

Background & Significance

- 30-day post-operative Urinary Tract Infection (UTI) rates for the urogynecology cohort within the Hospital were regularly trending above the national desired metric (<4%) set by the American College of Surgeons' National Surgical Quality Improvement Program (NSQIP), and previous efforts were ineffective
- Post-operative UTIs can cause costly and potentially serious complications
- Multiple studies support cranberry and lactobacillus supplements in UTI reduction
- An NIH-funded RCT found a statistically significant benefit of taking cranberry to prevent UTIs after gynecologic surgery
- RCTs have shown lactobacillus as an effective method in UTI prevention through inhibiting colonization of uro-pathogenic bacteria

Project Purpose & Goals

- To develop a standardized discharge care bundle utilizing non-prescription, pharmacologic supplements (cranberry & probiotic supplements), aimed at reducing UTI rates and improved patient safety outcomes for patients within the urogynecology cohort

Short-term Goals

- Educate 100% of urogynecology surgical patients and staff on non-antibiotic UTI prevention strategies
- Incorporate evidence-based methods into the post-operative surgical discharge process for urogynecology patients within the Hospital

Long-term Goals

- Reduce post-operative UTI rates by at least 50% within the NSQIP urogynecology cohort for the Hospital

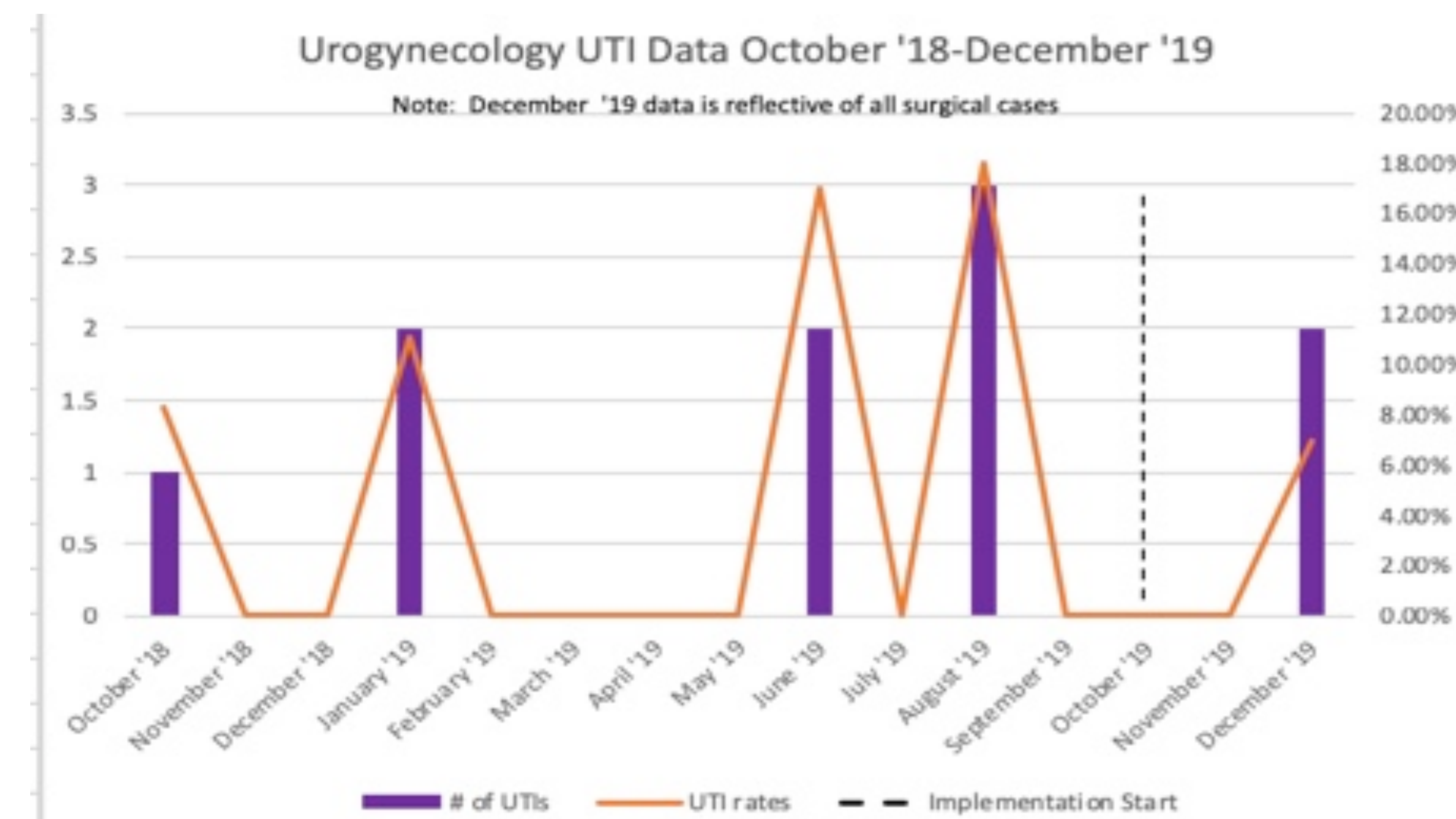
Methods

- *The Knowledge-To-Action Framework* was used to guide implementation of evidence-based knowledge into the post-surgery discharge process
- All urogynecology patients (n=85) with surgical procedures during the implementation period of October 9th 2019 through December 20th 2019, were encouraged to take a standard cranberry tablet and lactobacillus acidophilus chewable wafers, along with 32 ounces of daily water intake for 30 days post-operatively
- Patient follow up at 2, 4, and 6 weeks, assessed for supplement compliance and UTI symptom development
- Review of NSQIP data (a retrospective 25% random sample of UTI rates within the cohort) and chart reviews assessed for a UTI diagnoses, confirmed with a positive urine culture. Baseline UTI data rates were then compared to post intervention data

Results

- Of the 85 women who had surgeries during the implementation period, approximately 25% (n=21) of women elected to take the recommended supplements
- 100% of staff and patients were educated on the discharge bundle during the implementation period
- Adherence to supplement intake was high, with 96% of participants completing at least 75% of the 30-day supplements
- Only 1 patient who took supplements developed a UTI; 8 patients who did not take supplements developed UTIs
- Following the first 2 months of bundle implementation, the NSQIP UTI rate was 0%
- The average 3 month (July-Sept '19) pre-implementation UTI incidence rate for the NSQIP sample (45 pts) was 6%, compared to the average UTI rate for all surgical cases (85 pts) during the intervention period (Oct-Dec '19) of approximately 6.66%

Figures



Discussion

- Short term goal of 100% staff and patient education was achieved
- A reduction in NSQIP UTI rates was seen after discharge bundle implementation for the months of October and November; when compared to the 3- month pre-implementation period
- Retrospective NSQIP data was not available for the month of December, therefore sample data was compared to real-time data for the final month of the intervention
- Feasibility of offering supplements was addressed
- Additional patient participation is needed to evaluate effectiveness further
- There were no reported adverse side effects in patients who took supplements

Conclusions

- A decrease in UTI rates was seen in patients who opted to take the recommended supplements
- Intervention demonstrates the potential for cost-effective use of supplements to avoid post-operative UTIs for patients undergoing urogynecology procedures
- NSQIP UTI rates after the first 2 months of bundle implementation were favorable at 0%; below the expected rate of <4%, and a drop from the previous 3 month UTI rate average of 6%. Remaining NSQIP data for December is still pending
- Implementation of intervention allowed staff to educate and engage patients on non-antibiotic UTI prevention strategies and post-operative care
- Further evaluation of economically efficient ways to provide recommended supplements to patients at a low or no cost, to encourage more patient participation is needed

References

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Notes & Acknowledgements

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