

Improving Pre-operative Urine Culture Collection

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Background

Urinary tract infections are a known complication of urologic surgeries with rates of post-operative infections as high as 2.95%

If antimicrobial prophylaxis is to be considered prior to an operative procedure on the urinary tract, the urine should be tested and the results obtained and reviewed to properly inform selection of an antimicrobial agent.

Presence of pre-operative urinary tract infections increase risk of post-operative morbidity when inadequately treated

As the state's only teaching hospital with a Urology residency, MUSC often sees people from all corners of the state, often with >2h drives

Patients who do not have appropriate pre-procedural testing are at risk of having elective cases canceled or have to drive significant distances to labs capable of performing required testing

AIM STATEMENT

Increase rate of obtained pre-operative urine cultures by 50% by end of Q3 (3/31/22)

MUSC Pillar: Growth

- Reduce number of post-operative readmissions
- Will increase in network care coordination as patients that are identified pre-operatively will have cultures performed at MUSC as opposed to outside services

Interventions

Teaching sessions held for all RN, MA, and scribes at all 3 clinic locations starting in September

Meeting with nurse manager quarterly to discuss progress and barriers that were identified

Implemented signage at clinics and a pre-operative checklist that was provided to patients

Coordinated with Anesthesia pre-operative clinic team to improve collection at non-urology visits

Created a residency wide spreadsheet of all upcoming cases so challenging situations (Indwelling catheters, bed bound, caregiver) could be identified ahead of time

CONCLUSIONS

We met our goal of a 50% increased rate of pre-operative urine culture collection and surpassed it, achieving 63% increase in collection rate, or 71.2% total rate

When examining the data after Q1 we noticed one clinic location had a reduced collection rate

- Meeting was held and it was determined that the process at that clinic for handling sample collection was different than the one at other sites
- Discussion with all clinic team members held and collection protocol standardized.
- Q2 data for this site was on par with other two locations

Resident driven collection of cultures via phone call in the 2 weeks prior to surgery still accounted for a significant (>25%) portion of collection despite intervention

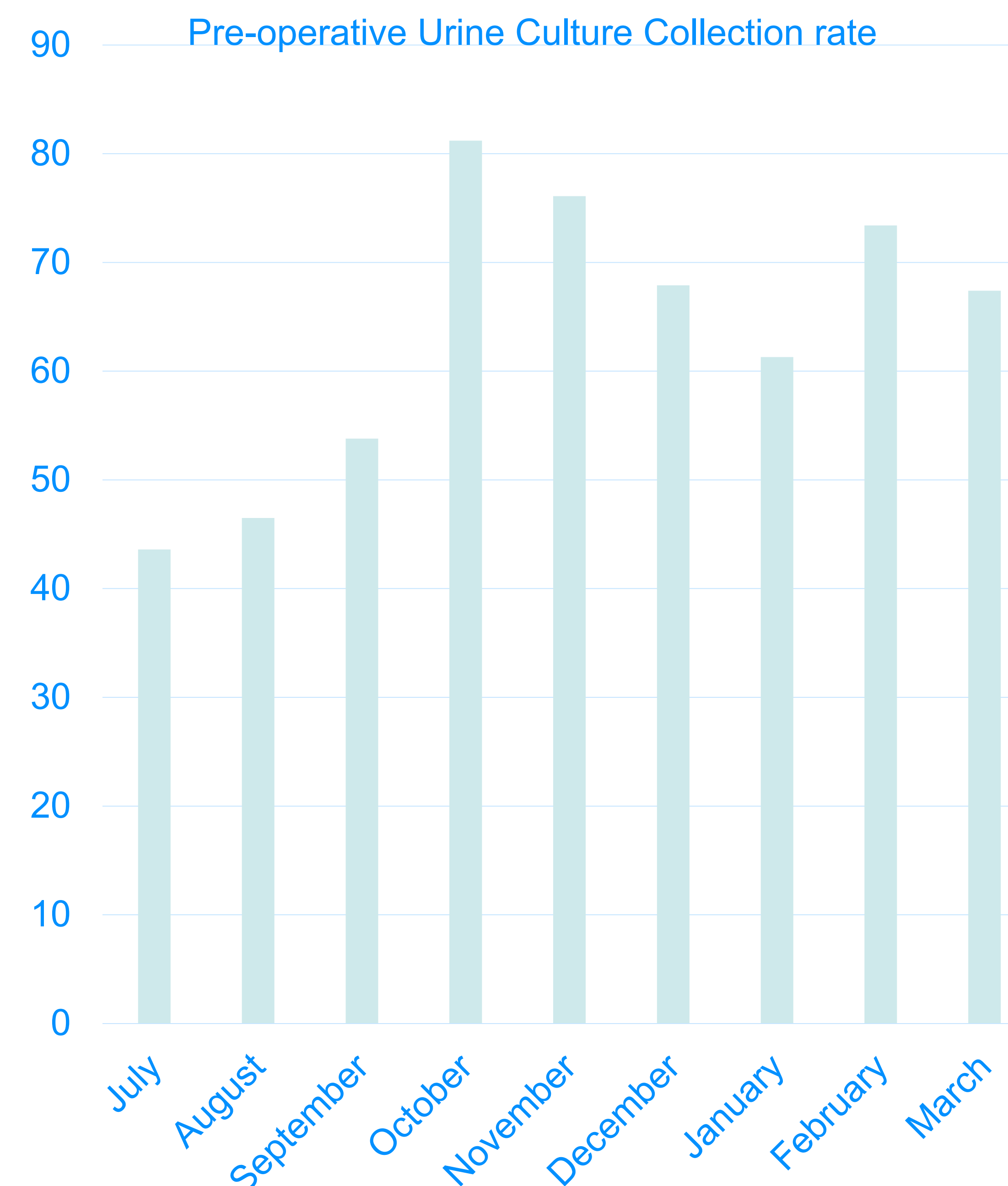
- Retrospective review revealed the majority (73%) of these situations were either from virtual visits, or from patients seen in clinic >30 days prior to surgery

Barriers we identified:

- staff and resident turnover in clinics
- Increased number of virtual appointments
- Busy OR schedule resulting in cases occurring up to 6-8 weeks from clinic visit

RESULTS

Month	Cases	Collection rate (%)
July	201	43.6
August	200	46.5
September	223	53.8
October	202	81.2
November	201	76.1
December	218	67.9
January	189	61.3
February	207	73.4
March	224	67.4



Next Steps

- Standardize the experience across all clinic sites so that staff moving between locations have a standard protocol
- Better onboarding for new members of the team to emphasize the importance of collection
- Improve coordination across different specialties to reduce multiple lab visits