

Project Title: Implementation of a standardized inpatient virtual consult platform within the Atrium Health North Central and Western market.

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For several years, the Atrium Health North Central and Western market has focused on a portfolio of strategies aimed at assuring “right patient, right place, right time” by enhancing the ability of network community hospitals (Wilkes Medical Center, Davie Medical Center and Lexington Medical Center) to care for higher acuity, more medically complex patients who would otherwise require transfer to our tertiary care center (WFBMC). These strategies have included the implementation of tele-ICU services and round trip procedures. A key benefit of these strategies is that patients are able to remain in their communities to be closer to their family and social support. These “right patient, right place, right time” strategies also help to improve health system capacity optimization, enhancing network community hospital census while freeing up bed capacity at WFBMC for patients with tertiary/quaternary care needs.

While the need had been recognized for some time, the lack of subspecialty consultative availability at network community hospitals was identified as an opportunity to better address. Historically, when a specialty care need arose that was not offered at one of the network hospitals, patients were transferred to WFBMC. Many of these patients could remain at their community hospital if the appropriate subspecialty support was available.

Goal

The overarching goals of Inpatient Virtual Consult initiative were threefold: 1) Keep patients in the right location for exceptional patient care and optimal family/social support, 2) Maintain WFBMC capacity for patients with the highest acuity needs, and 3) Increase complexity of patients that network hospitals are able to manage as inpatients. The SMART goal for the first year of the initiative was to increase the number of inpatient virtual consults to twenty (20) per month by 12/31/21.

Improvement Process

Understanding the potential to enhance subspecialty consultation support virtually within the North Central and Western market, leadership from the AHWFB Regional Operation Center and physician and administrative clinical operations leaders set out to ideate on the optimal solution. Prior teleconsultation initiatives had been attempted in the market, but had failed to gain traction due to a lack of coordination and infrastructure. The team desired to develop a standardized platform for virtual consult delivery that was easy for all to use including the ordering provider, the virtual consultant, the bedside nurse, as well as the patient. The continuous quality improvement methodology utilized was PDSA.

Plan- The first step toward creating the Wake market inpatient virtual consult platform was to assemble the leader team which consisted of Dr. Brian Hiestand (Co-Medical Director of the Wake Regional Operations Center and Market Emergency Medicine service line leader), Dr. Shayn Martin (Wake Market Critical Care service line leader) and John Blalock (Wake Market Associate Vice President for Clinical Operations). This team began to meet weekly to ideate on the requirements of a standardized, user friendly platform to provide inpatient virtual consults to network hospitals within the Atrium Health North Central and Western market. It was

decided that the service offering should be scoped to inpatients only and would include options for synchronous video visits directly between consultant providers and patients (facilitated by teammates at network hospital sites), as well as asynchronous consults between consultant and attending providers. Secondly, the leader team began to perform a needs assessment by reviewing existing hospital transfer data and meeting with key network hospital stakeholders including medical directors, CMOs and CNOs. From this assessment, the leader team was able to identify seven (7) initial consultant offerings including neurology, cardiology, infectious disease, nephrology, hematology/oncology, glucose management, and trauma (specific injury patterns).

Do – The inpatient virtual consult leader team then began work on designing a scalable process that would involve attending providers submitting a standardized virtual consult order, which would flow to a central consult navigator. This new navigator position would help to coordinate the consults regardless of referring facility/unit and consulting service. The navigator's role was to negotiate a virtual consult date and time that was conducive for all parties, schedule the appointment and send reminders, and generally serve as a key contact for the program. The leader team was able to identify an existing, highly competent teammate to serve in this new role, thus not incurring incremental cost. The leader team worked with IAS colleagues to create the Epic workflows and employ the applications that would ensure success (e.g., direct link for video visit within the Epic patient record, incorporation of translator support, etc.). The leader group worked with the CNOs at each site to identify teammates on the inpatient units who would assist with the consult facilitation as well as the necessary equipment. The leader team worked with the Wake region credentialing office to make sure that the identified consulting departments were properly privileged for telemedicine services through a Memorandum of Understanding process at WMC, LMC and DMC campuses. Lastly, a virtual consult playbook was created including key contacts at each site and educational material was developed and presented to the network hospital providers. The new virtual consult platform successfully went live on March 1, 2021. Following the initial go-live, additional serves have been added to the platform based on voiced needs and the proactive desire of subspecialty services to join. These additional services include dermatology, inpatient psychiatry, geriatrics, palliative care, wound management, neurocritical care, and emergency general surgery.

Study- After the new inpatient virtual consult platform became operational, the leader team continued to meet on a weekly basis to assess progress and optimize performance. With the help of IAS, the team developed a virtual consult dashboard which reported completed consults by type of service and market facility. The team continued to engage with all key stakeholders to gauge utility of the virtual consults and make improvements in the process. Stakeholder feedback indicated that the virtual consult navigator position had been a critical success factor for ease of use. The team also gleaned from ordering providers novel consultant services that would be helpful to onboard to the platform. Because one of the goals of the initiative was to keep patients within their communities, we assessed the transfer rates of patients being sent

from network hospitals to WFBMC. We noted statistically significant reductions in transfer rates from Lexington Medical Center and Davie Medical Center (DMC's transfer rate dropped from 8.7% to 6.5% post intervention).

Act- The inpatient leader team continues to meet regularly to review program performance and plan continued expansion. The goal in 2023 is to consistently sustain 130 inpatient virtual consults per month. We continue to add new consultant services, which will include pain medicine and pulmonary services in 2023. Additionally, we are very excited to extend services to High Point Medical Center this year. While this facility has greater subspecialty support compared to other network hospitals in the market, High Point will gain value in the ability to access our portfolio of consultant services.

Results/Outcomes

The inpatient virtual consult initiative has been very successful with volumes steadily increasing beginning in March 2021. Within the first year of operation the program supported an average of 73 inpatient virtual consults per month across 11 specialties. By the end of 2022, the program supported 1,178 consults (~99/month) across 14 specialties. The top three consultant specialties utilized in 2022 were neurology (482 or 41%), infectious disease (171 or 15%) and nephrology (106 or 10%).

Not only has the team achieved the goal to improve the patient experience for patients by keeping them within their communities and close to their families, but we have also achieved the goal of avoiding unnecessary transfers to WFBMC and optimizing market-wide inpatient bed capacity. This initiative conservatively improved network hospital margin by \$1.5M through retaining admitted patients who otherwise would have transferred to WFBMC. This financial value also does not include the liberated inpatient bed capacity in Winston that was used to accept incremental higher acuity admissions.

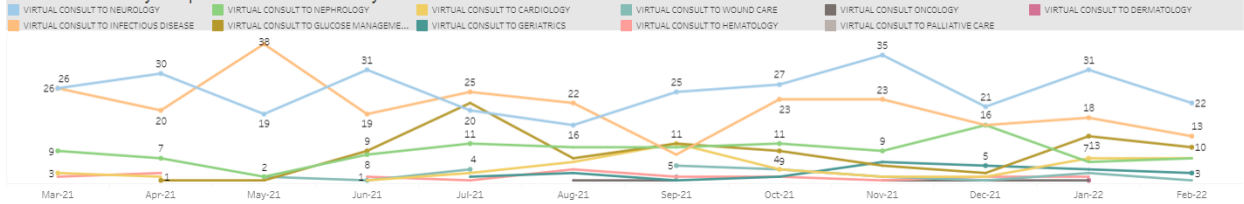
The virtual consult leader group continues to focus on improving the process for all stakeholders, enhancing the types of subspecialty services provided and increasing the offering to additional Wake market campuses. We believe that this particular program is uniquely valuable and that there could be opportunity to leverage this resource to other markets within Atrium Health, especially after Epic harmonization.

Virtual Consult Trending by service for first year of operation (Mar 21-Feb 22)

Number of Completed Virtual Consults by Service

	VIRTUAL CONSULT TO NEUROLOGY	VIRTUAL CONSULT TO INFECTIOUS DISEASE	VIRTUAL CONSULT TO NEPHROLOGY	VIRTUAL CONSULT TO GLUCOSE MANAGEMENT TE...	VIRTUAL CONSULT TO CARDIOLOGY	VIRTUAL CONSULT TO GERIATRICS	VIRTUAL CONSULT TO WOUND CARE	VIRTUAL CONSULT TO HEMATOLOGY	VIRTUAL CONSULT ONCOLOGY	VIRTUAL CONSULT TO PALLIATIVE CARE	VIRTUAL CONSULT TO DERMATOLOGY	Grand Total
Orders	303	251	106	91	48	26	23	21	5	2	1	877

Number of Monthly Completed Virtual Consults by Service



Virtual Consult Trending by Hospital for first year of operation (Mar 21-Feb 22)

Number of Completed Virtual Consults by Hospital

	LEXINGTON MEDICAL CENTER	DAVIE MEDICAL CENTER	WILKES MEDICAL CENTER	Grand Total
Orders	510	233	134	877

Number of Monthly Completed Virtual Consults by Hospital

