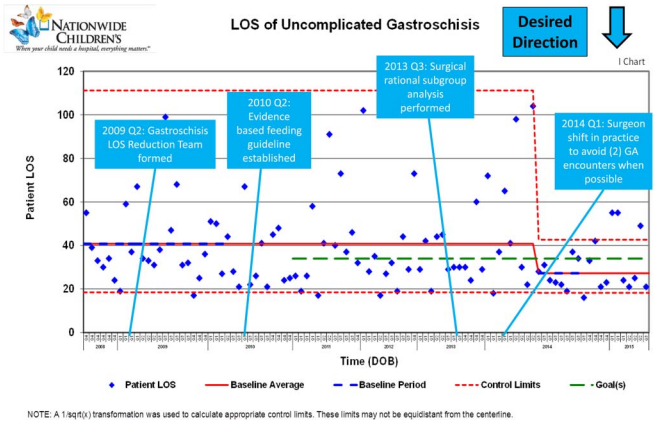

Figure 1

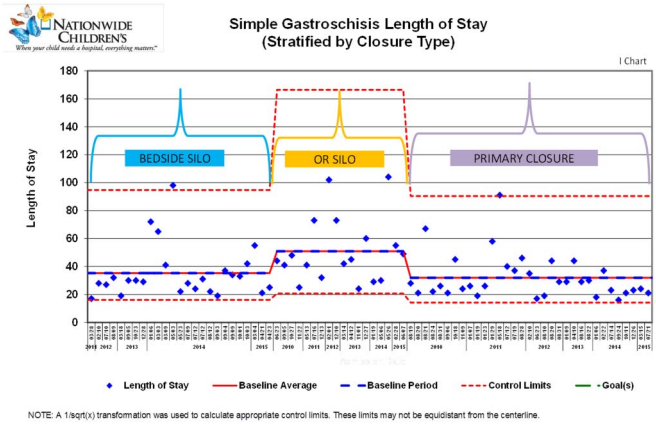

Figure 2

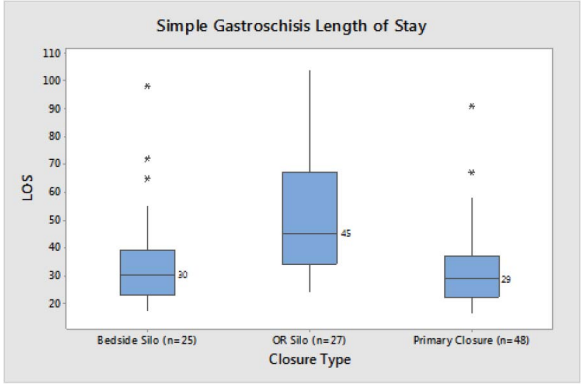

Figure 3

470 **USE OF QUALITY IMPROVEMENT (QI) METHODOLOGY TO DECREASE LENGTH OF STAY (LOS) FOR NEWBORNS WITH UNCOMPLICATED GASTROSCHISIS**

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Background Gastroschisis (G), an abdominal wall birth defect, can be repaired surgically, but recovery, feeding advancement, and subsequent hospitalization (LOS) can be prolonged.

Objectives We aimed to decrease LOS of G patients from a baseline of 41 days (n=26 patients) to 34 days by December 2010 and sustain for 6 months.

Methods In 2009, a QI team was established to reduce LOS. Subjects were newborns >34 weeks gestation with uncomplicated G. Model for Improvement and SPC methodology were used. Rational subgroup analysis (RSA) was used to assess impact of surgical approach and other factors on LOS. Subgroup medians were compared via ANOVA of log-transformed data.

Results From June 2010 to August 2015, 100 subjects were evaluated. Special cause variation in LOS was not detected until July 2014. A new baseline of 27 days was established figure 1. RSA revealed a longer LOS for patients undergoing a silicon silo procedure in the operating room (OR) for gradual reduction of abdominal contents followed by a later secondary OR abdominal closure (n=27; LOS, 44.5 days; IQR, 33.5 days) compared to patients undergoing either a primary OR closure (n=48; LOS, 29 days; IQR, 14 days) or a bedside silo placed under local anesthesia followed by secondary OR closure (n=25; LOS, 30 days; IQR, 16 days). ($p<0.001$). (figure 2 and 3)

Conclusions Standardized care and a change in surgical approach decreased LOS 34% in newborns with G. The causal relationship between LOS, multiple anesthesia and/or excessive bowel manipulation remain to be determined.