

BACKGROUND

- Antibiotics are commonly used in the neonatal intensive care unit (NICU)
- Studies have shown that prolonged duration of antibiotics for early onset sepsis (EOS) is associated with increased risk of death, necrotizing enterocolitis, and late onset sepsis
- Antibiotic therapy can be safely discontinued if blood cultures are not positive within 48 hours and patient is well-appearing

PROJECT AIM

Decrease exposure of neonates to antibiotics by allowing orders to expire after 48 hours without requiring discontinuation by a provider

PROJECT DESIGN/STRATEGY

- Starting in 2016, antibiotics ordered through the neonatal admission orderset had an automatic duration of 48 hours
- Retrospective chart review to determine if 48-hour hard stop is effective in decreasing duration of antibiotic exposure
- Secondary objective to evaluate whether the hard stop resulted in a delay in therapy when the decision was made to continue antibiotic treatment
- Categorical data compared using chi-squared statistical test



CHANGES MADE (PDSA CYCLES)



LESSONS LEARNED

- Majority of orders with additional doses following hard stop implementation were due to order entry outside of the admission orderset
- Other areas for improvement include patients transferred from outside facilities
- Automatic hard stop did not result in a delay in antibiotic therapy

NEXT STEPS

- Continue 48 hour hard stop on antibiotics ordered at admission to NICU
- Continue education of importance of limiting antibiotic exposure in neonates
- Plan a strategy to reduce ordering of antibiotics outside of the admission orderset
- Improve recognition and documentation of antibiotics given at outside facilities to standardize hardstop implementation for these antibiotic orders

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RESULTS/OUTCOMES

Type	Group, (n)	<48 hours, n (%)	>48 hours, n (%)	p-value
Patients	Pre (207)	129 (62.3)	78 (37.7)	<0.00001
	Post (168)	158 (94)	10 (6)	
Orders	Pre (418)	305 (73)	113 (27)	<0.00001
	Post (341)	326 (95.6)	15 (4.4)	



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