Evaluation of Barriers and Facilitators to providing an Acute, Uncomplicated Urinary Tract Infection Protocol in an Independent Community Pharmacy

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Objectives

1. To determine the feasibility of implementing an Acute Uncomplicated Urinary Tract Infection (UTI) treatment board approved protocol in a small suburban community pharmacy.
2. To identify potential barriers including appropriate cost, accessibility, and expectations from patients for UTI treatment at an independent pharmacy.

Background

- Urinary tract infections (UTIs) are one of the most common type of infections in adult women, and there is a significant opportunity to increase access to appropriate UTI therapy.[1] UTIs cause a substantial number of medical visits for women over their lifetime, with recurrence often occurring and antibiotic resistance tends to develop.[1]
- With the increases in the rates of SAR-CoV-2, access to providers will continue to be limited. Pharmacists are trusted within their communities and have played a crucial part in the response to the pandemic.
- Kentucky authorized a regulation to have board-approved protocols that pharmacists can implement within their practices.[2] With other healthcare systems focused on treating SARS-CoV-2, pharmacists in Kentucky can provide appropriate consultation and treatment to patients within these approved protocols including UTI therapy.

Methods

- An anonymous, qualitative survey was provided to female patients ages 18-64 during point-of-sale at one independent community pharmacy following Institutional Review Board (IRB) approval. The study received exempt status from the University of Kentucky IRB.
- Data was collected over a twelve-week period from December 2021 through February 2022.
- The survey items were designed to assess patients' awareness of UTI screening, familiarity with treatment via physician/pharmacist protocol, willingness to receive screening in a community pharmacy, and potential barriers to receiving the screening test and treatment. Other demographic information was collected for analysis including age, ethnicity, and education.
- Surveys were collected at the pharmacy and placed in a locked box.
- A total of 42 paper surveys were distributed and collected. None were excluded.
- Data was analyzed using descriptive statistics. ANOVA with a pairwise Post Hoc comparison using a Bonferroni correction was performed to determine significant variations in participant responses for willingness to be tested based on age group and education level. An Independent samples t-test was performed to compare between race responses for the willingness to be tested. A level of significance was defined as $P \leq 0.05$ using IBM SPSS Statistics version 27.

Results

Figure 1

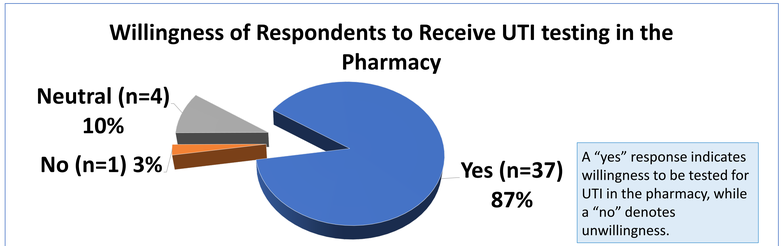


Figure 2

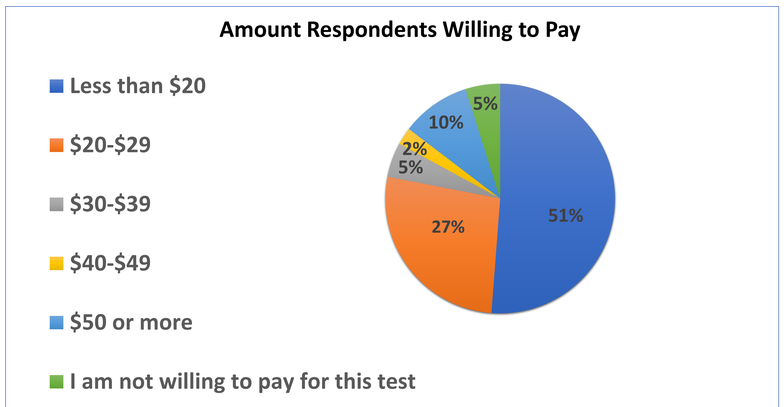


Table 1: Respondents Willing to Be Tested in a Pharmacy by Age

Age	Responses	Mean
18-34	10	1.70
35-50	12	1.50
51-65	17	1.35
66 and older	3	1.67
*p value = 0.715		

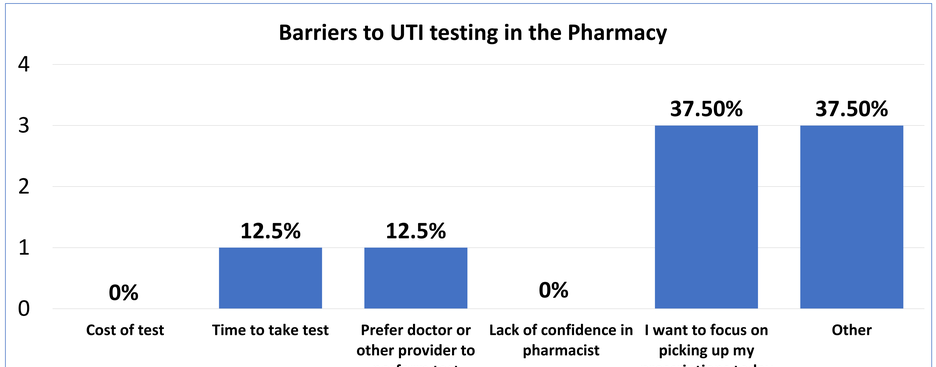
Table 2: Respondents Willing to Be Tested in a Pharmacy by Race

Race	Responses	Mean
White, non-Hispanic	38	1.47
Others	4	1.75
*p value = 0.739		

Table 3: Respondents Willing to Be Tested in a Pharmacy by Education Level

Education Level	Responses	Mean
High school, some college, no degree	10	2.81
Bachelor's Degree	21	1.74
Master/Doctorate/PhD or equivalent	11	1.74
*p-value = 0.007		

Figure 3



Discussion/Conclusion

- Many patients were willing to be tested for UTI and receive treatment at their community pharmacy. This presents an opportunity for pharmacists to add these new services knowing their patients will use them.
- The small percentage of patients not willing to receive testing for UTI cited most often they wanted to focus on picking up their prescriptions. Additionally, other was chosen without any explanation as barriers for patients. None of the patients listed lack of confidence in their pharmacist to provide these services or cost of test as concerns.
- More women age group 51-65 were willing to be tested for UTI compared to the other age groups. White women were the majority of participants in the survey. There was no difference in participants saying they were willing to be tested with respect to age and race. Respondents with a higher level of education versus those with no college degree or bachelor's degree were more willing to be tested for UTI at the pharmacy. There was significant difference in the willingness between education with the higher education level.
- The majority of patients were not willing to pay more than $20, which would be a feasible price to charge based on cost needed to cover testing supplies.
- This study had several limitations. The results are not generalizable to the entire United States population as the population near this pharmacy is mostly affluent. Another limitation is the potential for selection bias during point-of-sale. There is also the possibility that someone could have filled out the survey more than once. Three patients over 64 who would not be eligible for the UTI protocol completed the survey. Future directions for this study include interviewing pharmacy staff to determine barriers and concerns in implementing the UTI protocol as well as the benefits of this approach for the patient population at Wheeler Pharmacy.

References

References
1. Medina M, Castillo-Pino E. An introduction to the epidemiology and burden of urinary tract infections. Ther Adv Urol. 2019 May 2;11:1756287219832172. doi: 10.1177/1756287219832172Gubbins, Paul O.; Klepser, Michael E.; Dering-Anderson, Allison M.; Bauer, Karri A.; Darin, Kristin M.; Klepser, Stephanie; Matthias, Kathryn R.; Scarsi, Kimberly; Point-of-care testing for infectious diseases: Opportunities, barriers, and considerations in community pharmacy; Journal of the American Pharmacists Association, Volume 54, Issue 2, 163-171
2. Pharmacists' Authority to Deliver Protocol-Driven Care Set to Impact Patient and Public Health Across Kentucky. 1 May 2018. Available at: https://pharmacy.uky.edu/news-events/archive/pharmacists-authority-deliver-protocol-driven-care-set-impact-patient-and