**Table 1:** Toxin EIA and PCR Ct Performance

RefStd (n for QCC)	QCC EIA (n = 253)		IC EIA (n = 218)		Median PCR Ct (Ref+/Ref−)
	Sn	Sp	Sn	Sp	
PCR+ only (253)	0.36		0.34		24.3
PCR+ / Cx+ (211)	0.41	0.93	0.39	0.94	23.7 / 29.1**
PCR+ / CCCNA+ (128)	0.69	0.99	0.65	0.99	22.2 / 28.5**
PCR+ / cCDI+ (103)	0.46	0.71	0.47	0.74	23.6 / 25.2*
PCR+ / Cx+ / cCDI+ (89)	0.51	0.73	0.51	0.76	23.2 / 26.1*
PCR+ / CCCNA+ / cCDI+ (63)	0.73	0.77	0.72	0.80	21.8 / 26.3**

Ref+ vs. Ref- (Wilcoxon rank-sum): *$P < 0.05$; **$P < 0.0001$.

Figure 1. ROC Curve of PCR Ct to Identify PCR+ / CCCNA+ / cCDI+ Children.

Area under ROC curve = 0.7585
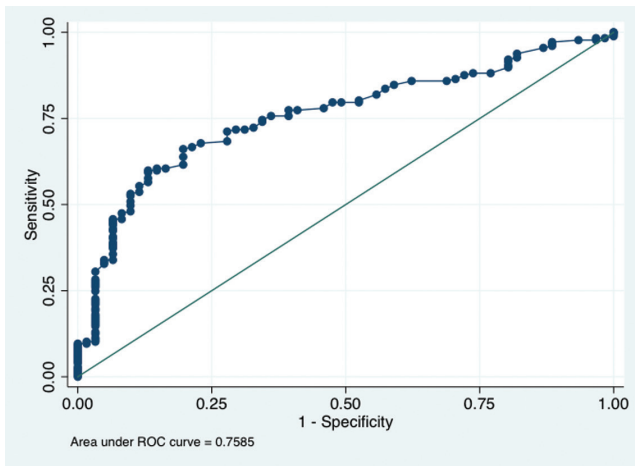
Disclosures. L. Kociolek, Alere/Techlab: Investigator, Research support.

1095. The Value of Hardwiring Diagnostic Stewardship in the Electronic Health Record: Electronic Ordering Restrictions for PCR-Based Rapid Diagnostic Testing of Diarrheal Illnesses

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Background. In 2015, the microbiology laboratory introduced a multiplex PCR test (FilmArray™ Gastrointestinal Panel (GIP)), replacing traditional stool culture. The GIP is faster and more sensitive than traditional stool culture, detecting 22 common viral, bacterial, and parasitic pathogens; but is significantly more expensive. The antimicrobial stewardship program (ASP) developed guidelines on test use and interpretation, recommending inpatient use only once per admission and not after hospital day 5. *C. difficile* test results from the GIP were not reported at any time.

Methods. Inpatient GIP use was reviewed over one year and considered inappropriate if performed >3 days after admission or repeated. Noncompliance with ASP recommendations was common; no meaningful pathogens were detected upon review of all inappropriate GIP use. An inpatient GIP electronic order restriction was implemented in April 2017 eliminating the ability to order tests inappropriately. GIP testing outside the restriction could be approved by the microbiology lab director. We captured separate *C. difficile* testing rates as a counterbalance measure. We used Poisson regression models to compare the rate of GIP and *C. difficile* tests per month between Period 1 (July 2015–March 2017) and Period 2 (April 2017–March 2018) per 1,000 patient-days (PD).

Results. The restriction resulted in a 26% reduction in GIP ordering rates between the two periods (Table 1, Figure 1). Direct cost savings was approximately $63,000. Table 1 shows changes in *C. difficile* test ordering rates during Periods 1 and 2. When including GIP tests that were ordered but not completed, potential GIP testing was reduced by 46% for a savings of $131,000 (Figure 2). Only 42 test overrides were approved by the microbiology director since the intervention; of those only two were positive (*Cryptosporidium* and *Norovirus*).

Table 1: Differences in Test Ordering Between Two Periods

	Period 1	Period 2	Estimated Risk of Ordering (95% CI)	P-value
GIP Rate	7.03	5.22	0.74 (0.65, 0.84)	<0.0001
C-Diff Testing Rate	2.66	2.23	0.84 (0.74, 0.94)	0.0039

Conclusion. Diagnostic stewardship of GIP using guidelines and electronic ordering restrictions can lead to meaningful improvements in test appropriateness and reduction in cost and waste, demonstrating the value of ASP interacting with the microbiology laboratory.
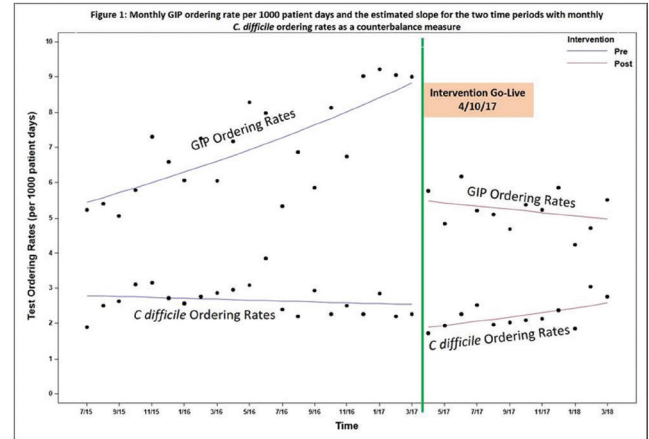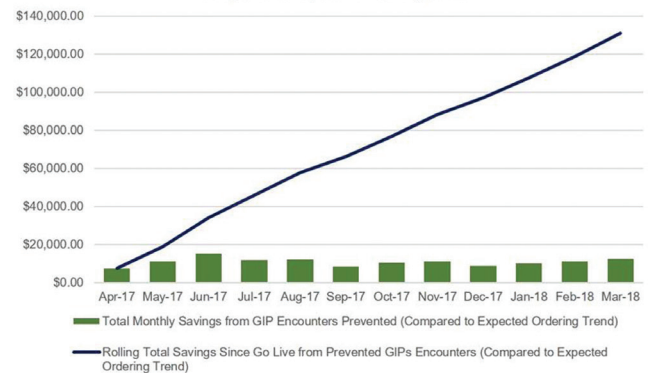

Figure 1: Monthly GIP ordering rate per 1000 patient days and the estimated slope for the two time periods with monthly *C. difficile* ordering rates as a counterbalance measure

Figure 2: GIP savings from encounters prevented since Go Live – compared to expected ordering trend

Total Monthly Savings from GIP Encounters Prevented (Compared to Expected Ordering Trend)

Rolling Total Savings Since Go Live from Prevented GIPs Encounters (Compared to Expected Ordering Trend)

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1096. Effect of Diarrheal Illness During Pregnancy on Adverse Birth Outcomes in Nepal

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Background. Adverse birth outcomes, including low birthweight (LBW), small-for-gestational-age (SGA) and preterm birth, contribute to 60–80% of infant mortality worldwide. Little published data exist on the association between diarrhea during pregnancy and adverse birth outcomes. We sought to identify whether diarrhea during pregnancy was associated with adverse birth outcomes.

Methods. We used data from a community-based, prospective randomized trial of maternal influenza immunization of pregnant women and their infants conducted in rural Nepal from 2011 to 2014. Illness episodes were defined as at least three watery