

received intubation, inotropes, or  $\geq 3$  fluid boluses within one hour of transfer.

**Results** The average rate of ETs per 10,000 patient days decreased from 1.57 to 0.49 during the study period (figure 2). This coincided with special cause improvement in all process measures, including earlier recognition of potentially deteriorating patients and increased exemplary utilization of SA tools (figure 3).

**Conclusions** An innovative, proactive, and reliable process to predict, prevent, and respond to clinical deterioration was associated with a nearly 70% reduction in ETs. Importantly, ETs are associated with increased hospital length of stay and mortality.

## 21 IMPLEMENTING TEAM BASED CARE TO IMPROVE CERVICAL CANCER SCREENING RATE IN COMMUNITY BASED RESIDENT RUN CLINIC

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**Background** In 2015, for every 100,000 women, 8 new Cervical Cancer cases were reported and 2 died of cancer. The introduction of effective screening has led to a steady decrease in Invasive Cervical Cancer incidence and mortality in high-income countries however Socioeconomic status and access to health have created a cervical cancer disparity gap. This QI project was undertaken to evaluate and improve cervical cancer screening rates at a community-based resident-run IM clinic.

**Objectives** Increase screening rate to 50% by Dec 2018 and sustain increase rates to above 45% in all months in 2019.

**Methods** At the start of 2018, physician data reported that screening rates at the clinic were 36%, lower than those of our other clinical practices. A clinical survey was completed

to assess patient understanding of cervical cancer screening. The first intervention was sharing individual provider data with the residents. This was a weak intervention and did not improve rates of screening. Our second intervention was a team-based approach and pre-visit planning: identify patients and calling them 1–2 days ahead and including PAP in the daily huddle.

**Results** The original survey showed that out of 124 women, 66 needed screening. Surveys intensified lack of continuity; several listed PCPs were not seeing their own patients, patients unsure of resources, and financial concerns as barriers. The team-based approach showed that more PAPs were being done per week, and was streamlined with staff feedback to minimize disruption to current workflow. With a goal of 50% by the end of 2018, we were able to achieve 48.9% screening rates. The increase was sustained above 45% in 8/12 months in 2019 (figure 1).

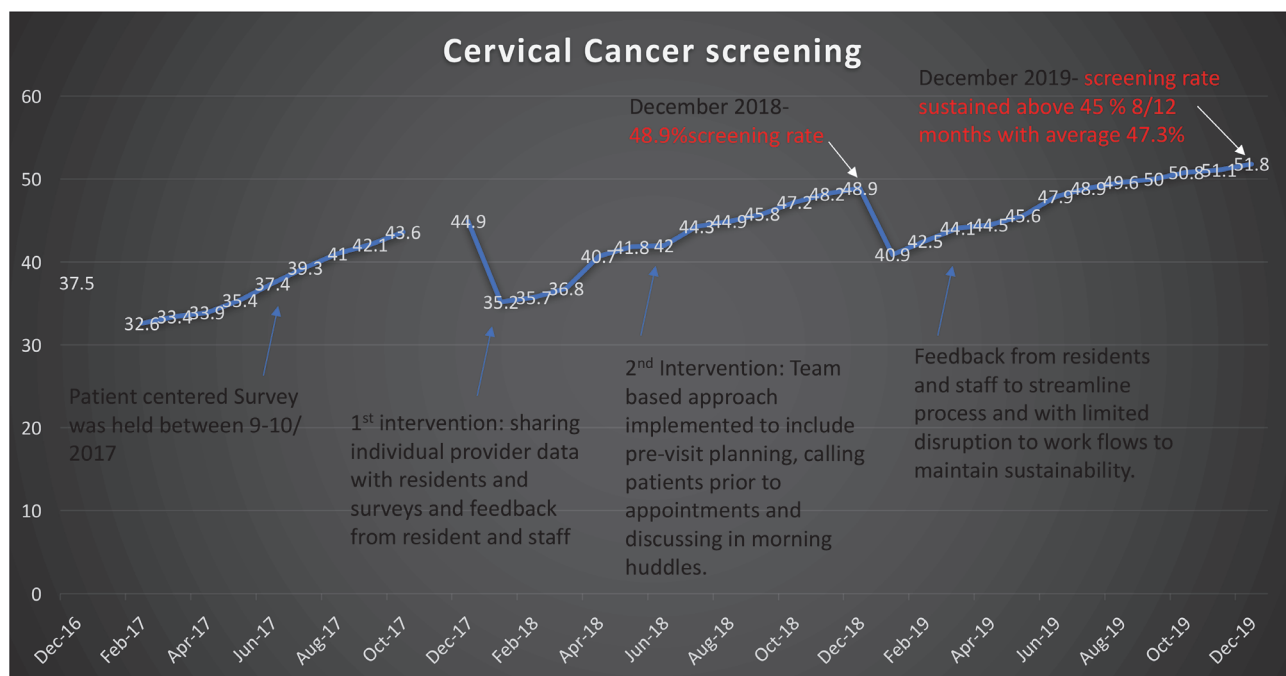
**Conclusions** Team-based practice is an effective practice in increasing cervical cancer screening to overcome challenges in continuity of care, health access disparity, and resource allocation in a primary care clinic.

## 22 IMPLEMENTATION OF A PHARMACIST-DRIVEN ANTIMICROBIAL TIME-OUT FOR MEDICAL-SURGERY SERVICES IN AN ACADEMIC PEDIATRIC HOSPITAL

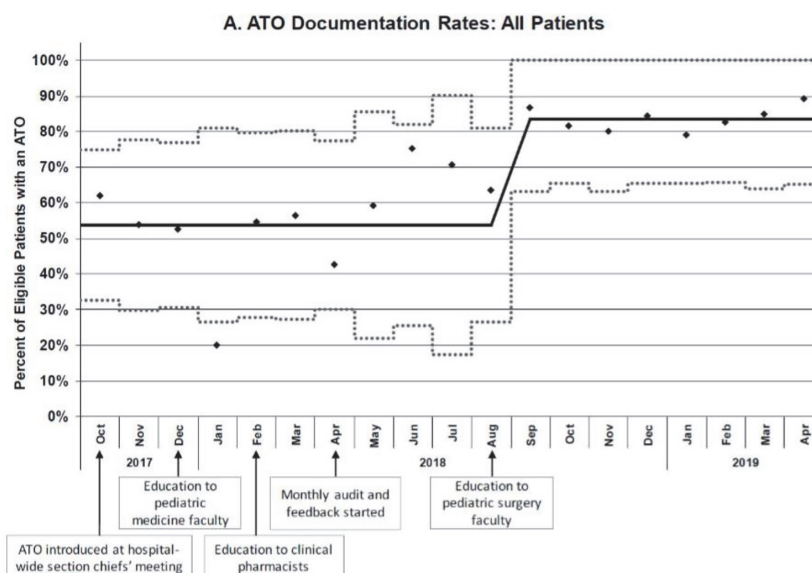
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**Background** This quality improvement initiative implemented a pharmacist-driven antimicrobial time-out (ATO) in a large, free-standing pediatric hospital.



Abstract 21 Figure 1



Abstract 22 Figure 1

**Objectives** Our goal was to complete and document an ATO for 90% of eligible patients hospitalized on general pediatric medicine or surgery services within 12 months.

**Methods** A multidisciplinary quality improvement team developed an ATO process and electronic documentation

tool. Clinical pharmacists were responsible to initiate and document an ATO for pediatric medicine or surgery patients on or before the 5th calendar day of therapy. Interventions included education of pharmacists and physicians, as well as ATO audit and feedback to the pharmacists. We used statistical process control methods to track monthly rates of ATO completion from October 2017 through April 2019.

**Results** Among 647 eligible antimicrobial courses over the 17-month study period, the mean monthly documentation rate increased from 54.6% to 83.5% ( $p < 0.001$ ) (figure 1). The mean ATO documentation rate increased from 32.8% to 74.2% ( $p < 0.001$ ) for the pediatric medicine service and from 65.0% to 88.1% for the pediatric surgery service ( $p = 0.006$ ). Among 302 notes assessed for quality, 35.8% had all the required data fields completed. A tentative antimicrobial stop date was the data element completed least often (49.3%) (tables 1 and 2).

**Conclusions** We successfully implemented a pharmacist-driven ATO, highlighting the opportunity for pharmacists to play an active role in antimicrobial stewardship. Defining treatment duration remains an important antimicrobial stewardship target.

Abstract 22 Table 1 Adjusted rates and odds ratios of note documentation by day of antimicrobial initiation.

| Variable                | Adjusted Documentation Rate, % (95% CI) | Adjusted OR (95% CI) | p value |
|-------------------------|---|----------------------|---------|
| Day of the Week         |   |                      |         |
| Sunday                  | 52.1 (41.6 to 62.4)                     | Reference            |         |
| Monday                  | 64.9 (54.1 to 74.3)                     | 1.70 (0.92 to 3.12)  | 0.089   |
| Tuesday                 | 71.5 (60.4 to 80.6)                     | 2.31 (1.20 to 4.44)  | 0.012   |
| Wednesday               | 78.8 (69.3 to 86.0)                     | 3.42 (1.78 to 6.57)  | <0.001  |
| Thursday                | 82.8 (73.0 to 89.6)                     | 4.42 (2.17 to 9.02)  | <0.001  |
| Friday                  | 62.0 (50.9 to 71.9)                     | 1.50 (0.81 to 2.77)  | 0.196   |
| Saturday                | 46.5 (35.9 to 57.4)                     | 0.80 (0.44 to 1.46)  | 0.464   |
| Any (day 4 is holiday)* | 28.9 (9.0 to 62.7)                      | 0.37 (0.09 to 1.63)  | 0.191   |
| Service                 |   |                      |         |
| Pediatric Surgery       | 72.9 (67.1-78.0)                        | Reference            |         |
| Pediatric Medicine      | 49.9 (41.9-58.0)                        | 0.37 (0.26-0.53)     | <0.001  |

OR, odds ratio

\*Antimicrobial initiated on any day, when day 4 of therapy occurred on a holiday

Abstract 22 Table 2 Completion rates of the antimicrobial time-out note data fields.

| Data Field                      | Number (Percent) Completed |                           |                           | p value† |
|---------------------------------|----------------------------|---------------------------|---------------------------|----------|
|                                 | Total (N=302)              | Pediatric Medicine (n=78) | Pediatric Surgery (n=224) |          |
| First date of effective therapy | 293 (97.0)                 | 76 (97.4)                 | 217 (96.9)                | 0.802    |
| Tentative stop date             | 149 (49.3)                 | 70 (89.7)                 | 79 (35.3)                 | < 0.001  |
| Adverse reaction/allergy        | 295 (97.7)                 | 77 (98.7)                 | 218 (97.3)                | 0.480    |
| Enteral therapy exclusion       | 232 (91.0)*                | 36 (85.7)*                | 196 (92.0)*               | 0.192    |
| Treatment indication            | 286 (94.7)                 | 74 (94.9)                 | 212 (94.6)                | 0.601    |
| Clinician documented            | 267 (88.4)                 | 57 (73.1)                 | 210 (93.8)                | < 0.001  |
| All data fields completed†      | 108 (35.8)                 | 42 (53.8)                 | 66 (29.5)                 | < 0.001  |

† Chi-square test, comparing pediatric medicine to pediatric surgery

\* Excludes patients already receiving enteral therapy at the time of the ATO. Total n=255, Pediatric Medicine n=42, Pediatric Surgery n=213

† Patients already receiving enteral therapy at the time of ATO were considered to have all data fields completed if the other five data fields were completed

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## INCREASING CAPACITY FOR AUTOLOGOUS STEM CELL TRANSPLANTS BY OUTPATIENT CONDITIONING THERAPY: A QUALITY IMPROVEMENT STUDY

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**Background** Autologous Stem Cell Transplant (ASCT) patients have an inpatient length of stay (LOS) of 21–28 days. In a resource constrained environment, this leads to increasing wait times and limited ability to do transplants. We tried to create additional capacity for transplants at our institution by