

## Institutional Action Project Abstract 2022

**Project Title:** The Creation of a Critical Care Service Line

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**Collaborators and Mentors:** Lawrence G. Smith, MD, MACP

**Topic Category:** Operations

**Background, Significance of project:** Northwell Health is a twenty-three-hospital health system in and around the New York metropolitan area. The health system has grown rapidly over the past ten years, and this expansion can be attributed to the merging of independent hospitals. The mergers have, over time, created a diverse system with a robust combination of community hospitals and tertiary care centers. The culture at each hospital varies immensely.

**Purpose/Objectives:** The aim of my IAP project is to strategically guide the future direction of the service line in the post-COVID era. Success of the project depends on the creation of a unified critical care service line, which includes medical, surgical, neurosurgical, cardiothoracic, pediatric, and emergency medicine critical care. Understanding the needs of these various areas of critical care and the overall needs of Northwell Health as a system will help dictate the planning of the service line.

**Methods/Approach/Evaluation Strategy:**

- I have the results of a survey that was done in 2011 looking at the different critical care units across the health system
- I have replicated that survey over the past few months to understand how critical care in our health system has changed over the past ten years.
- I surveyed the critical care leadership from each area and all the ICU Directors at each hospital and each type of unit.
- I also surveyed the senior leadership (medical directors and executive directors) at each hospital to understand their needs and requests regarding critical care.

**Outcomes/Results:**

- 100% of all ICUs have a director who is board-certified in the appropriate subspecialty of the unit.
- Admission and discharge decisions: 75% of ICUs have full control over decisions on admission and discharge. The ones that do not are primarily surgical and CTICUs.
- Staffing: All ICUs have daytime coverage with an intensivist. Night-time coverage is variable and, in some units, includes eICU coverage. So, in 2022 overall fewer intensivists at night.
- Concerns from ICU leaders: Space and resources; surge staffing, especially in smaller hospitals; education across ICUs in the system with regards to COVID care, ventilator strategies, ECMO, ultrasound at the bedside, post-ICU syndromes, difficult airway management and sepsis management.
- Concerns from Northwell leadership: Space; quality of 24-hour care in the ICU; ACP coverage; infusion of new talent and novel therapies; burnout and loss of staff; communication between the medical floors and ICU; nursing shortage; difficulty predicting future needs; and better integration of critical care and palliative care

**Discussion/Conclusion:** The creation of this novel critical-care service line in a large health system is a unique challenge given all the disciplines involved. The goals going forward have been clarified by this project; we will focus on education, joint projects, standardization of the ICU model and staffing. We will make the health system stronger by focusing on staffing resiliency, joint recruitment efforts and ACP training. We will study and improve care by standardization of metrics and multidisciplinary quality review. In terms of research, the goal would be to leverage the size of the health system to cultivate research. The financial gains will come from standardization of coding education and documentation. A major focus on wellness for this group will be necessary to decrease attrition and improve performance. Knowing the areas of vulnerability and areas of greatest impact will vastly improve the success and visibility of the service line.

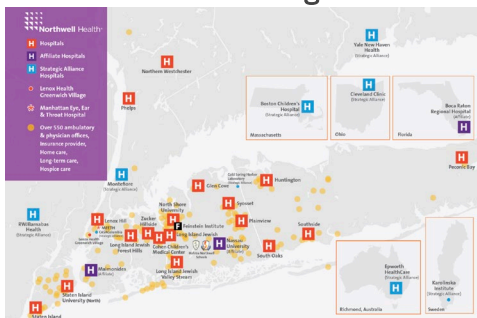
Fellow: Mangala Narasimhan DO, FCCP, SVP, Director of Critical Care Services, Northwell Health

Mentor: Lawrence G. Smith, MD, MACP, Dean and Physician-in-Chief Emeritus, Donald and Barbara Zucker SOM at Hofstra/Northwell

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## INTRODUCTION

- Northwell Health is a diverse, geographically widespread combination of community hospitals and tertiary care centers, each with its own culture and staffing models



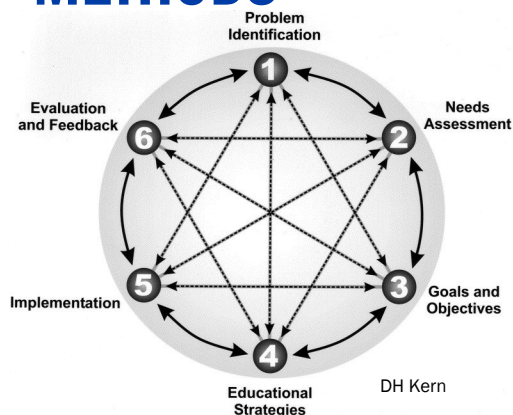
The critical care service line was created in July 2020 and includes all ICUs at Northwell

Scope- 39 ICUs, 492 CC beds, >37,000 annual patient encounters (2021) and 300+ physicians

## PURPOSE

- Create a unified critical care service line, integrating medical, surgical, neurosurgical, cardiothoracic, pediatric and emergency medicine critical care
- Needs assessment to strategically guide the future direction of the service line in the post-COVID era
- Vision is to be a fully integrated network of critical care units consistently delivering high quality care that is measurable

## METHODS



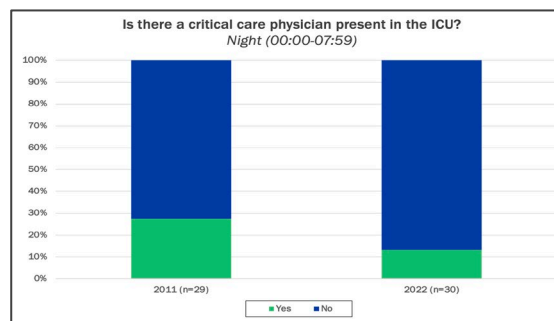
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## RESULTS



ICU Leaders

Northwell Leaders



- 100% of hospitals have an institutional CC committee/PICG
- 70% of ICUs have admission and discharge guidelines
- 100% have multidisciplinary rounds
- 80% have a TLC bundle document
- 100% do daily sedation vacations

## RESULTS (CONT.)

- 100% of ICUs have a director who is board certified in the appropriate subspecialty
- 75% of all ICUs have full control of decisions on admission and discharge. The ones that do not are primarily surgical and CTICUs
- 100% of all ICUs have daytime coverage with an intensivist, night-time coverage is variable and may include eICU coverage

## CONCLUSIONS

- Analyze new staffing models, standardization, eICU support analysis
- Focus on education- shared best practices, grand rounds, ABCDEF practices
- Strengthen organization by internal CC ACP training, standard medical student training
- Joint recruitment to staff difficult areas, regionalize credentialing
- Process improvement: quality review committee and creation of a standard dashboard to review metrics
- Focus on research- large multi-hospital data
- Improve billing and coding, standard notes
- Centralized low volume specialty care: ECMO, transplant, cardiac devices