



# The Neonatal CATCH Program at CHOP: An Innovative Approach to Neonatal Follow-up

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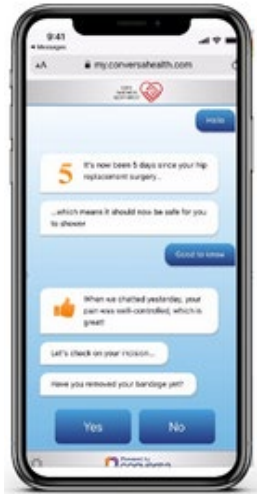
## Background

- Almost 50% of NICU graduates will be readmitted to the hospital within their first 2 years of life
- Those with indwelling devices such as gastrostomy tubes and VP shunts have increased rates of readmissions and emergency department visits
- The Neonatal Connected Applications to Transition to Care at Home (CATCH) program was developed to improve the transition home for infants discharged on tube feedings.

## The Program

- The CATCH program was implemented in February 2023 to monitor the infant's weight via the provided home scale, overall health, respiratory and feeding status, and parental confidence for the first month after discharge
- The CATCH Program consists of a neonatal healthcare team who provides families with Remote Patient Management (RPM) using a text message platform and telemedicine

### CATCH PROGRAM OVERVIEW



## Results

- The CATCH program was associated with decreased avoidable readmission rates compared to a similar patient cohort not enrolled (0.5% vs 4%,  $P < 0.1$ ,  $N=196$  vs. 105)
- Improving parent education and calling them for technical check 1 day post discharge (PDSA cycles) improved care delivery to high SVI population

	General Readmissions	Avoidable Readmissions
Historical cohort of eligible patients (from 2018, 2019, 2021, 2022) (n=546)	18% (n=97)	
Eligible patients enrolled into CATCH program 2023-24 (n=196)	12.8% (n=25)	0.5% (n=1)
Eligible patients NOT enrolled into CATCH program 2023-24 (n=105)	19% (n=20)	4% (n=4)

Intervention – reminder check in 24 hours post D/C, improved script at enrollment	High and medium high SVI		Low and medium low SVI	
	Pre	Post	Pre	Post
% who touches platform	83%	93%	91%	96%
% 1st chat response of those with > 0 chats	57%	90%	89%	83%
% response to 25% of chats	44%	50%	58%	67%
% response to 75% of chat	26%	20%	27%	26%

## Discussion

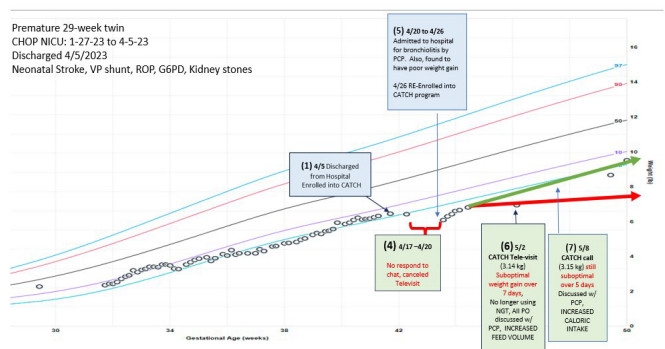
- The CATCH program provides an innovative approach to be a safety net for caregivers during the transition home for medically complex infants.
- **Further improvements:** The CATCH program hopes to decrease length of stay for medically complex infants who remain hospitalized for weight optimization and increase parental engagement rates for those with a high SVI score
- **Expansion:** Addition of infants w/ cardiac problems and inclusion of families discharged from other NICUs in our neonatal network

## Measure Methods

- Inclusion criteria: discharging from hospital for the 1st time following NICU admission with a feeding tube in place
- Exclusion criteria: infants with omphalocele and pulmonary hypoplasia
- CATCH data was compared with past institutional data
- Avoidable admissions were analyzed via a 3-person chart review. The Karitane Parental Confidence Scale and Net Promoter Score assessed self-efficacy and satisfaction. Social Vulnerability Index (SVI) guided program improvements to address equity.



### Case example of Poor Growth and Recovery



References: Duncan, T. L., Ulugia, J., & Bucher, B.T. (2019). Association of gastrostomy placement on hospital readmission in premature infants. *Journal of Perinatology*, 39, 1485-1491. <https://doi.org/10.1038/s41372-019-0504-9>

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