

Comparing the Impact of an Infectious Disease Elective on the Confidence of Students and Alumni

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Background

- Pharmacists play an integral role in the treatment of infectious diseases and the prevention of antimicrobial resistance
- Infectious disease remains a challenging topic for students to grasp prior to the start of advanced pharmacy practice experiences (APPEs)

Objectives

- Determine if a dedicated didactic infectious disease elective is effective in **increasing the confidence** of students and alumni in treating infectious diseases
- Compare the reported confidence** of those who did and did not take the infectious disease elective during their third professional year

Methods

- Study Population Inclusion Criteria:**
- Current third and fourth-year pharmacy students and alumni of the Southern Illinois University Edwardsville School of Pharmacy (SIUE-SOP)
- Study Design:**
- Observational, retrospective survey research
- Study Measures: Independent Variables**
- Students and alumni of the SIUE-SOP program who did and did not take the elective in their third professional year
- Study Measures: Dependent Variable**
- Difference in perceived confidence in treating five common infectious diseases, including **cystitis** (urinary tract infection), **Clostridium difficile**, **cellulitis** (skin infection), **otitis media** (ear infection), and **community-acquired pneumonia**

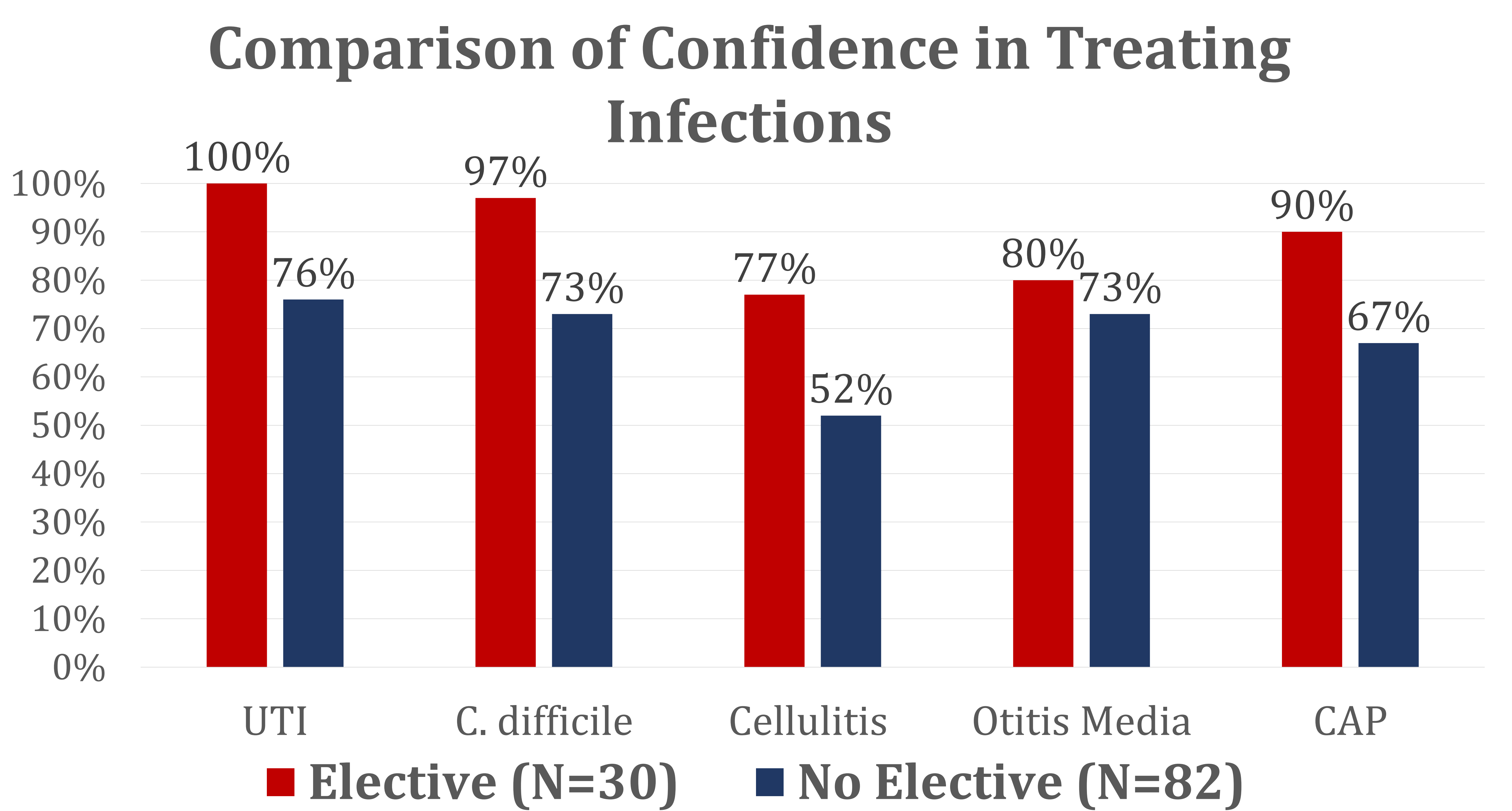
Methods (cont.)

- Survey:**
- Demographic questions summarized using **descriptive statistics**
 - Participants asked to indicate their level of confidence in treating five common infectious diseases using a **five-point Likert scale**
- Statistical Analysis:**
- Chi-square analysis** used to determine if a difference in confidence existed between those who did and did not take the infectious disease elective

Results

- Total of **112** participants comprised of **35 students** and **77 alumni**
 - Of those, 30 participants (27%) completed the didactic infectious disease elective
 - Of the participants who completed the elective, 90% felt that taking the elective positively impacted their confidence in treating infectious diseases overall
- Baseline Demographics:**
- Of all participants, 46% worked in community pharmacy, 34% in hospital pharmacy, and 18% worked as pharmacists in alternative practice sites (clinics, remote, etc.)
 - Alumni: 51% graduated after the initiation of the infectious disease elective

Survey:



Results (cont.)

Table 1. Chi-Square Analysis Results

| Infection | Chi-square Statistic | Degree of Freedom | P-value |
|---------------------|----------------------|-------------------|---------|
| UTI | 8.908 | 1 | 0.003 |
| <i>C. difficile</i> | 7.431 | 1 | 0.006 |
| Cellulitis | 5.327 | 1 | 0.021 |
| Otitis Media | 0.546 | 1 | 0.46 |
| CAP | 5.887 | 1 | 0.015 |

- Limitations:**
- Unequal distribution of students and alumni
 - Subjective reporting only measured outcome
 - Differences in work and APPE experience
 - Lack of knowledge-based assessment component

Conclusions and References

Increased exposure to infectious disease concepts by means of a didactic elective supports the confidence of students and alumni in treating four common infectious diseases.

References:

- Pharmacist's Role in Antimicrobial Stewardship and Infection Prevention and Control. (n.d.). American Society of Health-System Pharmacists.
- Johnson, M. A., Jones, B. M., Heil, E. L., et al (2019). Self-perceived knowledge and confidence regarding infectious diseases of advanced pharmacy practice experience students. *Currents in Pharmacy Teaching and Learning*, 11(11), 1095–1102. <https://doi.org/10.1016/j.cptl.2019.07.019>.