

**Additional Comments Regarding the MRI Workgroup
and
Response to Spring Petitions Related to MRI Services**

Mission Hospital (“Mission”) appreciates the opportunity to elaborate on the comments presented by Sondra Smith to the SHCC on March 2, 2022, regarding the need for MRI services and the work done by the MRI Workgroup. This submission also addresses the two MRI-related Spring petitions filed by:

- WakeMed regarding Policy TE-3; and
- Carolina Neurosurgery & Spine Associates (“CNSA”) regarding Policy TE-4.

Discussion of Petitions

Overall, Mission is supportive of the concept behind WakeMed’s petition regarding TE-3. Any hospital that offers 24/7 emergency care and offers inpatient and outpatient surgery should have a fixed MRI if it wants to offer this service. MRI is the standard of care for such hospital facilities and a need methodology should not limit access to such services.

Mission has mixed reactions to the CNSA petition regarding Policy TE-4. On the one hand if a hospital or other site is using enough mobile capacity that they want to convert to a fixed unit and can justify a full-time fixed unit capacity with reasonable utilization projections, allowing them to acquire a fixed MRI is consistent with the notion that MRI services are a basic standard of care and such providers should be able to offer a fixed MRI program. Perhaps a minimum threshold of utilization would justify conversion to a fixed unit. As discussed below, some providers report having to cobble together days of mobile service to meet demand. In such instances it makes sense to allow for a CON application to convert from a mobile to a fixed MRI.

Mission has concerns regarding CNSA’s petition to allow substitution of a third party’s MRI for another MRI operated by the host site. If allowed, this scenario would increase proliferation of mobile services by essentially substituting one mobile vendor for another, both of which can apparently add new service sites at will under current CON practice. As discussed below, the current status of mobile MRI services in the State renders planning for MRI services extremely complex, inconsistent, and does not promote access to what has become a basic imaging modality and the standard of care.

Overview of MRI Need Methodology

Consistent with the petitions by WakeMed and CSNA, Mission believes that the SHCC should address the need for hospital-located fixed MRI units and situations in which a location has sufficient demand for a fixed unit but is being served by one or more mobile providers. This

speaks to the “big picture” of MRI planning that was not addressed by the meetings held by the MRI Workgroup. While Mission appreciates the Workgroup’s efforts, there was simply not enough time for the group to do more than tweak nomenclature and assumptions in the current methodology, without an overall assessment of how MRI is being offered in our state and how it should be offered. The end result of the Workgroup’s recommendations is actually a greater limitation on quantitative need for *fixed* MRI services with the threshold scan volume **higher in the recommended methodology than the existing methodology** for all service areas including those without a fixed scanner as summarized below:

Step 4. Planning Thresholds			Reference: Current Method		
Number of Fixed Scanners in Service Area	Planning Threshold	Recommendation:	Planning Threshold	Adjusted Threshold	Fixed Scanners in Service Area
		Adjusted Threshold			
2+	0.80	4992	0.70	4805	4+
	0.80	4992	0.65	4462	3
	0.80	4992	0.60	4118	2
1	0.70	4368	0.55	3775	1
0	0.30	1872	0.25	1716	0

This does not address the very concerns identified by WakeMed and CSNA, which is a need for more fixed MRI capacity at hospitals and other highly utilized mobile MRI sites. It seems reasonable to agree that where a fixed MRI can be well utilized, this is preferable from a technology, continuity, and patient care perspective than the use of multiple mobile vendors to meet demand. We hear from our hospital colleagues that they cannot get enough mobile days to meet demand, yet as will be shown, **there should be more than enough mobile capacity with 26 CON approved mobile units and the equivalent of 11 “legacy” or grandfathered mobile units to serve the state.** It is not to say that mobile MRIs are not important to serve low volume and rural communities, to bridge the gap when a fixed unit cannot meet all the demand at the host site, to serve fixed sites temporarily when equipment is being replaced, for examples. Mission proposes that the goal of the planning methodology should be to offer fixed units where the demand exists to support a fixed unit and not limit needs so as to unnecessarily rely on mobile units. This goal is not furthered by the current or the recommended methodology.

Options for MRI Planning

As demonstrated below, the complexity of reporting mobile capacity leads to numerous unintended issues and problems with the current and recommended methodologies. The combination of mobile and fixed MRI units together also creates a less than clear picture of the full utilization and needs of hospitals, hospital systems and other fixed and mobile MRI sites. Many of these issues and errors are discussed in detail below. With these concerns, and the “big picture” issues identified above, the SHCC and the Technology and Equipment Committee should consider the following options:

- Reconvene the MRI Workgroup and expand participation to include additional hospital providers to undertake a larger evaluation of the MRI need projection process.
- Maintain the current methodology for the 2023 SMFP to provide more time for the MRI Workgroup to evaluate overall planning more fully for MRI services.
- Eliminate the MRI methodology and regulate MRI services through policies such as proposed TE-3 and TE-4 (without permitting the replacement of mobile vendors with a mobile owned by the host site and then allowing the host site to add new, multiple county service areas without a CON as is currently permitted).
- If a new methodology is to be established, within the framework of the larger view of MRI need, varying approaches can be considered for:
 - Identifying separate planning approaches for Fixed and Mobile services (like the PET methodology);
 - Separate consideration of utilization of specific fixed sites such as hospitals (like the PET methodology); and
 - Separate considerations for the needs of hospitals or across health systems in a defined geographic area (similar to the OR methodology).

It is Mission's hope that the SHCC, Technology and Equipment Committee and the Agency will consider the significant issues with the current methodology, and particularly the impact of mobile units described in detail below and will undertake a broader evaluation of MRI regulation and health planning goals even if this means delaying a year (planning cycle) for a more in-depth analysis.

Observations Regarding Mobile MRI Reporting And Inclusion in the Need Methodology

- **Lack of "Big Picture" Information** - The MRI Workgroup does not appear to have considered and the current methodology does not even allow for knowledge of the following:
 - How many CON-authorized mobile units are operating in the state?
 - How many legacy units are operating in the state? How many are permitted to?
 - How well utilized is each individual unit as a whole (instead of focusing on its utilization levels only at individual sites)?
 - How much available mobile capacity is not being used currently?
 - Is it reasonable that mobile equipment has the same capacity as fixed equipment given that it must travel between sites, limiting the length of operational days and potentially the days per week of operation?
 - If there are any mobile units serving providers all over the state, does that indicate that perhaps there is a need for more fixed units and that limitations on need for fixed units has resulted in an overuse of mobile equipment for this basic and standard imaging modality?
- **Information available from the reported utilization (MRI Workgroup excel file 2020 data, which is included in the 2022 SMFP) reveals the following information:**

- There are 26 reported CON authorized mobile units in NC.
 - Of these units, most are included in the methodology with less than 1 equivalent – not all authorized capacity is being used based on capacity definitions for mobile units.
 - It appears that the equivalent of only 16 fully-utilized mobile units are included in the need methodology despite the fact that 26 units are authorized and serving the state.
 - If you ask hospitals, it is very hard to get additional mobile days. If you look at the utilization of each individual mobile unit as a whole, it seems there is available capacity based on the standard capacity (which is applied across all sites and types of equipment).
 - There are a handful of units that are calculated to have more than 1 equivalent. If a CON authorizes one unit, why should it be included with an equivalent of more than 1?

Table 1

Total Reported CON Equipment					
CON Authorization	Legal Entity	Reported Equivalent Units	Calculated Equivalent Units	Eq. Units in Need Methodology	Unused Capacity (+) / Over-reported Capacity (-)
R-007623-06 Total	Sentara Albemarle Medical Center	0.31	0.270	0.270	0.730
G-00703804 Total	Alliance HealthCare Services	0.51	0.50	0.50	0.503
E-007066-04 Total	Blue Ridge Radiology	0.61	0.52	0.52	0.484
E-008230-80 Total	EmergeOrtho, PA	1.18	1.063	1.063	-0.063
F-006626-02 Total	Jacksonville Diagnostic Imaging	0.290	0.274	0.274	0.726
F-006734-03 Total	Carolina Neurosurgery & Spine Associates	1.30	1.30	1.30	-0.295
F-007040-04 Total	Carolinas Imaging Services, LLC	0.47	0.48	0.48	0.519
F-007164-04 Total	Presbyterian Mobile Imaging	0.920	0.892	0.892	0.108
F-007987-07 Total	OrthoCarolina, PA	1.050	1.020	1.020	-0.020
F-008000-07 Total	MRI Specialists of the Carolinas	0.40	0.40	0.40	0.603
G-006271-00 Total	Alliance HealthCare Services	0.73	0.71	0.71	0.288
G-007064-04 Total	High Point Regional Health System	0.260	0.245	0.245	0.755
G-007065-04 Total	Forsyth Medical Hospital	0.35	0.35	0.35	0.650
G-007723-06 Total	OrthoCarolina, PA	0.940	0.909	0.909	0.091
J-006665-02 Total	Cape Fear Mobile Imaging	0.690	0.667	0.667	0.333
J-007008-04 Total	Foundation Health Mobile Imaging, LLC	0.440	0.404	0.404	0.596
J-007012-04 Total	Wake Radiology	0.490	0.484	0.484	0.516
J-007756-06 Total	Raleigh Orthopaedic Clinic, PA	0.79	0.76	0.76	0.239
J-008453-09 Total	EmergeOrtho	1.100	1.010	1.010	-0.010
J-011291-17 Total	Wake Radiology	0.300	0.353	0.353	0.647
J-082608-08 Total	Pinnacle Health Service of North Carolina, LLC	1.53	1.37	1.37	-0.366
M-006605-02 Total	Mobile Imaging of North Carolina, LLC	0.47	0.419	0.419	0.581
O-006434-01 Total	Cape Fear Diagnostic Imaging, LLC	0.440	0.372	0.372	0.628
O-007001-04 Total	Alliance HealthCare Services	0.270	0.309	0.309	0.691
O-007254-05 Total	Porter's Neck Imaging, LLC	0.71	0.68	0.68	0.320
Q-006884-03 Total	Alliance HealthCare Services	0.730	0.675	0.675	0.325
Total Reported CON Equipment		17.280	16.419	16.419	9.581
Count of Authorized CON Equipment		26.000			

- It is unclear how many Legacy units are authorized operate in the state. It appears that perhaps a single authorized Legacy units can report multiple different equipment IDs, which may be associated with replacement equipment. However, this is completely unclear with the current and recommended methodology and reporting process.

- Across the state, there are 4 legal entities operating Legacy units. Entities operating Legacy mobile units include Insight Imaging, Alliance Imaging, Kings Medical, and Foundations Health.
- Collectively these entities report 22 different pieces of equipment (Equipment ID #s), which represent approximately 11 equivalent units combined.
- Combined, Alliance reports a total of 9.6 equivalent units across these legacy IDs. The Agency calculates 9.183 equivalent units in the need methodology. Is there any way to validate how many legacy units Alliance is supposed to be operating? For example, in 2020 Alliance Healthcare operated legacy units with IDs #92, 121, 123, 124, 125, 126, 127, 128, 129, 130, 131, 133, 134, 136, 155, and 156.
 - How many legacy units does Alliance actually have authorization to operate?
- Two providers (Kings Medical and Foundations) are counted as less than a unit even though they should be available full time.
- Insight appears to have one unit, but it is counted as more than a full-time fixed equivalent.

Table 2

Equipment ID#	Legal Entity	Reported Equivalent Units	Calculated Equivalent Units	Eq. Units in Need Methodology	Total Units
Legacy #99	Insight Imaging	0.18	0.147	0.147	1.062
Legacy #100	Insight Imaging	0.63	0.61	0.61	
Legacy #104	Insight Imaging	0.280	0.309	0.309	
Legacy #113	Kings Medical Group	0.140	0.316	0.316	0.752
Legacy #114	Kings Medical Group	0.440	0.436	0.436	
Legacy #189	Foundations Health Mobile Imaging	0.570	0.551	0.551	0.551
Legacy #121	Alliance HealthCare Services	0.940	0.900	0.900	9.183
Legacy #123	Alliance HealthCare Services	0.4	0.389	0.389	
Legacy #124	Alliance Healthcare Services	0.060	0.033	0.033	
Legacy #125	Alliance Healthcare Services	0.970	0.882	0.882	
Legacy #126	Alliance Healthcare Services	0.88	0.857	0.857	
Legacy #127	Alliance Healthcare Services	0.030	0.032	0.032	
Legacy #128	Alliance Healthcare Services	0.800	0.777	0.777	
Legacy #129	Alliance Healthcare Services	0.320	0.296	0.296	
Legacy #130	Alliance Healthcare Services	0.820	0.732	0.732	
Legacy # 131	Alliance HealthCare Services	0.320	0.345	0.345	
Legacy #133	Alliance Healthcare Services	0.250	0.242	0.242	
Legacy #134	Alliance Healthcare Services	0.670	0.627	0.627	
Legacy #136	Alliance Healthcare Services	0.66	0.639	0.639	
Legacy #155	Alliance Healthcare Services	0.47	0.452	0.452	
Legacy #156	Alliance Healthcare Services	1.130	1.091	1.091	
Legacy #207	Alliance Healthcare Services	0.920	0.889	0.889	
Total All Reported Legacy Units		11.880	11.549	11.549	

- **The concept of mobile equivalents is not based on actual capacity and is flawed and inconsistent with how many days a mobile is available on site.**
 - When all of the equivalent units reported and calculated are added up for a single unit during a year, they can calculate to more than 1 full unit. A single CON-authorization should only equal 1 unit. As noted above 5 CON-authorized providers each report more than 1 equivalent. (See Table 1)

- Example: Carolina Neurosurgery & Spine Assoc. ID #111 - F-006734-03 total reported and calculated equivalent units = 1.3
- Example: EmergeOrtho J-008453-09 operated equipment IDs #106, 107, 108, 109, 110. Collectively, these units add up to an equivalent of 1.1 units.
- Mobile equivalents are based on the threshold for the county/area and actual utilization as opposed to an allocation of a full-time unit across all locations.
 - Capacity should not be based on actual utilization as this would always show an equivalent unit is well utilized.
 - As a result, often, when the total utilization of an authorized unit is summed, the **equivalent units is less than 1 even though the unit is authorized for full time use**. This is a function of different thresholds going into the equivalent units in different service areas. These units should be counted as 1 full unit collectively as that is what they were approved to operate.
 - Despite what seems to be limited available days of service for host sites in need of capacity, most mobile MRI units appear to be utilized at relatively low percentages of capacity.
- If it is assumed that each authorized mobile has the capacity of a full unit, then the vast majority of mobile scanners are poorly utilized based on weighted scan volume / capacity as shown in **Table 3** under both the current and recommended (“Rec”) methodology.
 - This reflects the fact that despite a mobile MRI provider scheduling most, if not all, days of service it has available, mobile units have built in scheduling inefficiencies and simply cannot operate at the same capacity as a fixed unit.
 - However, a mobile unit should be counted as a full-time unit if scheduled every day regardless of its utilization each day (one full equivalent).
 - These inefficiencies raise the question again as to whether more fixed units should be permitted to increase efficiency.

Table 3

Existing CON Authorized Units - Adjusted Scans as a % of Capacity			
CON Authorization	Legal Entity	Rec Adjusted Scans as a % of Rec Capacity (6,240)	Current Adjusted Scans as a % of Current Capacity (6,864)
F-007040-04 Total	Carolinas Imaging Services, LLC	16.99%	18.2%
R-007623-06 Total	Sentara Albemarle Medical Center	18.36%	20.0%
G-007064-04 Total	High Point Regional Health System	19.21%	20.3%
Q-006884-03 Total	Alliance HealthCare Services	21.47%	27.8%
J-007008-04 Total	Foundation Health Mobile Imaging, LLC	22.01%	23.3%
M-006605-02 Total	Mobile Imaging of North Carolina, LLC	25.11%	26.5%
F-006626-02 Total	Jacksonville Diagnostic Imaging	25.94%	23.1%
O-007001-04 Total	Alliance HealthCare Services	26.96%	26.8%
O-006434-01 Total	Cape Fear Diagnostic Imaging, LLC	27.35%	29.7%
G-007065-04 Total	Forsyth Medical Hospital	28.30%	29.4%
J-011291-17 Total	Wake Radiology	29.70%	30.3%
G-007038-04 Total	Alliance HealthCare Services	30.43%	31.0%
H-061004-99 Total	First Health of The Carolinas, Inc	32.05%	39.9%
F-008000-07 Total	MRI Specialists of the Carolinas	32.92%	33.8%
E-007066-04 Total	Blue Ridge Radiology	39.33%	41.4%
J-007012-04 Total	Wake Radiology	40.05%	41.2%
F-005723-97 Total	Insight Imaging	44.61%	62.4%
J-006665-02 Total	Cape Fear Mobile Imaging	51.83%	53.3%
G-006271-00 Total	Alliance HealthCare Services	52.88%	57.3%
J-007756-06 Total	Raleigh Orthopaedic Clinic, PA	54.81%	60.3%
G-007723-06 Total	OrthoCarolina, PA	66.98%	72.8%
O-007254-05 Total	Porter's Neck Imaging, LLC	67.91%	68.5%
CURRENT TOP THRESHOLD			70.0%
F-007164-04 Total	Presbyterian Mobile Imaging	70.86%	74.3%
J-008453-09 Total	EmergeOrtho	73.17%	79.4%
RECOMMENDED TOP THRESHOLD		80.00%	
F-007987-07 Total	OrthoCarolina, PA	75.20%	81.8%
E-008230-80 Total	EmergeOrtho, PA	76.68%	82.5%
J-082608-08 Total	Pinnacle Health Service of North carolina, LLC	107.29%	113.1%
F-006734-03 Total	Carolina Neurosurgery & Spine Associates	113.34%	119.9%
Average Utilization of All CON Authorized Mobile Units		47.30%	50.29%

- **Complications in Reporting Leads to Errors** - During a given reporting year, mobile providers can make the following changes:
 - CON approved units can be replaced.
 - Legacy units can be replaced.
 - It appears that both CON approved and legacy units can:
 - Add site locations (even if they were not locations originally authorized in their CON)
 - Drop site locations
 - Serving the same site but with a different Equip ID (replace or move between units)
 - Serving the same site with:
 - Different CON authorized units, and/or
 - Different legacy units

- **These changes result in the following inconsistencies throughout the current and proposed inventory and need methodology. This information is not meant to criticize the Agency or any mobile vendor or host site and their reporting. It is simply a fact that given the complexities noted**

above, it is clearly an impossible task for the Agency to reconcile all mobile equipment utilization. All examples are based on 2020 data evaluated by the 2022 MRI Workgroup. This is not a full list of all errors.

- A single legal entity such as Alliance Imaging or Emerge Ortho may hold more than one CON and Legacy Equipment. They appear to be able to move equipment around to serve the same site with different units during a single year as noted above.
 - Example: Duplin General Hospital was served by Alliance CON Q-00684-03 and a legacy unit in 2020.
 - Example: Alliance served Harris Regional with both CON G-007038-04 and a legacy unit.
- A single site may be served by multiple CON approved mobile units in a given year:
 - Example: Novant – Monroe was served by Jacksonville Diagnostic Imaging CON F-006626-02 and Presbyterian Mobile CON F-007164-04
- A single site may be served by multiple legal entities with both CON and legacy equipment in a single year:
 - Example: OrthoCarolina Spine Center was served by OrthoCarolina CON F-007987-07 and Alliance Legacy Unit ID #125
- A single CON authorization may have operated as many as 5 different equipment IDs in a single year.
 - Example: EmergeOrtho J-008453-09 operated equipment IDs #106, 107, 108, 109, 110
- A single CON authorized unit is double counted under two equipment ID numbers:
 - Example: CON #F-007164-04 Presbyterian Mobile Imaging is counted under Unit ID #218 and then counted again with the same number of scans for ID #228.
- When equipment is replaced, the vendor files two separate Medical Equipment Registrations (MERs). The volume associated with both equipment IDs are not correctly added together.
 - Example: CON O-7001-07 was replaced by Alliance in June of 2020. Two MERs were filed. Volume data from only the initial unit (Signa 415) was included and not the replacement unit.

Replacement of CON O-7001-04

	Signa 415 10/19 - 5/20	ESP 23 6/20 - 9/20	Total
NHRMC	186	299	485
NHRMC-Brunswick	610	254	864
NHRMC Med & Diag	729	746	1475
Total Unit	1,525	1,299	2,824

Only one Unit Included in the methodology analysis.

2022 SMFP:

New Hanover	Mobile	O-007001-04	New Hanover Reg. Med-Health & Diagnostic (Alliance HealthCare Services)	0	0.15	729	325	404	0	0	891
New Hanover	Mobile	Legacy	New Hanover Reg. Med-Health & Diagnostic (Alliance HealthCare Services)	0	0.05	262	117	145	0	0	320
New Hanover	Mobile	O-007001-04	New Hanover Regional Medical (Alliance HealthCare Services)	0	0.04	186	155	31	0	0	198

- As both mobile providers and hospitals report mobile utilization, there are hospital sites included in the inventory and utilization that are not associated with a particular unit or CON. It appears when the Agency cannot match up the location (name/address etc.) they include both. (These

are noted as Equipment -99 with no CON number.) There are 16 total sites included from Licensure Renewal Applications (“LRAs”) that are likely duplicated with mobile reporting from MERs.

- Example: New Hanover Regional Medical Center’s Brunswick Forest location is counted as a hospital unit (-99 no mobile linked) in New Hanover County and also as a site for Alliance Healthcare Services site New Hanover Regional – Brunswick in Brunswick County with two different volume numbers.

NHRMC-Brunswick included in New Hanover County (located in Brunswick)

NHRMC-Brunswick double counted by including data from LRA for NHRMC

CON Approval	Legal Entity	Site	County	Scans	Source:
O-007001-04	Alliance HealthCare Services	NHRMC-Brunswick	Brunswick	610	MER
O-007001-04	Alliance HealthCare Services	NHRMC	New Hanover	186	MER
O-007001-04	Alliance HealthCare Services	NHRMC Med & Diag	New Hanover	729	MER
O-007001-04 Total	Alliance HealthCare Services			1,525	MER
O-006212-00 ??	Alliance HealthCare Services	NHRMC Brunswick	New Hanover	927	LRA

- Example: Cape Fear Bladen County Hospital is included with LRA volume (unit -99 no mobile associated) and included as Mobile Imaging of North Carolina M-006605-02).
- Example: WakeMed Apex is included with LRA volume (unit -99 – no associated mobile) and included with an Alliance Imaging Legacy unit.
- The exact same units and volume numbers are reported on two different units clearly representing double counting.
 - Example: Equip IDs #130 and 131 both operated as Legacy equipment by Alliance Imaging report the same exact scan volume for Wake Forest Baptist Health.

Forsyth	Mobile	Legacy	Wake Forest Baptist Health Outpatient Imaging (Alliance HealthCare Services)	0	0.24	1,135
Forsyth	Mobile	Legacy	Wake Forest Baptist Health Outpatient Imaging (Alliance HealthCare Services)	0	0.24	1,135

- Example: Presbyterian Mobile Imaging (Equip ID 228) is counted once for its total volume in Mecklenburg County with no associated CON number and then again for each of its site locations in different counties with CON #F-007164-04 (Equip ID 218).

Equipment ID	County	CON	Legal Entity	Site	Total Scans
218	Iredell	F-007164-04	Presbyterian Mobile Imaging	Mooresville Diagnostic Imaging	1,273
218	Mecklenburg	F-007164-04	Presbyterian Mobile Imaging	Novant Health Imaging - Ballantyne	213
218	Union	F-007164-04	Presbyterian Mobile Imaging	Novant Health Imaging - Monroe	382
218	Mecklenburg	F-007164-04	Presbyterian Mobile Imaging	Novant Health Imaging - University	336
218	TOTAL	F-007164-04	Presbyterian Mobile Imaging		2,204
228	TOTAL		Presbyterian Mobile Imaging		2,204

- Because units can change location during a year or the subsequent year, the mobile units may not be serving the same locations in a CON filing year as they were in the year in which need was identified. In other words, there may be more or less mobile units serving a county each year than anyone is aware of until after the fact.

- Example: Mission has learned there are 2 mobile units operating in Buncombe County that were not included or reflected in any recent SMFP (that is, not shown in the list of available mobile MRIs serving Buncombe County).

Conclusions Regarding Mobile MRI Need: This is by no means an exhaustive list of errors and there is no blame associated with such errors. This information is simply provided to demonstrate the issues and complexities associated with mobile MRI reporting and data compilation that impact the current and recommended methodology. For these reasons, Mission strongly encourages the SHCC to consider separating mobile MRI units from fixed units in future planning efforts. Moreover, given the number of what appears to be underutilized mobile MRI units, a different approach should be taken with respect to determining mobile capacity.

Observations on Fixed MRI Units

- Like the mobile MRI units discussed above, the current and recommended methodologies as well as the information from the MRI Workgroup do not evaluate any “big picture” information with regard to fixed MRI units (hospital-based or freestanding) in the State and their operations.
- With the current and recommended caps on MRI need, neither the current nor recommended methodologies recognize how many existing fixed units are highly utilized and may need more capacity.
- Average area utilization is clearly weighted downward based on the apparent underutilization of mobile MRIs in the current and recommended methodology, which the highly utilized fixed providers have to rely upon to address capacity constraints.
- **Analysis of the available data reveals:**
 - The largest service area (those with 4+ MRI units) represent the majority of highly utilized units.
 - **There are over 50 hospital units and over 17 freestanding units operating at over threshold. This clearly indicates a need for more fixed MRI capacity in these markets.**
 - The current and recommended methodologies limit need to 1 unit or even 2 in a service area, which does not address the fact that there may be many fixed providers in a large market operating at or over capacity.
 - **With a cap on need and a 4-to-5-year delay between data reporting, SMFP preparation, application, sometimes appeal, and then implementation, there is no way that sufficient fixed capacity can be brought online to address the large number of existing fixed providers operating at high levels of capacity.**
 - **The largest hospitals with 4+ MRI units are clearly highly utilized, and their needs are not being met. If a single MRI is recognized is needed, then awarded to a freestanding provider under based on enhanced “competition” or “cost effectiveness”, this leaves our major tertiary medical centers with ongoing limitations of MRI capacity for the most acutely ill patients.**
 - This perpetuates a situation in which the major tertiary medical centers cannot meet MRI demand. This should be considered in both policy and any type of future need methodology.
- **Important Observations available from the Agency’s collected data indicate:**
 - There are 256 total fixed MRI units in North Carolina including approved and operational units.
 - These units are distributed more heavily towards hospitals.
 - Most freestanding fixed units are located in service areas with a large number of scanners.

- There are a large number (more than 70) of highly utilized fixed units (both hospital and freestanding) many of those providers may need additional capacity.
 - Hospitals with the largest number of MRI units (larger hospitals) have the highest rates of utilization.
 - Hospitals and freestanding fixed units in the service areas with large numbers of MRI units are highly utilized.
 - With the current and recommended caps on MRI need, neither the current nor recommended methodologies recognize how many existing fixed units are highly utilized and may need more capacity.
 - Average area utilization is clearly weighted downward based on the apparent underutilization of mobile MRIs in the current and recommended methodology, which the highly utilized fixed providers have to rely upon to address capacity constraints.
 - A need methodology ONLY for fixed MRI units and an SMFP policy governing MRI need for hospitals, would address what appears to be a dire need for more fixed MRI units in the State.
- **With regard to Hospital-based fixed units:**
 - An analysis of hospital-based fixed unit reveals that there are 187 fixed units either existing or approved in hospital locations across North Carolina. This includes 6 units from the 2021 SMFP need determinations and 6 other non-operational units. 174 units in 112 site locations reported volume in 2020.
 - There are a large number and percent of hospitals with only 1 unit. About 27% of hospitals have 2 units. Very few providers have 3 or more units on the hospital campus, according to their LRAs.

Summary of Number of Units by Hospital		
1 unit	73	65.2%
2 units	30	26.8%
3 units	4	3.6%
4 units	2	1.8%
5 units	0	0.0%
6 or more units	3	2.7%
Total	112	100.0%

- In 2020, the 174 operational units performed an average of 3,751 adjusted scans per unit under the **current** methodology, which is 55% of the current capacity
- In 2020, the 174 operational units performed an average of 3,839 adjusted scans per unit under the newly **recommended** methodology, which is 61.5% of the recommended capacity.
- While the **average** utilization is below the thresholds, there are many units ~~above~~ operating above the need utilization threshold, indicating that multiple hospitals may need more capacity. (57 units in all service areas exceed the current threshold with 50 units operating at over 70% of capacity), which is far more than any need determination in recent years.
 - Based on the current methodology, most units and the most well utilized units are in the larger markets with 4+ scanners. With so many units in large markets highly utilized, a cap on need particularly in urban markets has the potential to seriously limit access.

Summary of Utilization of Freestanding Fixed MRI Units - Current Methodology				
Scanners in the Service Area	Planning Threshold	Total Scanners	Scanners Over Threshold	% Over Threshold
4 and Over	70.0%	105	50	47.6%
3	65.0%	12	2	16.7%
2	60.0%	33	3	9.1%
1	55.0%	24	2	8.3%
-	25.0%	0	0	0.0%

- Based on the newly recommended methodology, 52 units in the largest service areas are over 80% of capacity and may need more capacity.
- It should be noted that in the recommended methodology only 1 unit in a service area with 3 or less MRIs meets the capacity threshold compared to 7 units meeting this capacity threshold in the current methodology. The recommended methodology appears to penalize providers in smaller service areas by using an 80% standard for all services areas with 2+ units.

Summary of Utilization of Freestanding Fixed MRI Units - Recommended Methodology				
Scanners in the Service	Planning Threshold	Total Scanners	Scanners Over Threshold	% Over Threshold
4 and Over	80.0%	105	52	49.5%
3	80.0%	12	0	0.0%
2	80.0%	33	1	3.0%
1	70.0%	24	0	0.0%
-	30.0%	0	0	0.0%

- There is a correlation between hospital size (number of MRIs at a facility) and utilization rates. The average percent of capacity increases with the more units a hospital has onsite. It is assumed that the larger the hospital, the more MRI units it will need.
 - For hospitals with 4 or more MRI units, the average utilization is 77.7% of capacity with 23 of 29 units operating at over 70 percent of capacity.
 - These larger hospitals with 4 or more MRI units also likely include the largest tertiary hospitals including trauma centers. It is clear that the largest hospitals need more MRI capacity and given the historical limitation on need and capped need, they have been limited from adding fixed capacity.

Analysis of Utilization Rate of Hospitals by Number of MRI Units				
Units per Hospital/Site	Average % of Capacity (Current)	Units over 70%	Total Units	% of Units Over 70% of Capacity
1 unit	42.47%	7	73	9.6%
2 units	56.52%	16	60	26.7%
3 units	61.68%	1	12	8.3%
4 units+	77.69%	23	29	79.3%

- There are 69 fixed units existing and approved in freestanding facilities across North Carolina. This includes 8 units that are either not operational or not yet implemented (recent approvals) included in the 2020 data for the SMFP. This does not include the 2021 need determination place holders.
 - In 2020, the 61 operational units (not including approvals that are not yet implemented) performed an average of 4,277 adjusted scans per unit under the current methodology, which is 62.3% of the current capacity
 - In 2020, the 61 operational units (not including approvals that are not yet implemented) performed an average of 4,092 adjusted scans per unit under the newly recommended methodology, which is 65.5% of the recommended capacity.
 - Based on the current methodology, the vast majority (55 of 61 units) operate in service areas with 4+ scanners. Of these units, 41.8% operate at over 70% of capacity.
 - While the average utilization is below the thresholds, there are many units above threshold that could potentially need more capacity. Between 17 to 23 units (depending on methodology) are operating above threshold, which is far more than any need determination in recent years.

Summary of Utilization of Freestanding Fixed MRI Units - Current Methodology

Scanners in the Service Area	Planning Threshold	Total Scanners	Scanners Over Threshold	% Over Threshold
4 and Over	70.0%	55	23	41.8%
3	65.0%	4	0	0.0%
2	60.0%	2	0	0.0%
1	55.0%	0	0	0.0%
-	25.0%	0	0	0.0%

- Based on the newly recommended threshold, of all 55 units operating in service areas with 2+ units, only 17 freestanding facilities are operating at over this threshold volume. Fewer units achieve utilization threshold under their new methodology, further limiting need and access.

Summary of Utilization of Freestanding Fixed MRI Units - Recommended Methodology

Scanners in the Service Area	Planning Threshold	Total Scanners	Scanners Over Threshold	% Over Threshold
4 and Over	80.0%	55	17	30.9%
3	80.0%	4	0	0.0%
2	80.0%	2	0	0.0%
1	70.0%	0	0	0.0%
-	30.0%	0	0	0.0%

- For freestanding units, the only service areas that are recognized with potential for need are all the largest markets with 4+ units. While there are fewer freestanding MRIs in the smaller service areas (6 units in services areas with 2 or 3 units), these units do not meet the need threshold. As noted above, the recommended methodology may penalize providers in smaller service areas with 80% applying to any service area with 2+ units.

Conclusions Regarding Fixed MRI Need: The largest markets with 4+ MRI units appear to represent most of the fixed capacity particularly in freestanding settings. It is in these largest markets that the majority of highly utilized units also operate. With over 50 hospital units and over 17 freestanding units operating at over threshold, there is clearly a need for more fixed MRI capacity in these markets. With the practice of limiting need to 1 unit or even 2 in a service area, and then a 4-to-5-year delay between data, SMFP preparation, application, sometimes appeal, and then implementation, there is no way that sufficient fixed capacity can be brought online to address the large number of existing fixed providers operating at high levels of capacity. Moreover, the largest hospitals with 4+ MRI units are clearly highly utilized, and their needs are not being met. When a major urban service area has multiple fixed locations, including large hospitals operating at high levels, and a single unit is recognized as needed every few years, and then that unit is approved for a freestanding provider, this perpetuates a situation in which the major tertiary medical centers cannot meet MRI demand. This should be considered in both policy and any type of future need methodology.