utilization. Moreover, from 2009 to 2012, fixed PET volume declined at a CAGR of -3.9 percent statewide, as shown below.

<i>Year</i>	<i>Total Mobile PET Volume</i>	<i>Total Capacity (27 x 3,000)</i>	<i>Percent Utilization</i>
FY 2009	36,879	81,000	46%
FY 2010	36,622	81,000	45%
FY 2011	34,900	81,000	43%
FY 2012	32,729	81,000	40%
CAGR	-3.9%		

While the average utilization is 40 percent, per-site utilization ranges from nine percent to 75 percent. The number of fixed PET scanners has stabilized, however. Between 2009 and 2012, there were no need determinations for new fixed PET scanners in the state. In 2013, there was one need determination in HSA II, for which two providers filed CON applications; however, both were denied, primarily because of an inability to reasonably project that their existing and proposed PET scanners would be fully utilized.

Some opponents of additional mobile PET scanners may use the decline in fixed scanner volume as a rationale against more capacity of any kind; however, we believe that a lack of access to PET technology persists, as shown below. Moreover, the available capacity on fixed scanners has not mitigated the growth in mobile PET utilization, as the data indicate.

4. Some providers continue to lack sufficient access to PET services.

In addition to the statements made above and in previous comments to the SHCC regarding Randolph Hospital’s need for expanded mobile service, other petitions and anecdotal evidence suggests that additional mobile capacity is needed. An analysis of available data also suggests that access is not equal across the state.

- a. In general, sites with access to only mobile PET provide fewer PET scans as a ratio to radiation treatments than those with access to fixed PET.**

Since PET is used most often clinically in connection with oncology diagnosis and treatment, the relationship between linear accelerator treatments and PET scans by site provides some insight into whether access issues exist where only mobile PET is available. Although other types of cancer treatment modalities, such as surgery and chemotherapy, could be helpful to this analysis, data for those modalities are not publicly available. Please refer to Attachment 1 for the tables detailing this analysis. Providers in red have fixed PET scanners; those in black have mobile. Note that some providers do not have both and are therefore marked “NA.” The calculated ratio shows the number of PET scans per 1,000 ESTVs; thus, a lower number indicates fewer PET scans compared

to linear accelerator treatments. A higher number indicates a greater number of PET scans. The number of ESTVs was divided by 1,000 to prevent fractions.

Table 1 shows that there is a strong positive correlation (0.88) between linear accelerator treatments (ESTVs) and PET scans, as one would expect. Thus, the higher the number of ESTVs, one would expect a higher number of PET scans as well.

Table 2 shows that of the 18 providers with the lowest ratio of PET scans to ESTVs, all but one all have only mobile service, and the one (CMC-Union) only recently implemented its fixed PET service.

Table 3 shows that of the 18 providers with the highest ratio of PET scans to ESTVs, all but four have fixed PET scanners.

Clearly there is an overall difference in the number of PET scans provided at sites with a linear accelerator, depending on whether the provider had a fixed PET scanner or only mobile service. Sites with fixed PET scanners provided, in general, a higher number of PET scans per ESTV than those with only mobile service. It appears that patients with local access to only mobile PET have fewer PET scans than those with access to a fixed PET scanner. Please note that this analysis also includes the assumption that providers with fixed PET scanners are providing the optimal number of scans per patient; that is, they are providing enough to give effective diagnosis and treatment evaluation, but are also not over-utilizing the service. Given the marked increase in pre-authorization requirements for PET scans over the past few years, along with fewer additional PET sites being approved by CMS for reimbursement, we believe this assumption is reasonable.

What these data do not show, however, is whether patients went without a PET scan because of a lack of access, or whether they traveled to another provider for care. In addition, the data are only for providers with PET service and a linear accelerator. Counties without both are not considered. Thus, the following analysis attempts to determine that by examining PET scanner use rates by county.

- b. In general, counties without PET service have lower use rates than counties with PET service, which could indicate a lack of access.**

Using PET scanner patient origin data from the Medical Facilities Planning Branch, as collected from License Renewal Applications and aggregated into a database, PET scanner use rates for each county were calculated. Please see Attachment 2 for the results of the analysis. Counties with only mobile service are highlighted in blue; counties with

fixed are highlighted green; and counties with no services are not highlighted.

In general, the counties with the lowest use rates have no PET service. While those counties are mostly small, rural counties some of them are not. It is also true that some counties with only mobile access have PET use rates that exceed the state average. It is possible that those counties have a greater number of days per week of mobile access. It is clear, however, that access to PET services remains an issue for some counties in the state, including Randolph County. This is particularly the case in counties that are a greater distance from fixed PET sites, and in counties, such as Randolph, that have higher numbers of unemployed and uninsured, for which travel outside the county becomes much more difficult to manage.

The data also show that patients may have been forced to travel for PET services because of the lack of availability in their home county. For Randolph County, for example, only 96 of the 490 patients who received a PET scan in 2012 received it in Randolph County. (Comparatively, 271 patients received radiation therapy at Randolph Hospital in 2012). According to internal hospital data, over the last three years, as many as one-third of patients receiving cancer treatment at Randolph Hospital had to be referred outside the county for a PET scan, due to the lack of timely availability at the hospital. This number does not include those that could not travel for care, but only those for whom the referral was actually made. Given the use of PET scans during treatment to assess its efficacy, the need for local, timely access to PET services is clearly a patient safety and quality issue.

While the available data and the resulting analyses are not perfect (e.g. not age adjusted or adjusted to account for cancer rates), we believe that it clearly demonstrates persistent access issues for PET services in some areas of the state. The most effective way in which to eliminate these issues is to allow for the development of additional mobile PET scanners to serve all areas of the state.

Based on these four factors, Randolph Hospital believes that the most effective mechanism to address the issues is the development of a mobile PET methodology, as described above. The rationale for each of our recommendations will be discussed below.

- 1. When a mobile scanner reaches 2,080 procedures in any single year, a need is generated for one additional mobile scanner.**

The number 2,080 is 80 percent of the 2,600 procedures, the current defined capacity of a mobile PET scanner. While some may argue that this should be

increased, as discussed above, mobile scanners should ideally have a lower capacity than fixed, given the need to relocate them and the associated downtime throughout each week. In addition, the 80 percent threshold allows time for the need determination to be made, CON applications to be filed and reviewed, and the approved application to develop its project before maximum capacity is reached.

- 2. The restrictions that the existing mobile PET scanners limit their service to one planning area should be eliminated.**

The initial intent behind these planning areas, based on discussions made by the SHCC at that time, was to ensure equal access throughout the state. That has been accomplished, but we believe that the restriction has made it difficult for the mobile provider to be flexible in its routes and complicated its ability to provide more service to those that need it. The development of a mobile PET methodology and a need determination for additional mobile scanners should obviate the need for this restriction.

- 3. No more than two mobile scanners can be approved in the state in a single year.**

If the need methodology is approved as proposed, then the maximum need determination in the 2015 SMFP would be two mobile PET scanners. However, in subsequent years, or if the SHCC decides to enable providers with fixed PET scanners to convert to mobile scanners, multiple mobile PET scanners could be approved. While this might improve access, it might also result in unnecessary duplication. Thus, a limit on the number that can be approved in a single year is a prudent approach.

Regarding the conversion from mobile to fixed PET scanners, Randolph Hospital is aware that some providers may advocate a change in the methodology that would allow this to occur. In general, we are supportive of the use of one mobile scanner to replace two or more fixed scanners, particularly at low volume fixed sites. However, we recognize that, if approved, this conversion will most likely benefit larger healthcare systems in the state that already have multiple sites with fixed PET scanners. As such, the conversion of the fixed sites to mobile will probably not alleviate capacity constraints on the existing mobile scanners, nor will it necessarily increase access to providers without a fixed scanner, unless required to do so. Thus, we believe that if such conversions are allowed, they should either be approved outside the need for additional mobile scanners generated by the methodology, or the applicants should be required to expand access to providers that currently do not have a fixed PET scanner.

ADVERSE EFFECTS IF PETITION IS NOT APPROVED

The primary adverse effect will be the continued lack of access for patients in areas with no or only mobile PET service.

ALTERNATIVES CONSIDERED

File a Special Need Petition

Randolph Hospital considered filing a petition this summer for a special need adjustment. However, last summer, it filed a comment to urge the SHCC to take action on the mobile PET methodology, which we understand it is in the process of doing. Given the necessary timing of the development of a methodology with statewide implications, we believe we are filing a petition at the correct time.

EVIDENCE THAT THE PROPOSED CHANGE WOULD NOT RESULT IN UNNECESSARY DUPLICATION

If approved, the petition would not result in unnecessary duplication because it would require effective utilization of the existing mobile PET scanners before additional need determinations would be generated. In contrast to a special need petition, which is sometimes approved irrespective of the utilization of existing equipment or services, the proposed methodology would not generate a need determination before the existing equipment was effectively utilized, which would alleviate much of the risk of unnecessary duplication.

EVIDENCE OF CONSISTENCY WITH THE THREE BASIC PRINCIPLES

The petition is clearly consistent with the principle of Access, given that that primary need for a mobile PET methodology is to provide more equitable access to the service. In addition, the potential to expand a mobile service is an effective way to expand access, given that the mobile unit would serve multiple sites across a broad geography.

The petition is also consistent with the Quality and Safety principle. With expanded local access, providers will be better able to maintain the quality and safety for their patients, as compared to having to refer patients to another site for care. In addition, patients will receive more timely PET scans to determine the effectiveness of their cancer treatment, allowing treatments to be altered as needed to prevent unnecessary patient discomfort and to improve outcomes.

Finally, the petition is also consistent with healthcare Value. By enabling the expansion of a mobile service, costs can be shared across multiple sites and utilization can be maximized, lowering the cost per procedure compared to less utilized fixed sites. Moreover, with more local expansion of access to the service, patients will be prevented from spending their resources traveling to a more distant location for the service, which lowers the overall cost for them.

CONCLUSION

In conclusion, Randolph Hospital urges the SHCC to develop a methodology for mobile PET and enable the expansion of a service that has been operating at the current capacity for well over a decade.

Thank you for your consideration.

Attachment 1

Linac Utilization (ESTVs) to PET volume comparison
Source: 2014 SMFP

Table 1

*There is strong positive correlation between
the number of linac treatments and PET scans.*

Correlation between linac and PET: 0.888754

Provider	Linac	PET	PET:Linac*
Mission	19,161	1,545	80.6
Catawba/Frye	20,898	1,293	61.9
NC Baptist	18,670	2,009	107.6
Cone	29,386	1,801	61.3
Forsyth Medical	24,723	2,615	105.8
High Point	7,449	601	80.7
Alamance	9,165	687	75.0
Carolinas	28,215	3,036	107.6
CMC-Union	7,573	269	35.5
CaroMont	12,650	767	60.6
CMC-NorthEast	14,243	1,108	77.8
Presbyterian	10,471	1,577	150.6
Iredell	6,124	359	58.6
Duke University	33,593	4,474	133.2
UNC	27,450	1,940	70.7
Rex	19,401	1,729	89.1
Wake PET	NA	683	NA
New Hanover	6,201	1,283	206.9
Cape Fear Valley	20,967	1,238	59.0
FirstHealth	18,276	1,011	55.3
Vidant	10,529	1,643	156.0
CarolinaEast	8,274	619	74.8
Nash	7,971	442	55.5
Caldwell	2,612	132	50.5
Cleveland	7,070	480	67.9
CMC-Blue Ridge	5,246	93	17.7
Pardee	5,089	167	32.8
Park Ridge	NA	151	NA
Rutherford	NA	126	NA
Watauga	5,434	106	19.5
MedWest Harris	3,993	288	72.1
Hugh Chatham	2,448	0	0.0
Randolph	4,055	107	26.4
Thomasville	NA	91	NA
Northern	NA	104	NA
Lake Norman	10,670	191	17.9
Rowan	6,131	267	43.5
Stanly	3,625	74	20.4
Huntersville	NA	211	NA
Matthews	9,489	106	11.2
Duke Raleigh	9,807	573	58.4
Johnston	8,021	151	18.8
Scotland	4,278	156	36.5
Southeastern	8,553	312	36.5
Albemarle	5,677	252	44.4
Outer Banks	2,447	128	52.3
Carteret	4,016	198	49.3
Lenoir	6,349	150	23.6
Onslow	3,937	176	44.7
Wayne	5,186	338	65.2
Wilson	4,353	377	86.6

*Linear accelerator treatments are divided by 1,000.

Attachment 1

Linac Utilization (ESTVs) to PET volume comparison
Source: 2014 SMFP

Table 2

Mobile sites have fewer PET scans per linac treatment, which could indicate an access issue for those sites.

Sorted Lowest to Highest

Provider	Linac	PET	PET:Linac*
Matthews	9,489	106	11.2
CMC-Blue Ridge	5,246	93	17.7
Lake Norman	10,670	191	17.9
Johnston	8,021	151	18.8
Watauga	5,434	106	19.5
Stanly	3,625	74	20.4
Lenoir	6,349	150	23.6
Randolph	4,055	107	26.4
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Caldwell	2,612	132	50.5
Outer Banks	2,447	128	52.3
FirstHealth	18,276	1,011	55.3
Nash	7,971	442	55.5
Duke Raleigh	9,807	573	58.4
Iredell	6,124	359	58.6
Cape Fear Valley	20,967	1,238	59.0
CaroMont	12,650	767	60.6
Cone	29,386	1,801	61.3
Catawba/Frye	20,898	1,293	61.9
Wayne	5,186	338	65.2
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Presbyterian	10,471	1,577	150.6
Vidant	10,529	1,643	156.0
New Hanover	6,201	1,283	206.9
Hugh Chatham	2,448	0	NA
Wake PET	NA	683	NA
Park Ridge	NA	151	NA
Rutherford	NA	126	NA
Thomasville	NA	91	NA
Northern	NA	104	NA
Huntersville	NA	211	NA

*Linear accelerator treatments are divided by 1,000.

Linac Utilization (ESTVs) to PET volume comparison
Source: 2014 SMFP

Table 3

- Sites with fixed PET scanners have more PET scans per linac treatment, which could indicate better access.

Sorted Highest to Lowest

Provider	Linac	PET	PET:Linac*
New Hanover	6,201	1,283	206.9
Vidant	10,529	1,643	156.0
Presbyterian	10,471	1,577	150.6
Duke University	33,593	4,474	133.2
NC Baptist	18,670	2,009	107.6
Carolinas	28,215	3,036	107.6
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Matthews	9,489	106	11.2
Hugh Chatham	2,448	0	NA
Wake PET	NA	683	NA
Park Ridge	NA	151	NA
Rutherford	NA	126	NA
Thomasville	NA	91	NA
Northern	NA	104	NA
Huntersville	NA	211	NA

*Linear accelerator treatments are divided by 1,000.

Attachment 2

Attachment 2

2012 PET Patient Use Rates**Source: MFP Branch database**

Type	County	# of Patients	County Population	Rate per 1,000
None	Gates	11	11,957	0.92
None	Camden	16	10,076	1.59
None	Polk	38	20,422	1.86
Mobile	Watauga	100	52,472	1.91
None	Currituck	47	24,165	1.94
None	Clay	21	10,729	1.96
None	Hoke	112	49,928	2.24
None	Madison	51	21,092	2.42
None	Greene	53	21,435	2.47
None	Avery	47	17,795	2.64
None	Hertford	67	24,631	2.72
None	Graham	24	8,798	2.73
None	Duplin	168	60,100	2.80
Mobile	Johnston	500	174,933	2.86
None	Tyrrell*	12	4,188	2.87
None	Harnett	347	120,900	2.87
Fixed	Union*	606	207,896	2.91
Fixed	Mecklenburg	2,830	962,593	2.94
Mobile	Wayne	369	124,341	2.97
Mobile	Jackson	122	40,924	2.98
None	McDowell	135	45,269	2.98
Mobile	Onslow	578	190,187	3.04
Fixed	Pitt	528	172,569	3.06
None	Cherokee	85	27,512	3.09
Fixed	Buncombe	771	245,228	3.14
None	Macon	107	33,939	3.15
Fixed	New Hanover	669	209,846	3.19
Mobile	Burke	295	90,051	3.28
None	Northampton	71	21,521	3.30
None	Bladen	116	35,146	3.30
None	Ashe	91	27,326	3.33
None	Perquimans	46	13,692	3.36
Fixed	Wake	3,177	945,143	3.36
None	Edgecombe	189	56,039	3.37
None	Anson	90	26,656	3.38
Mobile	Randolph	490	142,471	3.44
None	Pender	188	54,259	3.46
Mobile	Pasquotank	140	40,179	3.48
None	Bertie	75	20,767	3.61
Fixed	Orange	505	138,330	3.65
Mobile	Rutherford	251	68,032	3.69
None	Brunswick	417	112,701	3.70
None	Haywood	220	59,276	3.71
Mobile	Henderson	405	108,340	3.74

Attachment 2

None	Sampson	241	64,121	3.76
Mobile	Robeson	507	134,822	3.76
None	Washington	49	12,920	3.79
Mobile	Rowan	531	138,252	3.84
Fixed	Cumberland	1,278	331,279	3.86
None	Chatham	259	66,618	3.89
None	Transylvania	133	33,189	4.01
None	Hyde	23	5,718	4.02
Fixed	Craven	428	105,080	4.07
None	Wilkes	284	69,625	4.08
None	Franklin	254	61,633	4.12
Mobile	Lenoir	246	59,546	4.13
Fixed	Guilford	2,099	501,058	4.19
None	Yancey	75	17,857	4.20
Fixed	Iredell	688	163,189	4.22
None	Mitchell	65	15,397	4.22
None	Montgomery	118	27,828	4.24
None	Warren	89	20,746	4.29
Fixed	Gaston	897	208,704	4.30
None	Columbus	250	58,107	4.30
None	Lincoln	348	79,512	4.38
None	Chowan	67	14,836	4.52
None	Richmond	211	46,398	4.55
None	Swain	66	14,393	4.59
Fixed	Cabarrus	845	183,806	4.60
None	Martin	112	24,139	4.64
None	Caswell	110	23,557	4.67
None	Halifax	257	54,308	4.73
Fixed	Nash	456	95,728	4.76
Mobile	Dare	168	34,816	4.83
None	Rockingham	451	92,977	4.85
Mobile	Davidson	813	163,683	4.97
None	Lee	300	59,073	5.08
Fixed	Forsyth	1,817	357,483	5.08
None	Alexander	193	37,361	5.17
Mobile	Stanly	316	60,636	5.21
None	Pamlico	69	13,208	5.22
Mobile	Caldwell	437	82,590	5.29
Mobile	Cleveland	519	97,800	5.31
None	Jones	57	10,615	5.37
Fixed	Durham	1,511	280,921	5.38
Mobile	Scotland	197	36,387	5.41
None	Granville	315	58,036	5.43
Mobile	Surry	402	73,754	5.45
None	Person	216	39,394	5.48
Mobile	Wilson	450	82,020	5.49
None	Yadkin	212	38,204	5.55
Fixed	Catawba	864	155,353	5.56

NC State average = 3.93

Attachment 2

None	Beaufort	267	48,008	5.56
None	Stokes	262	47,026	5.57
Mobile	Carteret	380	68,151	5.58
None	Vance	256	45,541	5.62
None	Alleghany	64	11,028	5.80
Fixed	Alamance	908	153,033	5.93
Fixed	Moore	537	90,414	5.94
None	Davie	247	41,497	5.95
	North Carolina	38,394	9,765,229	3.93

*Note: Based on the MFP database, Tyrrell County had 183 patients, which equates to a use rate of 43.70. The HLRA for Presbyterian Hospital shows 171 patients from Tyrrell County, which is likely a typo. Based on the geographic and alphabetical proximity of Union County, as well as the lower than average use rate for Union, Randolph Hospital assumes that these numbers were intended to be Union and has adjusted the data accordingly. Unadjusted, the Union County use rate is 2.09 based on 435 patients.