

Introduction

- Fluoroquinolone antibiotics have fallen out of favor for reasons including antibiotic resistance, tendon rupture, QT prolongation, blood glucose fluctuations, and aortic dissection.
- With risks surrounding usage, a prospective audit should be completed weighing the risks versus benefits of therapy.

Objectives

- The quality improvement program initiated at Samaritan and Albany Memorial Hospital was to improve fluoroquinolone prescribing through assessing ordering prior to and following provider education on appropriate prescribing.
- The specific goal was to limit fluoroquinolone use in patients with hypertension, age ≥ 65, vascular disease, or a history of an aortic aneurysm, when alternative antibiotics exist.

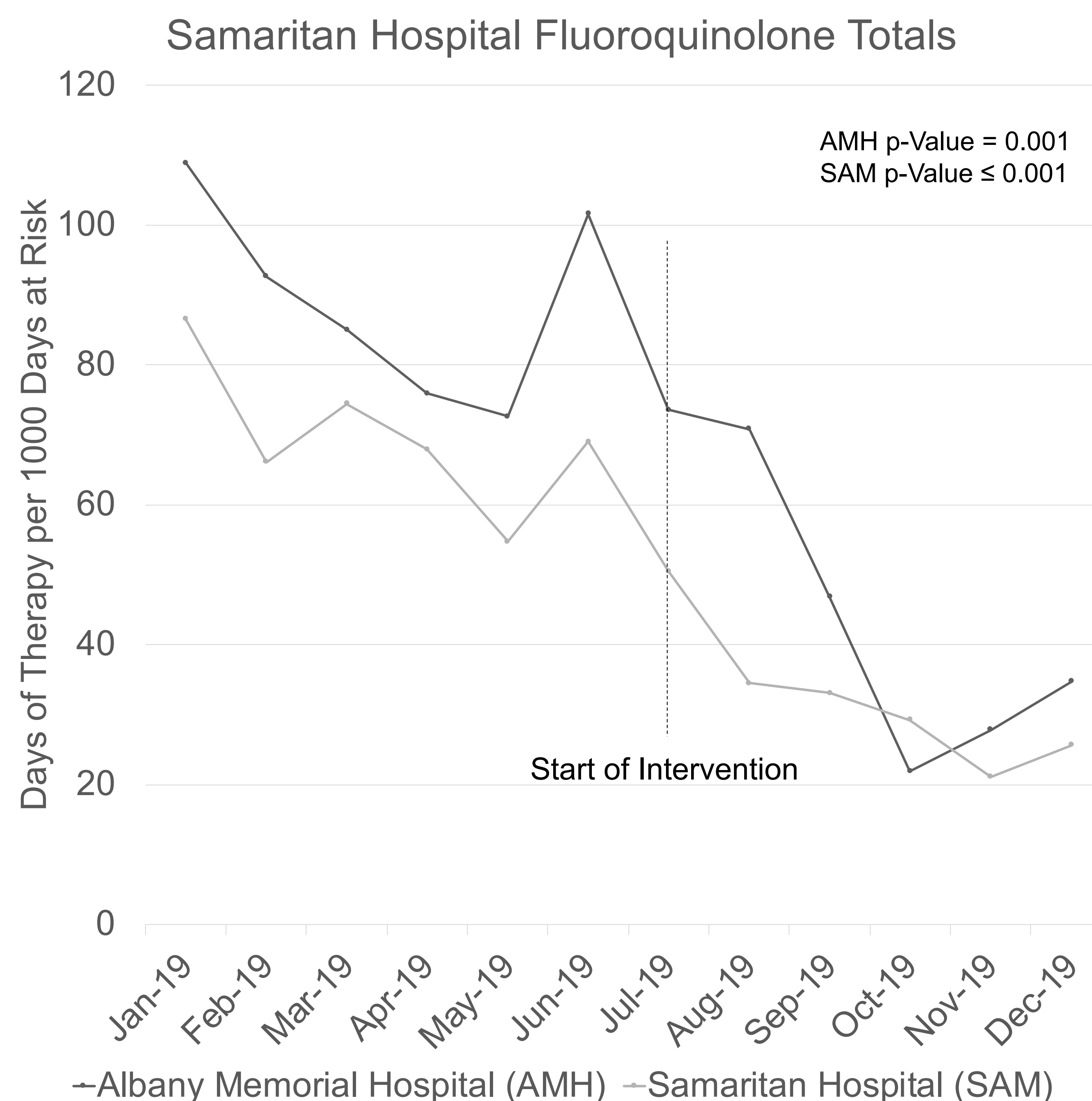
Methods

- Retrospective data was reviewed from January 2019 to June 2019 before the addition of the alert and the review of fluoroquinolones on infectious disease rounds.
- Following the retrospective data, clinical support was added focusing on appropriate prescribing practices including indications, appropriate patients, and alternative therapies.
- Completed was our Infectious Disease Physician's education to the system's hospitalists about the risk of fluoroquinolone prescribing.
- The program provided clinical decision support system alerts and clinical antibiotic stewardship rounds for fluoroquinolone warnings and risks.
- Data was reviewed from July 2019 to December 2019, after implementation, to see if these supports decreased inappropriate fluoroquinolone prescribing.
- Data collected and analyzed in both cohorts included days of therapy per 1000 patient days at risk, indication, provider specialty, number of stewardship interventions targeting fluoroquinolones, and their acceptance rate.

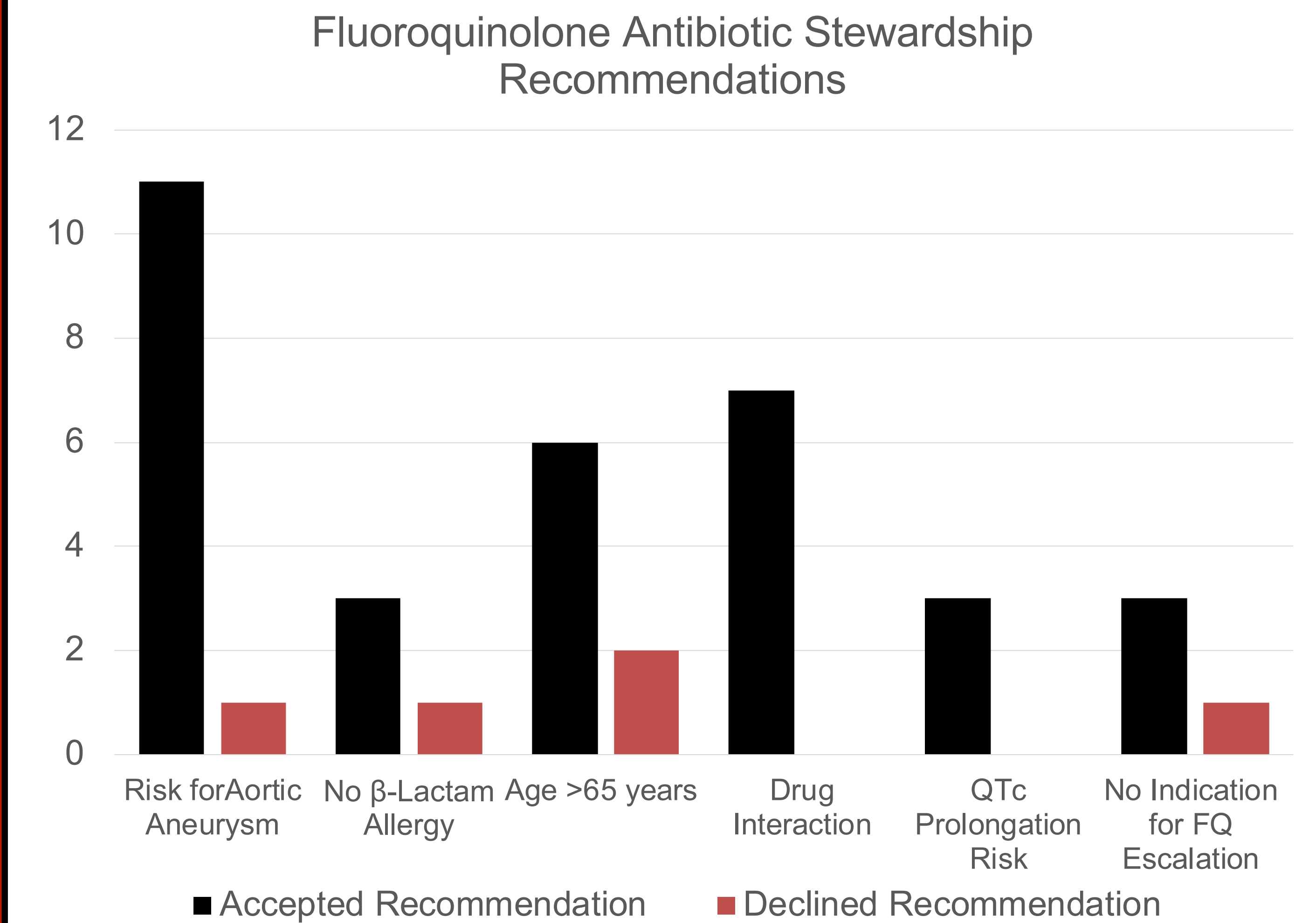
Results

- After the implementation of the initiative, 38 fluoroquinolone antibiotic stewardship recommendations were completed between both hospitals, 33 of them were accepted, leading to an 86.8% acceptance rate.
- At Albany Memorial Hospital, fluoroquinolone antibiotic average days of therapy per 1000 patient days at risk decreased from 89.4 to 45.9 (p-value = 0.001).
- At Samaritan Hospital, fluoroquinolone antibiotic average days of therapy per 1000 patient days at risk decreased from 69.8 to 32.3 (p-value ≤ 0.001).
- Total days of fluoroquinolone therapy decreased from 183 days to 68 days after the intervention at Albany Memorial hospital.
- Total days of fluoroquinolone therapy decreased from 881 days to 379 days after the intervention at Samaritan Hospital.

Results



Results



Discussion

- Through this implementation, these institutions are more appropriately prescribing fluoroquinolones to the patient population studied through clinical pharmacist and provider communication and interventions.
- This program further integrated the institutions' infectious disease clinical pharmacist into the stewardship team to advance patient care when prescribing fluoroquinolones.
- This project ensures quality care in specific patient populations.
- With the addition of the clinical decision support system, the pharmacy department is further reaching providers on appropriately prescribing fluoroquinolones.

References

- Sousa J, et al. Curr Drug Saf. 2014;9(2):89-105.
- FDA Drug Safety Communication: FDA advises restricting fluoroquinolone antibiotic use for certain uncomplicated infections; warns about disabling side effects that can occur together. [Internet]. 2016 [cited 22 July 2019]. Available from: <https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-fda-advises-restricting-fluoroquinolone-antibiotic-use-certain>
- FDA warns about increased risk of ruptures or tears in the aorta blood vessel with fluoroquinolone antibiotics in certain patients. [Internet]. 2018 [cited 22 July 2019]. Available from: <https://www.fda.gov/drugs/drug-safety-and-availability/fda-warns-about-increased-risk-ruptures-or-tears-aorta-blood-vessel-fluoroquinolone-antibiotics>

Disclosure: Authors of the presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation: Reid LaPlante: nothing to disclose; Julie Bennett: nothing to disclose; Kaitlin Farley: nothing to disclose.