

# Elevation of the Infant Transitional Unit (ITCU) at Children's Hospital of Philadelphia (CHOP)

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**OBJECTIVE:** Elevate the Infant Transitional Care Unit (ITCU) to care exclusively for babies following neonatal intensive care in a cohorted space, reducing fragmentation in care, improving patient and care team experience and reducing harm

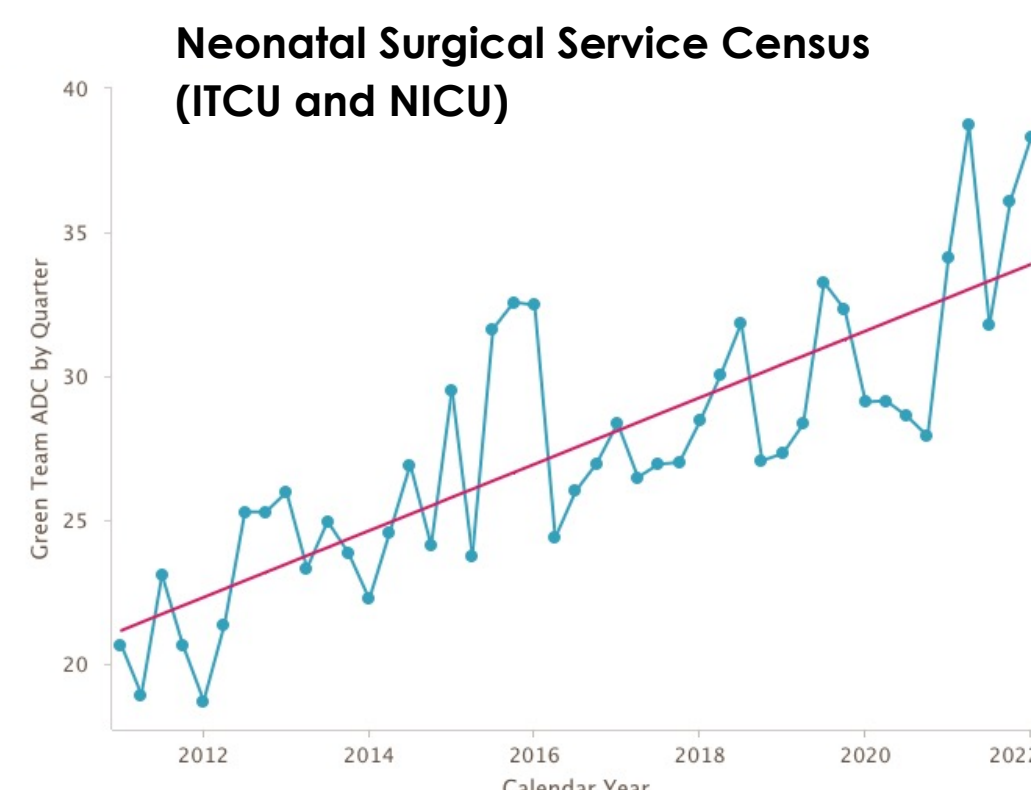
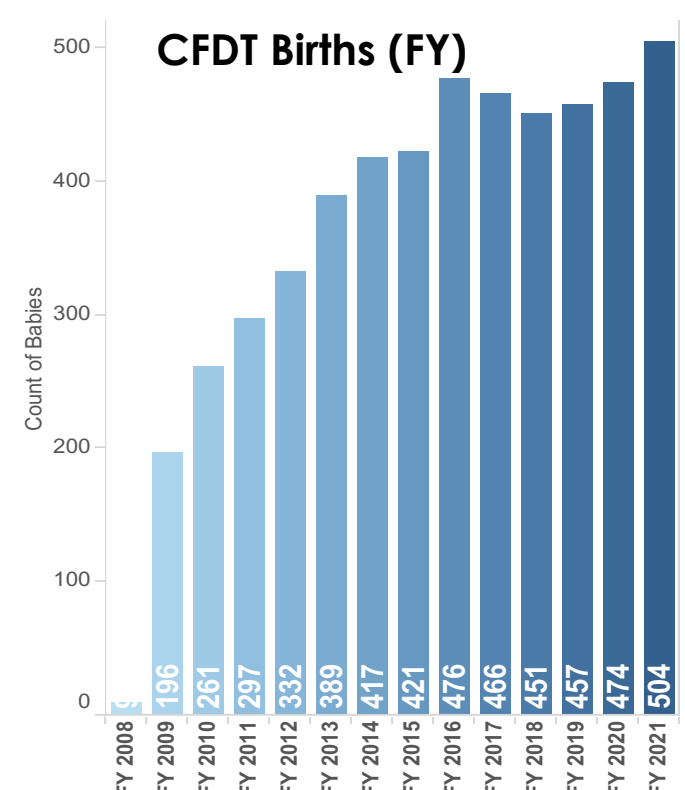
Collaborators and Mentors: N. Scott Adzick, MD; Renee Ebbert, CRNP; Katherine Maschhoff, MD; Arnetta Woodson, RN; Tom Reynolds, MFA, MBA; Kristen Behrens, MBA

## CURRENT STATE ASSESSMENT

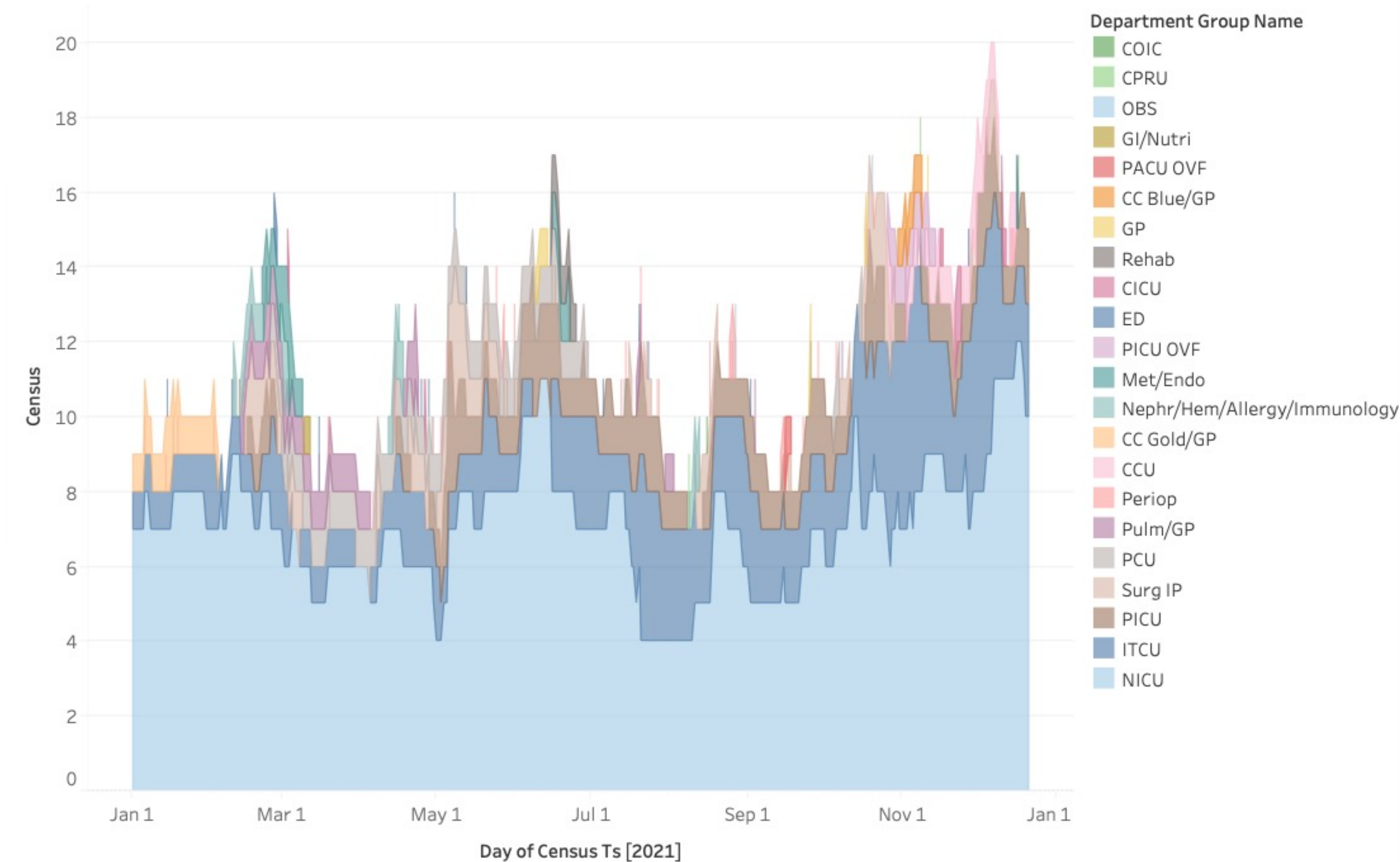
- CHOP's Center for Fetal Diagnosis and Treatment (CFDT) has cared for more than 28,000 patients since 1995
- Following intensive care, neonatal patients move to 15 different units and are discharged from 8 locations, disrupting continuity of care
- Capacity constraints have compounded, increasing the number of handoffs during a patient stay

## RISKS OF INACTION

- Increased harm
- Lack of discharge readiness
- Increased length of stay and readmission rates
- Inability to scale patient growth and revenue due to space



## METHODS FOR CHANGE



Congenital Diaphragmatic Hernia (CDH) Patient Census by Department (2021)

## ACHIEVEMENT TO DATE

- Aligning interdisciplinary stakeholders, identifying challenges/opportunities
- Actively seeking staff feedback
- Created parent advisory group; incorporating Press Ganey feedback
- Data tracking with real-time information
- Dedicated attending for rounding
- Dedicated case management
- Developed quality improvement (QI) projects to improve known vulnerabilities
- Outlined plan to enhance staff training and family discharge education
- Created budget and requested funding
- Reimagined unit to include family training area and potential 24-hour stay room
- Requested dedicated nutritionist and social worker
- Launch remote patient monitoring (RPM); team and software funded (July 2022)

## DISCUSSION

The creation of a dedicated ITCU will elevate the care for all babies following neonatal critical care. It will reduce parent strain, empower families, and improve safety in addition to driving revenue through increased volumes and improved long-term outcomes.

## ABSTRACT: 2022 ELAM Institutional Action Project

**Project Title:** Elevation of Infant Transitional Care Unit

**Name and Institution:** Holly L. Hedrick, MD, Children's Hospital of Philadelphia

**Collaborators and Mentors:** N. Scott Adzick, MD, Kristen Behrens, MBA, Renee Ebbert, MSN, CRNP, Kathryn Maschhoff, MD, Tom Reynolds, MFA, MBA, Arnetta Woodson, MBA, RN

**Topic Category:** Clinical

**Background, Significance of project:**

The Center for Fetal Diagnosis and Treatment (CFDT) is the largest and most experienced fetal center in the world, providing comprehensive care for more than 28,000 pregnant mothers and their babies since 1995. An emphasis on care from "gestation to graduation" means supporting patients from their diagnosis, all the way through neonatal intensive care, convalescence, discharge and follow up care. After studying congenital diaphragmatic hernia (CDH) patients over three years, the team identified data confirming babies transitioned to 15 different units following their stay in the Neonatal Infant Intensive Care Unit (N/IICU) and discharged from eight different units, creating disparities in discharge readiness, increasing length of stay and contributing to readmission rates. Handoffs to multiple units impacts patient family and provider experience, fragments care, and increases variability - all leading to potential harm.

**Purpose/Objectives:**

Elevating the current Infant Transitional Care Unit (ITCU) to care exclusively for babies following neonatal critical care in the N/IICU in a single space would increase their ability to thrive, providing expert clinical care in one location and cohorting patients to enhance family support systems. A 24-hour stay room on the unit would act as the dedicated education space to train on homecare equipment with nurses specializing in education and follow up. With modification and expansion, this unit would serve as a seamless pathway to discharge, a crucial step to empowering families to care for medically at-risk babies.

**Methods/Approach/Evaluation Strategy:**

- Gather patient/family feedback through Press Ganey and small group meetings (complete and ongoing)
- Build real-time risk adjusted Clinical Outcomes Data Archive (CODA) to inform decision support (complete and ongoing)
- Meet with all interdisciplinary stakeholders, identifying challenges and opportunities (complete and ongoing)
- Develop quality improvement (QI) projects to improve known areas of weakness, including feeding, brain development and education (complete and ongoing)
- Hire nurse educator, discharge coordinator, remote patient monitor lead, and outpatient nurse navigator to support unit (complete)
- Engage facilities team to redesign adjacent playroom into 24-hour stay room to accommodate feeding and homecare equipment training (in progress)
- Outline budget needs, request funding, and identify potential donors (in progress)

**Outcomes/Results:** The needs assessment and opportunities to provide continuity of care in the ITCU are defined. The team and institutional decision makers recognize immediate needs. Path forward is supported by now available real-time data. Change in patient flow and bed management challenged by capacity constraints and will progress incrementally. Due to ongoing QI work, malnutrition at discharge was reduced from 40% to 0% in patients with CDH.<sup>1</sup>

**Discussion/Conclusion with Statement of Impact/Potential Impact:** The creation of a dedicated ITCU will elevate the care for all babies following neonatal intensive care. The focus will reduce parent strain, empower families, improve long-term outcomes in addition to driving revenue through increased volume.

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<sup>1</sup> Wild KT, Bartholomew D, Edwards TM, Froh E, Spatz DL, Huber M, Hedrick HL, Nawab US. Achieving adequate growth in infants with congenital diaphragmatic hernia prior to discharge. *J Pediatr Surg*. 2021 Mar 26:S0022-3468(21)00282-7.