

A Quality Improvement Project: Creation and Implementation of a Standardized Inpatient Treatment Guideline for Neonatal Abstinence Syndrome

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AIM

◆ To assess if implementation of a standardized in-patient NAS treatment algorithm for in-utero opioid exposed infants who require methadone treatment will:

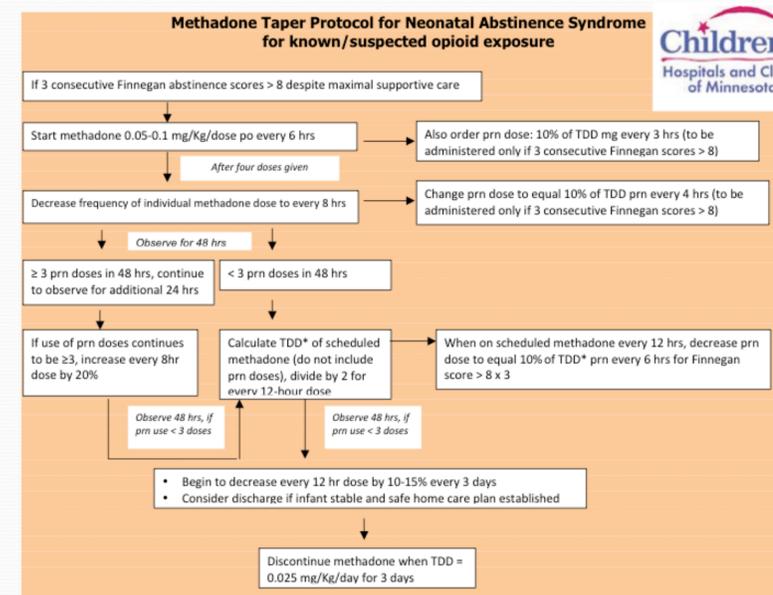
- ◆ Facilitate safe discharge on twice daily (BID) dosing of outpatient methadone
- ◆ Decrease hospital length of stay
- ◆ Have no adverse affects on re-hospitalization rates

SETTING

◆ Term and late-preterm infants hospitalized in the Level II or III NICU for NAS treatment with methadone.

METHODS

- ◆ Multi-disciplinary team meetings to formulate and implement inpatient NAS treatment algorithm, discharge criteria/planning, and outpatient management guidelines
- ◆ Retrospective chart review on infants who were treated with methadone for NAS from January 1st, 2012 through June 1st, 2013.
- ◆ Infants included in the study were managed with methadone as an inpatient by our 8 staff neonatologists, ≥ 35 weeks gestational age, and followed as an outpatient by Children's Hospitals and Clinics of Minnesota Pain/Palliative care team.
- ◆ 20 infants in 2012 and 6 infants in 2013 (January through June) met criteria.
- ◆ Infants born in 2012 were not on any standardized treatment protocol (2012PRE).
- ◆ Infants born in 2013 were treated with the new standardized methadone treatment protocol (2013POST).
- ◆ Readmission rates were tracked via chart review of Children's Hospitals and Clinics EMR.
- ◆ Data were analyzed using 2-sample t-test ($\alpha = 0.05$) and Fisher's exact test ($\alpha = 0.05$) as appropriate.



* TDD: Total Daily Dose

RESULTS

	2012PRE (n=20)	2013POST (n=6)	P-value
Hospital Length of Stay (days)	13.5	11.2	0.4
Length of total therapy (days)	43	36	0.5
Lowest Finnegan in 48 hrs preceding discharge	3	4	0.3
Highest Finnegan in 48 hrs prior to discharge	7	7	0.8
Length of outpatient taper (days)	29	27	0.9
# Home Care visits after discharge	6	7	0.5
Weeks of Home Care services	4	4	0.8
# Pain/Palliative Care Outpatient Clinic Visits	3	3	0.4
Average number of total post-discharge visits	9	10	0.7
Infants breastfeeding at discharge	8	1	1
Infants breastfeeding at end of methadone taper	3	1	1
# infants readmitted within 7 days of discharge	2	1	1

CONCLUSIONS

◆ With implementation of the standardized treatment protocol, the absolute hospital length of stay decreased from 13.5 days in the 2012PRE group to 11.2 days in 2013POST group, however it is not statistically significant.

• Of note, one full year of pre-intervention data (n=20) was compared to only 5 months post-intervention (n=6)

◆ We view this QI project as a successful intervention that thus far has met our intended aims

◆ We propose that the decrease in hospital length of stay is a positive step towards potentially decreasing the time the infant is away from family, improving mother-baby bonding and decreasing the cost of hospitalization without increasing re-hospitalization rates

