

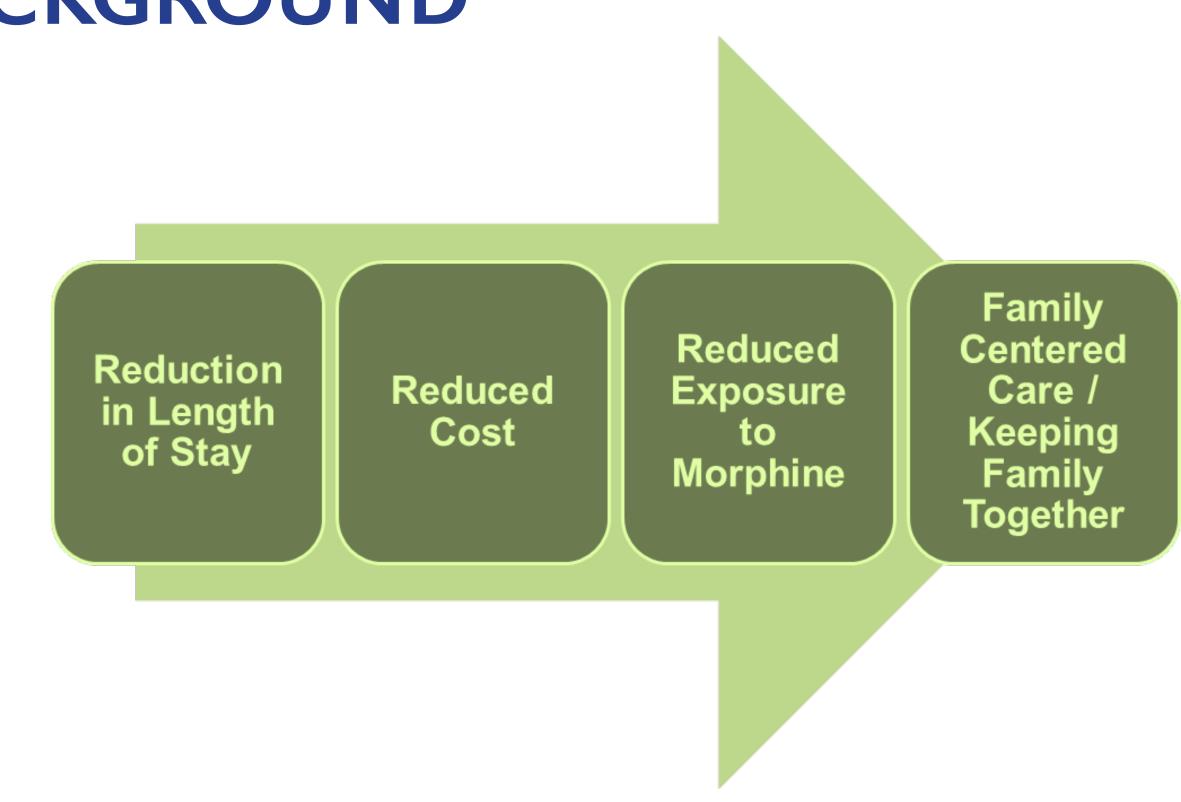
'Eat, Sleep, Console' to Reduce Opiate Exposure and Cost of Care in Neonates

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INTRODUCTION

- This project was completed as part of the Maternal-Child Health Nurse Leadership Academy (MCHNLA) with support from SIGMA and program sponsor Johnson & Johnson.
- In-utero opioid exposures continue to rise nationally. Infants at risk for Neonatal Abstinence Syndrome (NAS) often experience extended, length of stay in critical care units, and increased costs of care.
- New research suggests that functional based assessment of NAS could reduce opioid medication exposure rates and improve outcomes.

BACKGROUND



The purpose of this IRB exempt quality improvement project was to use functional based nursing interventions to support the neonate in an effort to:

- Reduce the number of infants treated pharmacologically for NAS and thus infant exposure to opiates
- Reduce Length Of Stay
- Reduce cost/case

METHODS

- A Multi-Disciplinary team was formed to understand the goals of Eat Sleep Console (ESC) and provide staff resources and education.
- 4 hours of ESC education was provided to nursing caregivers, including a pre-post test to determine learning outcomes.

- Support
 resources were
 created for
 infant consoling
 including
 developmental
 aids, and
 caregivers
 /"cuddlers."
- All infants with known opiate exposure were observed for 5-7 days before discharge was considered.
- Upon maternal discharge, all infants with

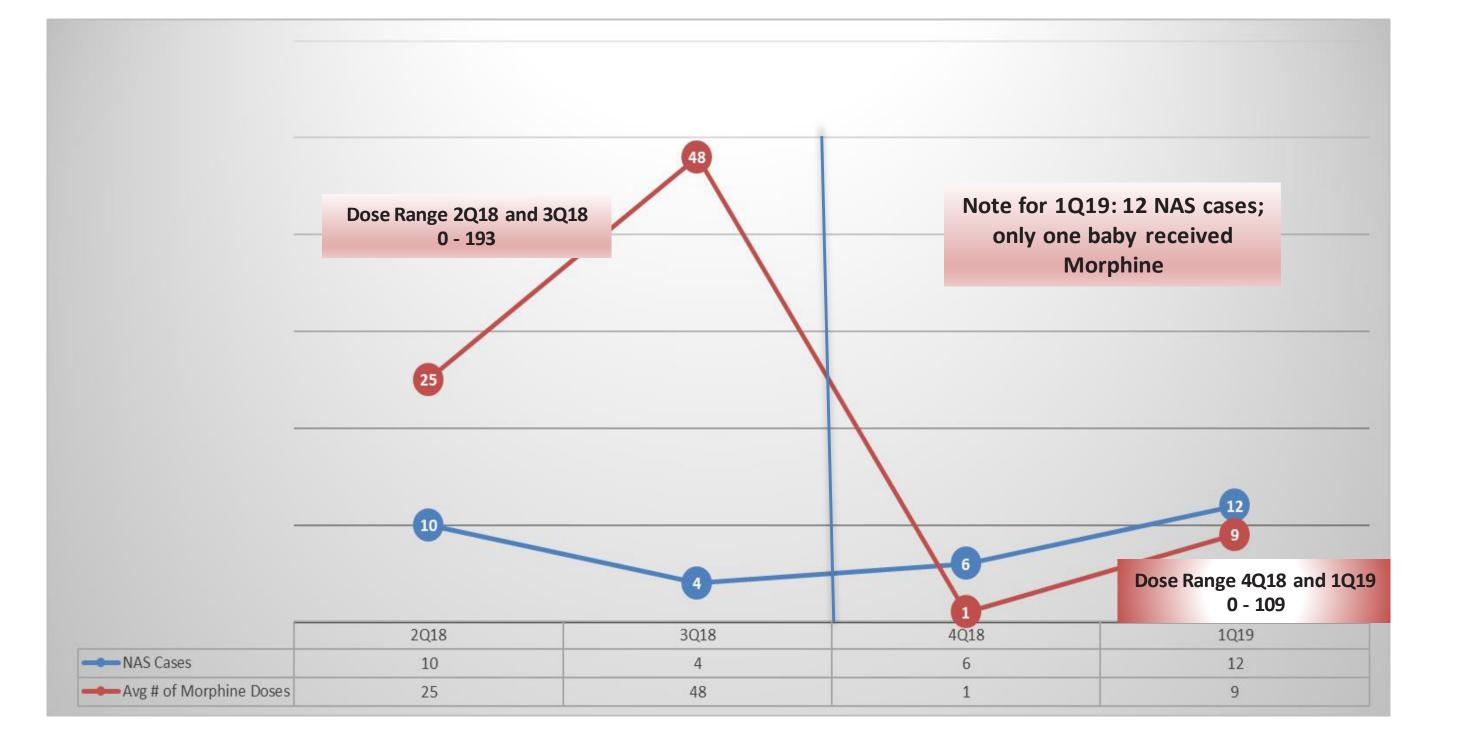
extended stay were transferred to the Pediatrics Unit to continue bonding and supportive care.

- Routine transfer to NICU and administration of opiates such as morphine are avoided unless needed for withdrawal symptom management.
- On October 1, 2018, Franciscan Health Indianapolis replaced its current assessment tool (Finnegan Neonatal Abstinence Scoring Tool-FNAST) with the **Eat, Sleep, Console (ESC)** functional based scoring tool for determination of treatment planning.
- Supportive resources and education created to try to reduce the stigma around neonatal exposure and withdrawal.
- The cohort of patients reviewed for outcomes were those >36 weeks gestation.

RESULTS/OUTCOMES

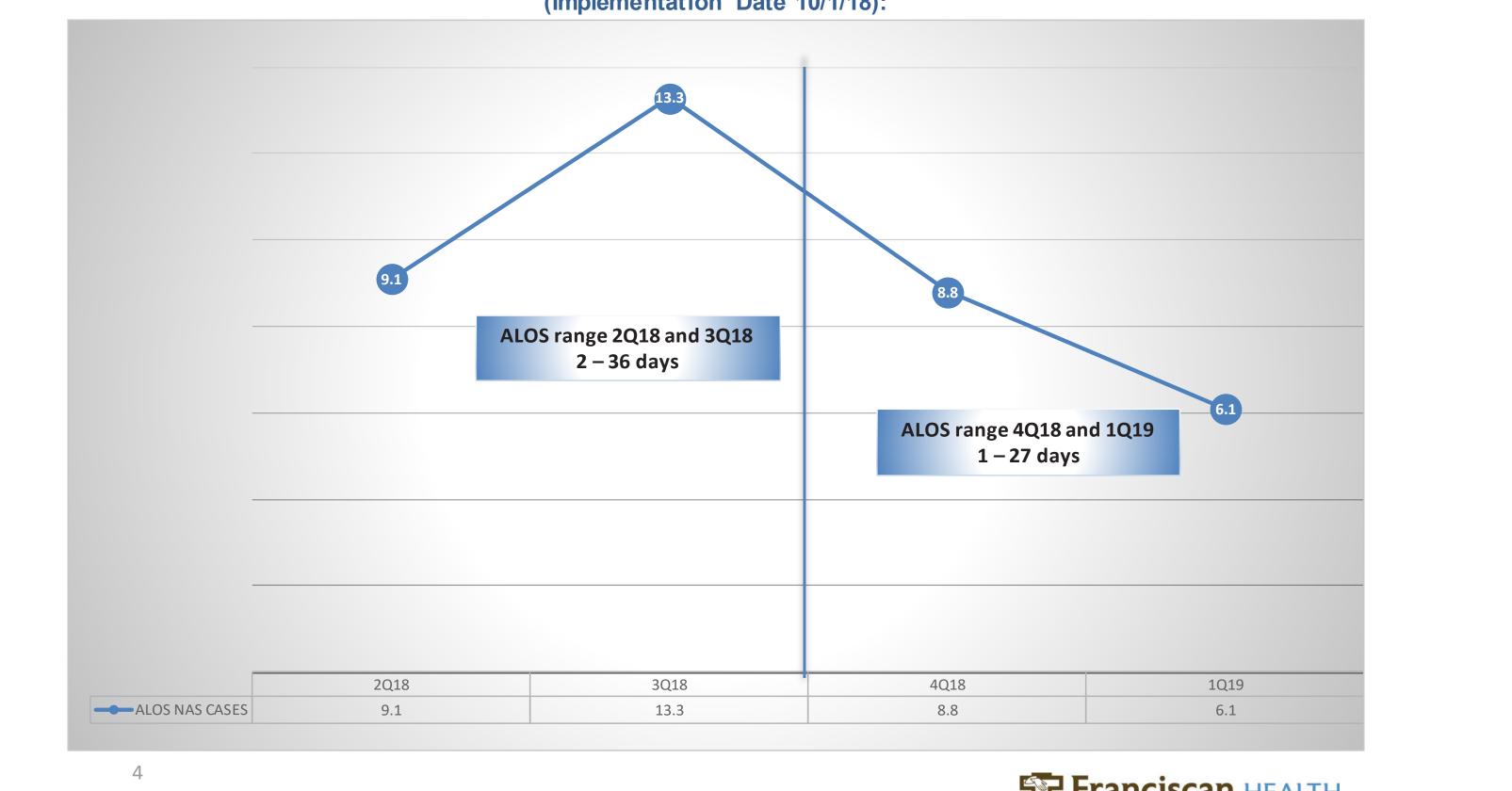
- The project resulted in improvement of both staff knowledge and care of infants with NAS. Post intervention data (4th quarter 2018) was compared to baseline data (1st through 3rd quarter 2018)
- Knowledge: Significant improvements in the caregiver's knowledge about withdrawal symptoms, ways to console, and adequate

IAS CASE COUNTS and MORPHINE ADMINISTRATION- IN CAMPUS 6 MONTHS PRE AND POST ESC MODEL IMPLEMENTATION* (Implementation Date 10/1/18):



*Data inclusion criteria = Infants born at ≥ 36 weeks gestation with a primary or secondary NAS-related diagnosis

AVERAGE LENGTH OF STAY (ALOS) – IN CAMPUS
6 MONTHS PRE AND POST ESC MODEL IMPLEMENTATION*



FINANCIAL DATA—IN CAMPUS *
PRE AND POST ESC MODEL IMPLEMENTATION
(Implementation, Date 10/1/18):

	Net Revenue	Direct Cost	Contribution Margin
9 Months Prior to ESC Implementation	\$603,754	\$427,637	\$176,117
Annualized	\$805,005	\$570,183	\$234,823
6 Months Post-Implementation **	\$243,703	\$164,215	\$79,488
Annualized	\$487,406	\$328,430	\$158,976

Notes: *Inpatient data only

*Includes cases of gestational age < 36 weeks, which are excluded from case count, ALOS, and Morphine administration data

**Excludes an outlier case from February, 2019 with a significantly higher contribution margin

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comfort measures were noted on post-test results. Knowledge about when it is appropriate to assess a sleeping infant increased from 68.7% to 91.6% after education. In addition, staff better understood the timeframe to assess for consolation as evidenced by an increase in correct responses from 45.7% to 83.2%.

- Care: After implementation of the ESC assessment scoring tool the average number of morphine doses administered to treat NAS decreased from 48 to 9. This decrease has significant implications due to both cost avoidance and exposure to opiates in the neonate.
- Length of stay for those infants with NAS related diagnosis declined from 10.48 days to 6.1 days.
- The overall direct cost of care declined from \$570,183 to annualized costs of \$328,430.

CONCLUSIONS

The outcomes of this project appear to suggest that the ESC model allows the caregiver to accurately address withdrawal symptoms while still providing supportive care to infants with NAS. Using the ESC tools appears to lead to decreased lengths of stay, decreased cost of care, and overall reductions in exposure to morphine.

LEADERSHIP JOURNEY



BENEFICIARIES IMPACTED BY THIS WORK

ΓΟΤΑL	5980
Patients	5000
Health care administrators	10
Health educators	5
Community health workers	10
Vurses	600
Other physicians	75
Pediatricians	100
Obstetricians	80
General medicine physicians	100

LIMITATIONS/UNANTICIPATED OUTCOMES

- Elevated perception of care given to those with NAS
- Perceived change in stigma for those with Substance Use Disorder (SUD)
- Increased verbal staff satisfaction with ESC model
- Local schools of nursing including ESC in curriculum
- Volumes in NICU declining which has caused revenues to decrease

REFERENCES

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