TO THE NORTH CAROLINA STATE HEALTH COORDINATING COUNCIL

PETITION BY NOVANT HEALTH, INC. AND MEDQUEST ASSOCIATES, INC. TO INCLUDE A SPECIAL NEED DETERMINATION FOR TWO NEW MOBILE MRI UNITS IN THE 2023 SMFP

July 27, 2022

Via Email: DHSR.SMFP.Petitions-Comments@dhhs.nc.gov

1. **Petitioner's Contact Information:**

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Overview

This Petition seeks to improve access to mobile MRI services for residents of North Carolina. It has been 12 years since a new mobile MRI unit was approved to operate in North Carolina. In the past dozen years, demand for this critical imaging modality has grown exponentially and providers have struggled to meet the demand. This Petition will outline the critical point that mobile MRI services have reached in North Carolina and the steps necessary to correct this imbalance. Petitioners respectfully submit that correcting this imbalance should be an urgent priority in developing the 2023 State Medical Facilities Plan. Patients will benefit greatly as a result.

Novant

Novant Health, Inc. is a three-state integrated health network of physician clinics, outpatient facilities and hospitals that consists of more than 1,800 physicians and over 35,000 employees who provide remarkable care at more than 800 locations, including 15 medical centers and hundreds of outpatient facilities and physician clinics. Headquartered in Winston-Salem, North Carolina, Novant Health is committed to making health care remarkable for patients and communities, serving more than six million patients annually.

MedQuest

MedQuest Associates, a subsidiary of Novant Health, Inc., assists Novant with the management and operation of Novant's medical imaging equipment, including both fixed and mobile MRI assets in Novant's network located in North Carolina. Novant Health, Inc. operates the second-largest mobile MRI unit fleet in North Carolina, serving 24 host sites across the State and performing nearly 25,000 unweighted procedures utilizing mobile MRI units. MedQuest's deep expertise in imaging delivers remarkable patient care daily.

2. **A statement of the requested change, citing the policy or methodology (spring), need determination (summer) or other aspect of the SMFP for which the change is proposed**

Petitioners are requesting that the State Health Coordinating Council (SHCC) approve a need determination for two new mobile MRI scanners in the 2023 State Medical Facilities Plan (SMFP), Chapter 17. To ensure maximum flexibility to address patient needs, Petitioners respectfully request that the need determination should be statewide, and not limited to a specific service area.

3. **Reasons for the proposed change including a statement of adverse effects on providers or consumers of health services that are likely to ensue if the change is not made; and a statement of alternatives to the proposed change that were considered and found not feasible**

Without the approval of additional mobile MRI units by the SHCC, North Carolina residents will continue to be adversely impacted by the lack of sufficient mobile MRI capacity necessary to meet the high demand for mobile MRI imaging services across the State. Mobile MRI providers, like Novant, are finding it increasingly difficult to provide additional service requested by existing mobile MRI host sites as well as potential new host sites due to lack of mobile MRI capacity in North Carolina. For example, Petitioners were recently contacted by a healthcare provider in Wake County that requested additional mobile MRI service at three host site facilities. Petitioners could only provide one day of mobile MRI service due to lack of available mobile MRI capacity and the healthcare provider was required to determine which host site had the greatest need. This type of situation is not unusual – it has become the status quo for mobile MRI providers operating in North Carolina. Mobile MRI services in North Carolina have reached a critical point that requires immediate action to improve accessibility for North Carolina residents.

Overview of the SMFP's MRI Methodology

In Chapter 17 of the SMFP, the MRI Methodology utilizes the weighted MRI volumes for both fixed and mobile MRI scanners to calculate need determinations for fixed MRI scanners only. There is no mechanism in the current MRI methodology that projects need for mobile MRI scanners.

Prior to the 2010 SMFP, healthcare providers had the opportunity to file a Certificate of Need application for a mobile MRI unit by demonstrating need for the proposed service and complying with the mobile MRI rules contained in 10A NCAC 14C.2700. The last mobile MRI unit was approved by the State in 2010.

Beginning with the 2010 SMFP, all subsequent SMFPs contained one sentence regarding mobile MRI services in North Carolina:

"*There is no need for mobile MRI units*"

This single statement effectively created a moratorium preventing healthcare providers from acquiring additional mobile MRI units to serve North Carolina for over a decade. At the time, the rationale centered around increasing fixed MRI capacity in order to decrease the need for mobile MRI services. However, a review of MRI data indicates that demand for mobile MRI services has not decreased over the last decade despite the addition of **41** fixed MRI scanners in North Carolina since 2010.

Table 1 – Total MRI Volume (Fixed and Mobile) in North Carolina, Mecklenburg and Wake Counties			
MRI Volume	**2010 SMFP Total Unweighted MRI Volume – Fixed & Mobile**	**Draft 2023 SMFP Total Unweighted MRI Volume – Fixed & Mobile**	**Percent Change**
North Carolina	814,048	961,745	**18.1%**
Mecklenburg County	88,525	122,681	**38.6%**
Wake County	65,892	118,165	**79.3%**

Source: 2010 SMFP and Draft 2023 SMFP Table 17E.

The following chart provides further insight regarding the demand for mobile MRI services in North Carolina's largest service areas. In Mecklenburg County, the number of fixed MRI units increased from 18 units to 29 units. Despite the additional 11 fixed MRI units in Mecklenburg County, demand for mobile MRI services has not decreased. In Wake County, the number of fixed MRI units increased from 11 fixed MRI units to 21 fixed MRI units, well below the fixed MRI capacity of Mecklenburg County. The demand for mobile MRI services has risen exponentially in Wake County due in part to the lack of fixed MRI units as compared to Mecklenburg County.

Table 2- MRI Resources in Mecklenburg and Wake Counties 2010 SMFP -2023 SMFP					
County	**2010 SMFP-Fixed MRI Units**	**Draft 2023 SMFP-Fixed MRI Units**	**2010 SMFP Mobile MRI - unweighted volume**	**Draft 2023 SMFP Mobile MRI -unweighted volume**	**% Change**
Mecklenburg County	18	29	16,478	16,659	+1.1%
Wake County	11	21	15,298	**36,247**	**137%**

Source: 2010 SMFP and Draft 2023 SMFP Table 17E.

Over the last decade, North Carolina has experienced exponential growth in its population which directly impacts the increasing demand for both fixed and mobile MRI services. The following chart outlines population growth in North Carolina from 2010 through 2030 based on the US Census data.

Table 3 - Population Growth in North Carolina and its Metropolitan Areas 2010-2030			
Year	**2010**	**2020**	**2030**
North Carolina	9,571,007	10,456,593	11,527,150
% Change	---	**9.25%**	**10.3%**
Mecklenburg	923,344	1,118,182	1,324,258
% Change	---	**21.1%**	**18.4%**
Wake	907,514	1,134,824	1,387,427
% Change	---	**25.0%**	**22.3%**

Source: North Carolina Office of Budget and State Management.

From 2010-2020, North Carolina experienced steady population growth with an overall increase of 9.25%. A closer look at the population growth in North Carolina's two largest counties, Mecklenburg and Wake, confirms that population growth skyrocketed in these counties in the last decade and will continue to experience rapid growth, outpacing that of North Carolina, through 2030.

The tremendous influx of new residents in Mecklenburg and Wake Counties has fueled the demand for mobile MRI services in these service areas. Of the nearly 150 current mobile MRI host sites identified in the 2022 Mobile MRI Inventory Reports, roughly 58 sites are located in either Mecklenburg or Wake Counties. Population projections for July 2022 indicate that Wake County with 1,179,121 residents has now surpassed Mecklenburg County (1,154,783 residents) in population size. While there is one fixed MRI unit per 39,820 residents in Mecklenburg County, there is only one fixed MRI unit per 56,149 residents in Wake County. As shown in the chart above, Wake County providers and patients are relying heavily on mobile MRI services to provide imaging support for acute care facilities and other healthcare providers in Wake County. Population projections from the NC OBSM indicate that population growth in North Carolina will continue to increase with the most notable changes occurring in Wake and Mecklenburg Counties from 2020-2030. While Mecklenburg and Wake Counties have additional fixed MRI scanners allocated, the time frame from data collection to implementation of new fixed MRI scanners can take as long as four to five years before these fixed resources are available for public use.

Rural Communities Rely on Mobile MRIs

Mobile MRI units also provide critical access to imaging services for patients residing in North Carolina's smaller communities. While population growth in rural communities may occur at a slower rate than North Carolina's metropolitan areas, access to all types of healthcare services can be limited in smaller communities, which present hardships for North Carolina's rural residents. The ability for small community hospitals and healthcare providers to offer mobile MRI services in places like Duplin County or Hoke County increase accessibility for patients that fall under the category of medically underserved. For example, Petitioners provide mobile MRI service to community hospitals in Montgomery, Hoke and Lee Counties. Residents of Montgomery County do not have access to fixed MRI services. According to the draft 2023 SMFP, Table 17E-1, there are 22 counties in North Carolina that do not have fixed or mobile MRI services available within their home counties. There are additional 7 rural counties in North Carolina that rely solely on mobile MRI services with no access to fixed MRI services. Those counties include Anson, Bladen, Duplin, Martin, Montgomery, Pender, Polk and Yadkin Counties. While these counties are not expected to experience population growth over the next ten years[1], the median age for each of these counties is higher than the North Carolina average. Typically, as a population ages, it requires increased accessibility to healthcare services.

[1] Pender County is the only county that is projected to increase its population size from 2020 - 2029, which is likely due to its proximity to New Hanover County.

Table 4 - Median Age – North Carolina and Rural Communities without Fixed MRI Units	
Area	Median Age
North Carolina	**39.3**
Anson County	41.8
Bladen County	45.8
Duplin County	41.0
Martin County	47.3
Montgomery County	44.0
Pender County	42.3
Polk County	53.8
Yadkin County	44.8

Mobile MRI providers are currently faced with the dual demand from metropolitan areas that are experiencing a rapid influx of new residents combined with the needs of rural communities that do not have sufficient access to fixed MRI services and rely on mobile MRI services. These two factors are fueling the overwhelming demand for additional mobile MRI services in North Carolina that requires immediate action.

The following chart compares fixed and mobile MRI services provided in North Carolina based on MRI data in the 2010 SMFP and draft 2023 SMFP.

Table 5 – Unweighted MRI Volume per Fixed MRI and Mobile MRI from 2010 SMFP to 2023 SMFP

Time Period		FIXED	MOBILE
2010 SMFP	Units	219	47
(FY 10/07-9/08)	Unweighted MRI Volume	673,178	140,870
	Average/Unit	3,073	2,997
2023 SMFP	Units	260	47
(FY 10/20-9/21)	Unweighted MRI Volume	803,562	158,183
	Average/Unit	3,091	3,366
Net Change in MRI Units		**+41**	**0**

Source: 2010 SMFP, 2022 SMFP, draft 2023 SMFP Table 17E-1

Since the 2010 SMFP, unweighted MRI volume increased by 18.1% from 814,048 unweighted procedures to 961,745 unweighted procedures for all MRI units. While the inventory of fixed MRI scanners has increased by 41 fixed MRI units, there has been no new mobile MRI units approved during the last 12 years. Mobile MRI unweighted volume also increased by 12.3% during this time period without additional mobile MRI capacity. As indicated above, the current unweighted volume per fixed MRI unit in North Carolina averages 3,091 procedures while the unweighted volume per mobile MRI unit is higher at 3,366 procedures.

During the last 12 years, the approval of an additional 41 fixed MRI scanners in North Carolina has not diminished the ongoing demand for mobile MRI services by hospitals, physician practices and outpatient imaging centers. Further, the lack of additional mobile MRI units since 2010 has now created a critical access issue that finds the Petitioners, like many other providers, reaching out to competitors in attempt

to find any available mobile MRI days to provide service for patients. The competitors, like the Petitioners, are resource-constrained, and rarely have additional mobile days to spare.

Legacy & CON-Approved Mobile MRI Units

All mobile MRI units are not treated the same, which further complicates the delivery of mobile MRI services across North Carolina. For healthcare planning purposes in North Carolina, there are two types of mobile MRI units, Legacy mobile MRI units and CON-approved mobile MRI units.

> **Legacy units** (aka "grandfathered" units) are defined as mobile MRI units that were in operation prior to adoption of the 1993 Certificate of Need law, which specifically regulates MRI scanners. The Legacy units are unrestricted by the State, are able to move freely across county lines, and can be "parked" at any host mobile site. Only those mobile MRI units that were in operation prior to the enactment of the 1993 Certificate of Need law can be considered "Legacy" units. As such, the number of these types of mobile MRI units is finite and cannot increase.
>
> **CON-Approved units** are issued a CON with conditions of approval that each mobile MRI unit and operator are required to comply with based on each CON application submitted to the State. The conditions of approval vary greatly for each mobile MRI unit based on the individual representations in each respective CON application. Typically, most CON-approved Mobile MRI units are required to be moved weekly and have geographic restrictions regarding counties that can be served.

Please refer to Attachment A for a list of Legacy and CON-Approved Mobile MRI units currently serving North Carolina host sites.

Current Inventory of Mobile MRI Units – Legacy and CON-Approved

The North Carolina Division of Health Service Regulation requires that each mobile MRI operator submit annual inventory reports for each mobile MRI unit operating in North Carolina during the year regardless of status (Legacy or CON-Approved). Based on a review of the 2022 Medical Equipment Inventory Reports submitted to the NCDHSR on or about January 31, 2022, the number of Legacy and CON-Approved mobile MRI units operating in North Carolina are as follows:

Table 6 – Current Inventory of Legacy and CON-Approved Mobile MRI Units

Type of Mobile MRI Unit	# of Mobile MRI Units	# of Mobile MRI Units – Parked
Legacy	24	8
CON-Approved	23	3
Total	**47**	**11**

See Attachment A for the Mobile MRI unit inventory list. The eleven parked mobile MRI units are included in the total count of 47 mobile MRI units identified by the Petitioner that are authorized to operate in NC.

Based on the data in the draft 2023 SMFP, Table 17E-1, mobile MRI units performed a total of 166,660 weighted MRI procedures, or an average of **3,546** weighted MRI procedures per mobile MRI unit last year in North Carolina. The performance standard set for mobile MRI scanners in 10A NCAC.14C.2701 is defined as 3,328 weighted procedures.

Of the total 47 mobile MRI units approved to operate in North Carolina, **23%** of these mobile MRI units were parked at one host site last year. The majority of mobile MRI units that are parked are providing support service for acute care facilities, primarily in the Wake County service area, further underscoring the high demand for MRI services in one of North Carolina's largest population centers.

Novant Health currently provides mobile MRI services to approximately 24 host sites in North Carolina, using a combination of one or more mobile MRI units. Of these host sites, five host sites are acute care facilities. In the last two years, Petitioners have received numerous requests for additional mobile MRI coverage from each existing host site to address patient demand. This does not include the number of healthcare providers that have contacted Novant Health that want to initiate mobile MRI service at a new host site. During this time frame, Novant Health has contacted other mobile MRI vendors in North Carolina in an attempt to secure additional mobile MRI capacity; however, other providers do not have capacity available.

Based on current capacity levels discussed above, the average procedure volume per mobile MRI unit is 3,546 weighted procedures which exceeds the State's threshold of 3,328 weighted procedures contained in the MRI rules. This level of operation is extraordinarily high considering the nature of mobile MRI service. Mobile MRI units must travel from site to site, which significantly reduces the amount of time available for procedures. Staffing for mobile MRI units is another important area of concern. Mobile MRI providers typically hire MRI technologists in the general geographic area that the mobile MRI unit serves. It is not unusual for MRI technologists to drive two hours one way before their shift starts. With a potential 8-12 hour shift at a mobile host site, a MRI technologist could easily log 14-16 hours a day. Over the course of a typical week, a mobile MRI unit may cover more than 500 miles as it moves from host site to host site. Annually, this equates to over 26,000 highway miles, nearly 1,000 hours of travel time and approximately 35,000 hours of total staff time.

The logistics of operating a mobile MRI scanner, such as travel time for the mobile MRI unit, travel time for clinical professionals, and the operating hours of each host site are factors that define capacity for each mobile MRI unit in North Carolina. Across the State, mobile MRI providers have been challenged for the last decade with the task of creating additional capacity through efficient route planning and longer hours of operation. But there are limits as to how much providers can reasonably do to address challenges without additional mobile resources. It is not feasible, for example, to require mobile providers to operate 24/7/365. Patients requiring medically necessary but non-emergent outpatient MRI scans are unwilling to have their scans performed in the middle of the night. Nor is staff willing or able to work more hours than they are already working. Given increasing staffing costs and labor demands, staffing mobile MRI scanners for multiple shifts, as may the case at a hospital, is not reasonable. The availability of two new mobile MRI units in North Carolina would provide much needed relief for both mobile MRI host sites and mobile providers.

Statement of Alternatives to the Proposed Change Considered

As an existing provider of both fixed and mobile MRI imaging services in North Carolina, Novant has considered several alternatives to address high demand for mobile MRI services that have ultimately been determined to be inadequate to address the need for additional capacity.

1. File for fixed MRI need determinations.
2. Increase hours of operation at host sites.
3. Negotiate additional mobile MRI capacity usage with other mobile MRI providers.

File for fixed MRI Need Determinations

Due to the limited number of fixed MRI need determinations available annually, this alternative does not address the immediate need for improvement in statewide access to mobile MRI services. For example, over the last four years, the SMFP MRI Methodology has generated the following number of fixed MRI need determinations.

Table 7- Fixed MRI Need Determinations from 2019 SMFP – 2022 SMFP

SMFP	Service Area	# of Fixed MRI Need Determinations	Did Approved Site report data for the 2023 SMFP (10/1/2020-9/30/21 operational period)?
2019 SMFP	Forsyth County	1 Fixed	NO
	Mecklenburg County	1 Fixed	YES
	Wake County	1 Fixed	NO
2020 SMFP	Alamance	1 Fixed	NO
	Durham/Caswell	1 Fixed	YES
	Guilford	1 Fixed	NO
	Mecklenburg	1 Fixed	NO
	Watauga	1 Fixed	NO
2021 SMFP	Buncombe	1 Fixed	NO
	Mecklenburg	1 Fixed	NO
	New Hanover	1 Fixed	NO
	Orange	1 Fixed	NO
	Wake	1 Fixed	NO
2022 SMFP	Mecklenburg	1 Fixed	CON Review in Fall 2022
	Pasquotank	1 Fixed	CON Review in Fall 2022
	Pitt Greene	1 Fixed	CON Review in Fall 2022
Total Need Determinations for Fixed MRIs		**16 FIXED UNITS**	**2 UNITS OPERATIONAL**

Since the 2019 SMFP, there have been 13 Fixed MRI need determinations (there are three need determinations that will be reviewed during 2022). Only two of these fixed MRI units are currently operational based on data in the draft 2023 SMFP, Table 17E-1. This chart highlights the amount of the time required to develop new fixed MRI scanners for use by patients. The timeframe for development of new fixed MRI scanners can take anywhere from four to five years following data collection before the service is available for patient use. Using the Mecklenburg County 2022 MRI need determination as an example, the following chart illustrates the timeline from the point data is collected until the service becomes operational.

Table 8 - Overview of the Time Required to Develop Fixed MRI Projects	
January 31, 2021	Providers file MRI volume data for 10/1/2019-9/30/2020
March - September	Planning Process for the 2022 SMFP
December 2021	2022 SMFP is approved by Governor Cooper with need determinations based on FY 10/1/2019 data
October 2022	Providers file CON applications for Mecklenburg County Fixed MRI need determination
November 2022	CON Review Begins
March 31, 2023	The Certificate of Need Section has a maximum of 150 days to issue a decision
May 2023	Assuming no legal appeals, a CON can be issued 35 days after the decision is issued.
Fall/Winter 2024	Provider develops fixed MRI service (assuming no substantial supply chain issues or construction delays)

Assuming no litigation delays or development delays, the Mecklenburg County MRI service area that generated an MRI need determination based on FY 10/1/2019 data will not see relief in the form of additional fixed MRI capacity for nearly **five years**. During this extended time-period, providers will continue to utilize mobile MRI services to meet patient demand as clearly demonstrated in the mobile MRI volumes in Wake and Mecklenburg Counties.

Increase Hours of Operation

Increasing hours of operation is an alternative that has already been in use across North Carolina at Novant host sites. Novant, as a provider that operates both mobile MRI units and mobile MRI host sites, has the ability to increase hours of operation for the mobile unit and the host site. However, this alternative fails to adequately address the overwhelming demand for additional mobile MRI units across the State. Mobile MRI host sites, like Piedmont Imaging in Winston-Salem or Open MRI of Asheville, that are in desperate need of additional fixed MRI capacity, are currently operating more than 70 hours per week and cannot reasonably be expected to further increase operational hours.

Mobile MRI units are inherently under time constraints to operate its service. Before the first mobile MRI procedure of the day begins, the mobile MRI unit was moved from town to town either overnight or in the early morning hours. Mobile MRI staff who are assigned to the mobile MRI unit must travel from their homes to meet the mobile MRI unit at the host site. It is not unusual for mobile MRI technologists to travel four to five hours round trip for one shift. By the time the shift ends roughly 10 hours later, a mobile MRI technologist may log 14 hours in one day. The cycle repeats for the next day

of mobile MRI service. Although routes are designed to be as efficient as possible, the ability to increase actual procedure time onsite is very limited due to staffing of the mobile MRI unit as well as operational hours for each host site facility. Further, it is not feasible to schedule patients late at night or in the early morning hours as a long-term solution. Novant's mobile host sites are operating on extended schedules to meet the high demand. For example, Piedmont Imaging requires mobile MRI service to supplement the high demand for its fixed MR imaging services in Forsyth County. This facility offers MRI services over 70 hours per week, beginning at 7am until 9pm Monday – Thursdays, 7am – 7pm on Fridays and by appointment on Saturdays. Increasing hours of operation does not represent a viable long-term solution to address the lack of mobile MRI capacity in North Carolina.

Secure Additional Mobile Days of Service from Other Providers

This alternative is already in use in North Carolina as well. Despite having its own mobile MRI fleet, Novant contracts with Alliance Imaging and other mobile MRI providers for additional mobile MRI coverage for its host sites. However, the lack of mobile MRI capacity in North Carolina is an issue that impacts all mobile MRI providers in North Carolina. This means existing mobile MRI host sites are struggling to secure additional time on mobile units. Further, a healthcare provider that wants to initiate new mobile MRI service as a host site will find it nearly impossible to secure mobile MRI service at this time.

The only feasible alternative available is to request a special need determination for additional mobile MRI units to serve North Carolina residents. Without the immediate approval of the requested special need determination for two new mobile MRI units, mobile MRI providers, acute care facilities, physician providers and outpatient imaging sites will continue to be hampered in their ability to provide necessary imaging services for patients.

4. Evidence that the proposed change will not result in unnecessary duplication of health resources in the area

The request for additional mobile MRI units would not result in unnecessary duplication of existing resources. The basis for Novant's request is the critical shortage of mobile MRI units approved to serve North Carolina residents. Novant contends that mobile MRI demand from both existing and potential new host sites is outstripping available mobile MRI capacity. The current number of mobile MRI units approved to operate in North Carolina are insufficient to meet the high demand from existing mobile host sites. Further, healthcare providers that want to initiate mobile MRI services have few options due to the lack of mobile MRI capacity across the State. Mobile MRI units provide a critical service for both urban and rural communities and additional capacity is urgently needed. The ongoing demand for mobile MRI services since 2010 is evidence that solely adding new fixed MRI resources does not adequately address the need for additional mobile MRI units. Mobile and Fixed MRI units work in tandem to provide critical imaging services in each community. There is a significant resource imbalance in North Carolina related to mobile MRI services that needs to be corrected to ensure North Carolina residents have adequate access to these services.

5. Evidence that the requested change is consistent with the three Basic Principles governing the development of the SMFP (Safety and Quality, Access and Value)

The proposed request for additional mobile MRI units is consistent with the Basic Principles of Safety and Quality, Access and Value. Each principle is discussed below:

Safety and Quality

The requested need determination for two (2) additional mobile MRI units to serve North Carolina residents will promote the principles of safety and quality contained in the SMFP. For the provision of mobile healthcare services, safety and quality requires a dual approach. In the Novant Health system, extensive safety and quality requirements are in place for both the mobile medical equipment and the mobile MRI host sites. Mobile MRI host sites are required to be certified by either the American College of Radiology or JCAHO. Mobile MRI technologists are required to hold and maintain all required professional certifications, which includes continuing education and CPR certifications. Mobile MRI units are regularly inspected and maintained to ensure all medical equipment is properly functioning.

The availability of mobile MRI services onsite reduces the travel burden for patients. The ability to serve patients in their home communities maintains continuity of care with their existing healthcare team while keeping patients close to their support network of family and friends. The mobile MRI Technologists that travel with the mobile MRI units are highly trained clinical professionals that are proficient in capturing high-quality images quickly and efficiently.

Benefits of Mobile MRI Use during COVID Pandemic

Another important consideration for enhancing safety and quality for North Carolina residents is the use of mobile MRI services during the COVID pandemic. For example, in Forsyth County, when possible, Novant would schedule COVID patients on a mobile MRI unit located at Piedmont Imaging in Winston-Salem. The use of mobile MRI resources to provide necessary imaging services for COVID patients was critical to reduce the spread of this highly contagious disease to other imaging patients and clinical staff. When mobile MRI units were not available, Novant's quality measures required that the facility's air-handling system cycled 6 times before a new patient was allowed to enter the imaging room, which increased "procedure" time by 30-45 minutes and in turn reduces the number of patients who can be scanned on fixed MRI units on a daily basis. Mobile MRI units are self-contained and have separate ventilation systems that do not interact with a mobile host site's physical building, which is beneficial for treating patients with infectious diseases.

The COVID pandemic has demonstrated how quickly health resources and clinical staff can be overwhelmed and the importance of being well prepared for the future. According to an March 9, 2022 article in the Journal of American Medical Association, a study conducted from January 2019 through September 2021 found that patients were also presenting for care later in the course of illness because of delays in obtaining diagnostic tests or outpatient appointments. These studies also found that racial minorities experienced increases in mortality which continue to persist into 2021. According to the World Health Organization, based on a study conducted at the end of 2021, health systems in over 90% of countries surveyed reported ongoing disruptions across services for all major health areas with little or no improvement since early 2021. North Carolina is experiencing unprecedented demand for both fixed and mobile MRI services. The ability to improve access to critical diagnostic imaging services should be a statewide priority and the approval of additional mobile MRI resources is a key factor.

Access

The focal point of Novant's petition is improving access to mobile MRI services for all residents of North Carolina. Barriers to access can be geography, low income, limited or no insurance, and disability, to name a few. In many cases, patients can be impacted by one or more of these barriers particularly in North Carolina's rural areas. For example, a patient residing in geographic area without fixed MRI scanners may also have a disability or low income. For these medically underserved patients, they may be faced with decisions about delaying or foregoing necessary medical care. A delayed MRI scan may delay further medically necessary treatment, such as surgery. The availability of sufficient mobile MRI resources in North Carolina is a vital component of the healthcare delivery system and the rural communities that depend on these services. Without the approval of the requested mobile MRI resources, medically underserved patients across the State will continue to experience unnecessary hardships.

Value

For North Carolina's rural communities, the ability to purchase a new fixed MRI scanner (assuming a need determination exists) and operate a fixed MRI scanner with the necessary clinical staff is often cost-prohibitive for many smaller communities. Nearly two-thirds of North Carolina's existing host sites are located in counties with less than 500,000 residents. While Policy TE-3 allows a hospital with licensed beds and 24-hour emergency care to apply for a fixed MRI scanner, many small community hospitals may lack the capital necessary to develop a fixed MRI scanner.

The cost of a new fixed MRI scanner ranges from $2 million to $3 million depending on the type of MRI scanner. Clinical staffing costs alone could easily exceed $300,000 annually for a provider. Equipment maintenance is also a significant annual expense after a manufacturer's coverage period ends. Overall, a single unit fixed MRI scanner would incur roughly $1 million in annual operating expenses for a fixed MRI scanner.

Access to mobile MRI services for providers offers the following value-based advantages:

- Mobile MRI units (MRI and trailer) typically cost less than fixed MRI scanners at $1.8 to $2 million but offer the same high-quality imaging services as fixed MRI units.
- Mobile MRI units can be delivered to the provider in less than 12 months, which significantly reduces the development period for the service. The development of fixed MRI scanners can take 24 months or longer to complete in light of supply chain issues impacting the construction industry and are experiencing increased project costs. The development of a fixed MRI scanner typically costs between $2 million to $3 million depending on the site.
- Mobile MRI host sites are charged a per diem rate for a mobile service, which includes specialized staffing and other mobile MRI operational expenses borne by the mobile MRI provider.
- Mobile MRI patients have access to high-quality imaging procedures performed by highly trained MRI technologists.

The requested special need determination for two new mobile MRI units will promote safety and quality, increase accessibility for both providers and patients, and will add value by creating additional mobile MRI capacity at a lower cost than fixed MRI scanners within a shorter development period.

Conclusion

Petitioners respectfully request that the SHCC include a need determination for two mobile MRI units in the 2023 SMFP to improve accessibility for patients and healthcare providers across North Carolina.

We appreciate the SHCC's careful consideration of this important issue and would be pleased to answer any questions.

ATTACHMENT A

2022 Mobile MRI Inventory Reports

LEGACY UNITS

Mobile MRI Unit	Name	Serial Number	Legacy	Mobile Unit Count	Parked?	Notes:
Alliance	SIGNA 294		YES	1	YES	Host Site - Duke Regional Hospital
Alliance	SIGNA 89		YES	1	NO	
Alliance	SIGNA 461		YES	1	NO	
Alliance	SIGNA 447		YES	1	YES	Host Site- Southeastern Ortho; Replaced by ESP 60
	ESP 60					ESP 60 - Replaced Signa 447 3/20/21-9/30/21
Alliance	SIGNA 413		YES	1	NO	Exported from NC when Replaced by SIGNA 456 (10/1/2020-1/10/21)
	SIGNA 456		YES		YES	This unit became the replacement for SIGNA 413 in January 2021
Alliance	ESP 28		YES	1	NO	
Alliance	VOYA5		YES	1	YES	Host site - Duke Health Raleigh October 2018 Replacement
Alliance	SYM 43		YES	1	YES	Host site - Duke Raleigh Hospital
Alliance	SIGNA 432		YES	1	NO	Replaced by Signa 425 10/1/2020-3/10/21
Alliance	SIGNA 425		YES	1	NO	This unit replaced Signa 432 3/10/21-9/30/21
Alliance	SIGNA 273		YES	1	NO	
Alliance	ESP 66		YES	1	NO	
Alliance	SIGNA 480		YES	1	NO	This unit was replaced by ESP 43 in May 2021
Alliance	SIGNA 451		YES	1	NO	
Alliance	SIGNA 406		YES	1	YES	Duke Hospital Cary (also known as SYM 43)
Alliance	AERA 16		YES	1	YES	Replacement for SIGNA 403; UNC Hospital Hillsborough host site
Alliance	SIGNA 270		YES	1	NO	
Alliance	ESP 62		YES	1	NO	Replaced ESP 17 on 11/11/2019
Kings Medical Group		Serial #31421	YES	1	NO	
Kings Medical Group		Serial #31472	YES	1	NO	
Insight Imaging	R229	ID G1816	YES	1	NO	Insight filed 3 reports for this unit - one for each host site

Insight Imaging	R272	ID G1212	YES	1	YES	Emerge Ortho Blue Ridge - Buncombe County
Insight Imaging		ID G1251	YES	1	NO	Insight filed 3 separate reports for this unit
Foundation Health Mobile NOVANT	MQ 23	Serial #31429	YES	1	NO	
		TOTAL LEGACY MOBILE MRI		**24**		
CON APPROVED MOBILE MRI UNITS						
Mobile MRI Unit	Name	Serial Number	CON ID	Mobile Unit Count	Parked?	Notes:
Alliance	SYM 65		G-7038-04	1	NO	SYM 65 replaced by SYM 71 in 3/2021
	SYM 71		G-7038-04		NO	
Alliance	ESP 61		Q-6884-03	1	NO	Unit owned by Alliance & University Health Systems of Eastern Carolina, Inc.
Alliance	SIGNA 407		G-6271-00	1	NO	
Alliance	ESP 23		O-7001-04	1	NO	Replaced Signa 415 in June 2020
Porters Neck Imaging	R5022		O-7254-05	1	NO	
Sentara Albemarle Medical Center		Serial #31451	R-7623-06	0	YES	Albemarle Medical Center (2023 Table 17E-1 refers to this project ID # as both fixed and mobile)
MRI Specialists of the Carolinas		1M9A3A8248H022441	F-8000-07	1	YES	Host Site - MRI Specialists of the Carolinas GASTON CO
Pinnacle Health		400-418683	J-8260-08	1	NO	
Blue Ridge Healthcare		Serial #25424	E-7066-04	1	NO	
High Point Regional Health System		Serial #25530	G-7064-04	1	NO	
Raleigh Orthopaedic	SIGNA 457	1S9FA48218113197	J-7756-06	1	NO	

Wake Radiology	MRI 1	Serial #25432	J-7012-04	1	NO	
Wake Radiology	MRI 2	Serial # 10018165	J-11291-17	1	NO	Transferred from UNC Rex Healthcare
Insight Imaging	R433	Serial # G1223	F-5723-97	1	YES	Host Site - Carolina Ortho & Sports Medicine Gaston County
WakeMed		Serial #23788	J-7043-04	1	NO	
Carolinas Imaging Services		Serial # R-6099	F-7040-04	1	NO	CIS completed 3 separate inventory reports for this unit
EmergeOrtho		Serial# 159FA4802Y1182381	E-8230-08	1	NO	
EmergeOrtho		Serial # 25625	J-8443-09	1	NO	
Cape Fear Mobile Imaging	MQ 17	Serial #31267	O-6665-02	1	NO	
Foundation Health	MQ 19	G1254	J-7008-04	1	NO	
Forsyth Medical Hospital	FORSYTH	Serial #25479	G-7065-04	1	NO	
Jacksonville Diagnostic	MQ 13	R4378	F-6626-02	1	NO	
Novant-Cape Fear Diagnostic	MQ 15	R5786	O-6434-01	1	NO	
Presbyterian Mobile Imaging	PRESBY	Serial #31381	F-7164-04	1	NO	
	TOTAL CON APPROVED MOBILE MRIs			**23**		
	COMBINED TOTAL			**47**		