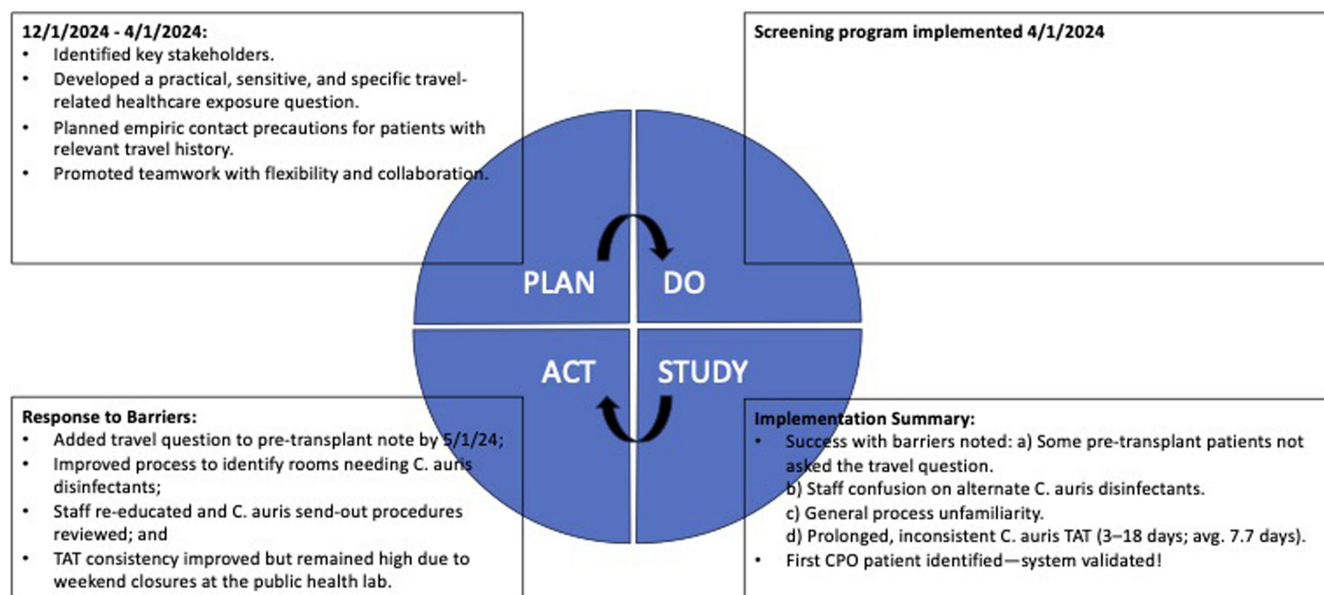




organization methodically plan the implementation and address barriers. The long turn-around-time for *C. auris* testing resulted in undesirable duration of empiric contact precautions. Continued evaluation of program metrics and public health recommendations are critical to sustainment and refinement over time.

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Presentation Type:

Poster Presentation

Subject Category: Quality Improvement

Utilizing a Process Improvement Approach and Implementing a Plan-Do-Study-Act (PDSA) Cycle to Decrease CAUTIs on a Cardiology Unit
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Background: There is a high prevalence of catheter associated urinary tract infections (CAUTIs) on a hospital cardiology unit, with a rate of 2.48 CAUTIs per 1,000 catheter days over the past two years compared to the national average of 0.96 CAUTIs for similar units. CAUTIs lead to increased lengths of stay, mortality, and hospital expenditures. Per NHSN, the presence of an indwelling urinary catheter (IUC) increases the risk for developing a CAUTI by 3–7% each day an IUC is in place. **Method:** A process improvement approach was utilized to study the problem of increased CAUTIs and implement a PDSA intervention.

A process map was created to identify opportunities for error that could increase risk for CAUTIs (Figure 1). Contributing factors were explored through developing a driver diagram (Figure 2).

Data was collected to study root causes of CAUTI development and identify opportunities for improvement. 7 nurses were observed placing IUCs in mannequins to assess insertion practices. 19 maintenance audits of IUCs among patients were conducted. Electronic medical record (EMR) data was compiled to assess hospital location of catheter insertion, catheter utilization ratio, indication for insertion, and duration of catheterization. Based on data, team decided to focus PDSA intervention on reducing IUC duration, a process measure for the desired outcome of reducing CAUTIs. **Results:** EMR baseline data during the period 11/6/2024– 12/29/2024 revealed an average IUC duration of 7.92 days. A SMART(IE) goal was established to reduce the average duration of IUCs on this unit by 15% from 7.92 days to 6.73 days within 4 weeks.

An intervention was developed to incorporate discussion of IUC indication, duration, and eligibility for removal for patients with IUCs during daily multidisciplinary rounds. Unit charge nurses received training on CAUTI prevention, facilitating rounds discussions, and data collection. Intervention is being implemented over the period 12/30/2024– 1/25/2025. During the pre-intervention period 11/6/2024– 12/29/2024, 70 IUCs were reviewed. In preliminary analysis of the post-intervention period of 12/30/24– 1/15/25, 15 IUCs were reviewed. Preliminary analysis shows the average duration of IUCs per patient decreased by 31%, to an average of 5.47 days (Figure 3). There were 4 IUCs that were removed after discussions at multidisciplinary rounds. **Conclusion:** Process improvement tools can be utilized to study contributors to CAUTIs and develop unit-level solutions. Preliminary data demonstrates that incorporating review of IUCs during multidisciplinary rounds may reduce average duration of IUC use.

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Figure 1

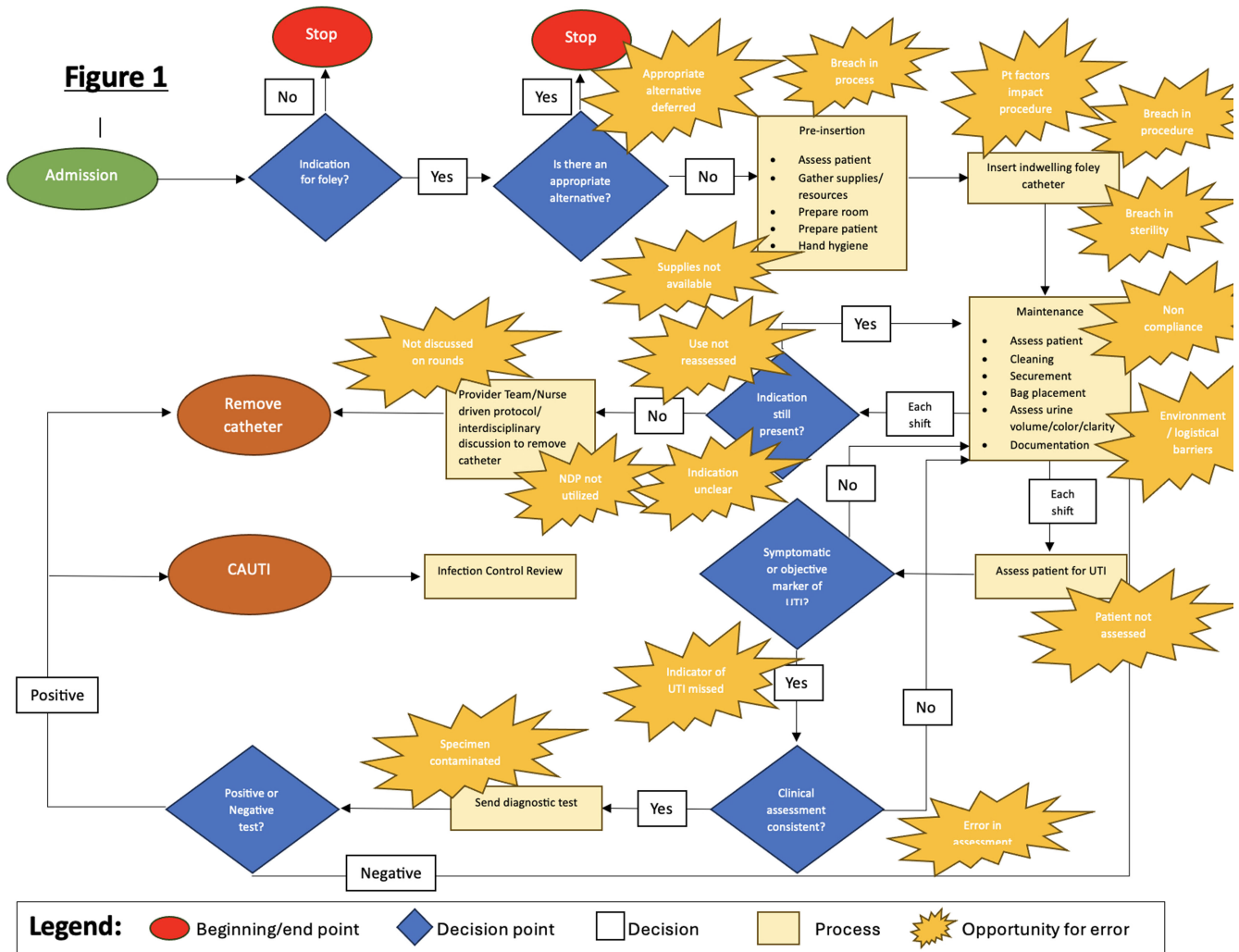


Figure 2

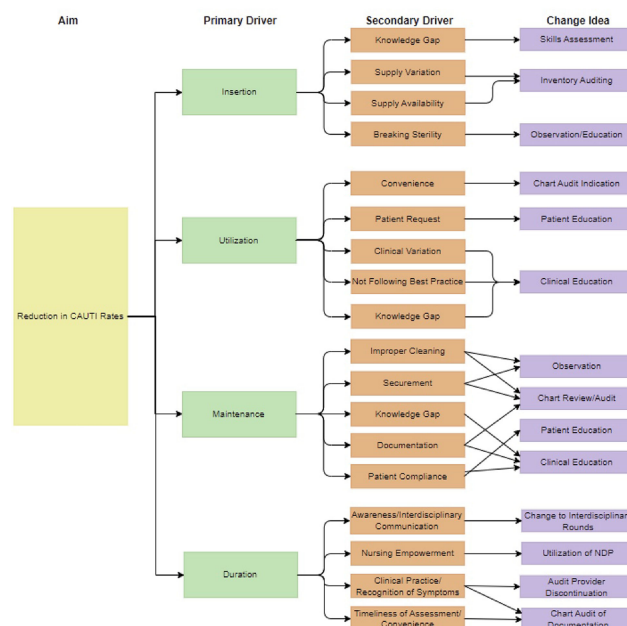
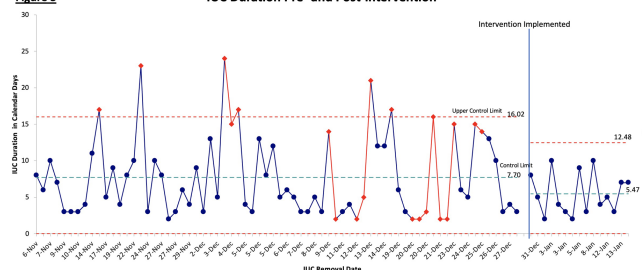


Figure 3 IUC Duration Pre- and Post-Intervention



Presentation Type:

Poster Presentation

Subject Category: Quality Improvement

Systematic Electronic Capture of Outpatient Parenteral Antimicrobial Therapy (OPAT) Adverse Events, Implications for Performance

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Background: OPAT has emerged as an effective modality for continued treatment of serious infections outside the hospital, requiring complex care coordination and close monitoring for patient safety. Despite increasing availability of OPAT services nationwide, monitoring and benchmarking of treatment-related adverse events, patient outcomes, and program quality remain labor intensive and inconsistent across programs. **Method:** A previously reported OPAT-specific bundle of modifications to an Epic® Systems Corporation electronic health record (EHR) at a large academic OPAT program was leveraged to develop a model for longitudinal electronic monitoring and reporting of OPAT adverse event and safety outcomes data. An EHR-based SQL report evaluated mortality within 1 year of OPAT start, as well as intravascular access device (IVAD) occlusions (defined as documented intracatheter administration of alteplase), IVAD associated deep venous thromboses (DVT) (defined by 212 Upper Extremity DVT ICD-10 codes via custom SNOMED CT concept hierarchy grouper), anaphylaxis (defined by ICD-10 codes T78.2 and T88.6), and nephrotoxicity (defined as >0.3 increase or >1.5 times increase in baseline serum creatinine) while on OPAT. Hospital readmissions, emergency department utilization, non-anaphylactic allergic reaction (defined as documentation of new allergy to OPAT antibiotic), were evaluated while on OPAT or within 30 days of conclusion. **Result:** Total of 5190 OPAT episodes (10/18/2018 to 12/3/2024) in 4213 unique patients were examined (Figure 1). Bone/joint infection and bacteremia were most frequent indications for OPAT (Figure 2), with vancomycin, ceftriaxone, and

Figure 1

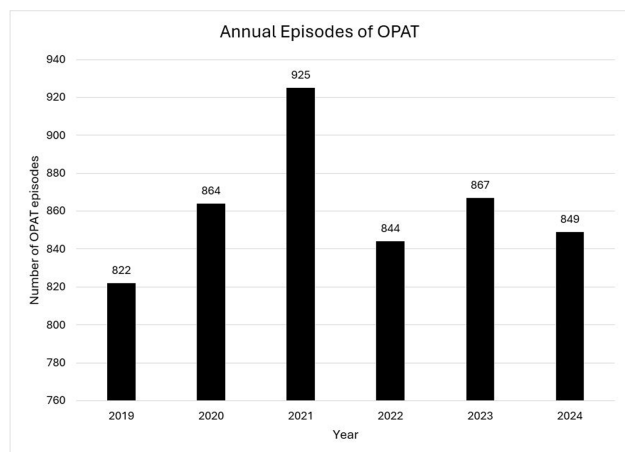


Figure 2

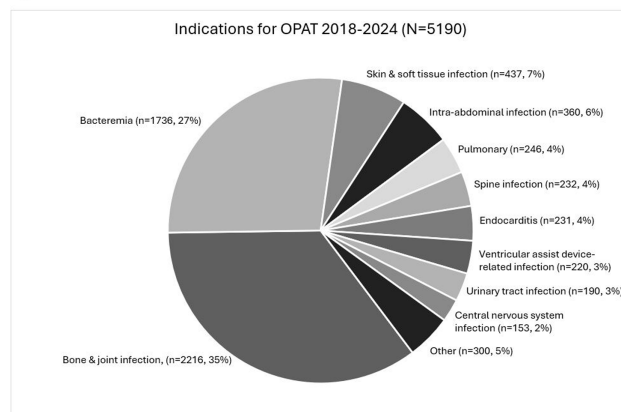


Figure 3

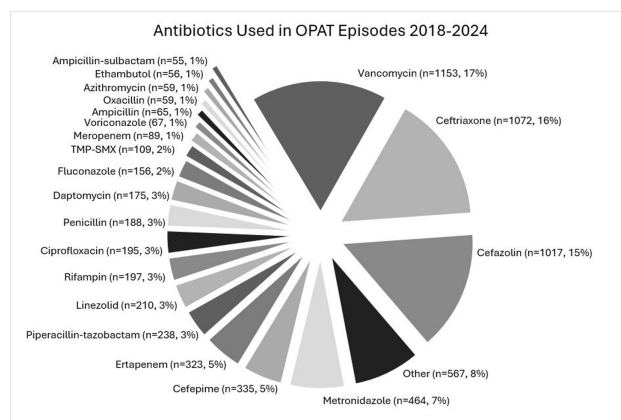
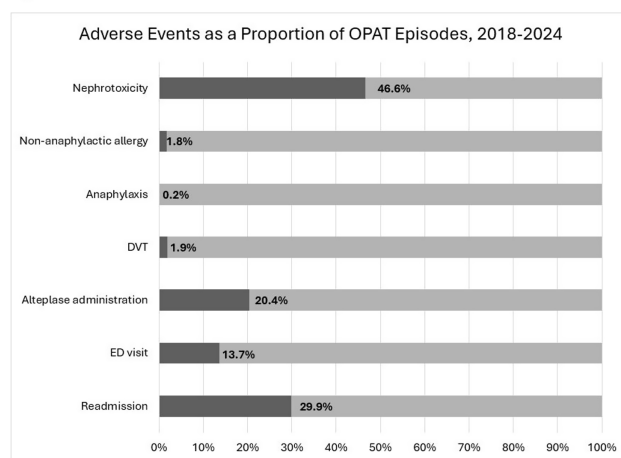


Figure 4a



cefazolin most common antibiotics (Figure 3). Rates of adverse events over time (Figure 4) were notable for high prevalence of nephrotoxicity affecting 2075 (40%) of all episodes, and demonstrating significant association with vancomycin therapy, although no difference was observed between vancomycin monotherapy and vancomycin-containing combination regimens