

Pharmacist role in antimicrobial stewardship: a 30-year experience

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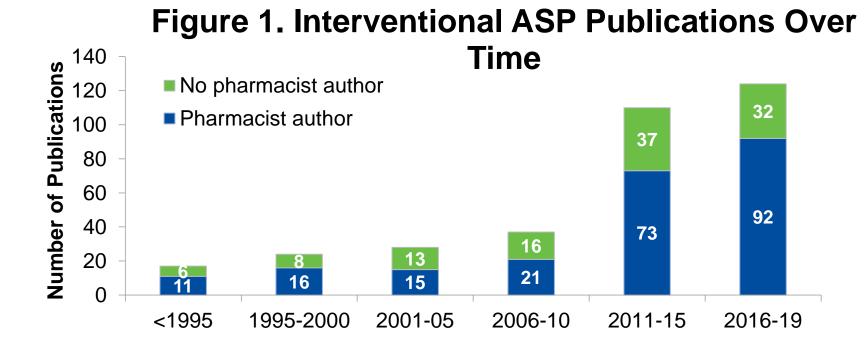
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Introduction

- Infectious diseases (ID) pharmacists have an essential role in antimicrobial stewardship programs (ASPs) and co-leadership with a physician is supported by regulatory bodies^{1,2}
- Over 85% of healthcare institutions rely on pharmacy services to implement ASPs and expand stewardship initiatives.^{3,4}
- The objective of this study was to examine the pharmacists' role in research and publications evaluating antimicrobial stewardship interventions and quality improvement

Approach

- A PubMed search was conducted using terms: "antimicrobial stewardship" and "quality improvement" from 1990-2019
- 1426 articles published in the United States and Canada were screened
- 340 articles met inclusion criteria as interventional ASP studies
 - 67% (228/340) had at least one author with pharmacist credentials
 - Pharmacists were first-authors in 59% (135/228)



 A random subset of 100 interventional ASP studies with at least one pharmacist author were stratified by five-year periods and selected for inclusion



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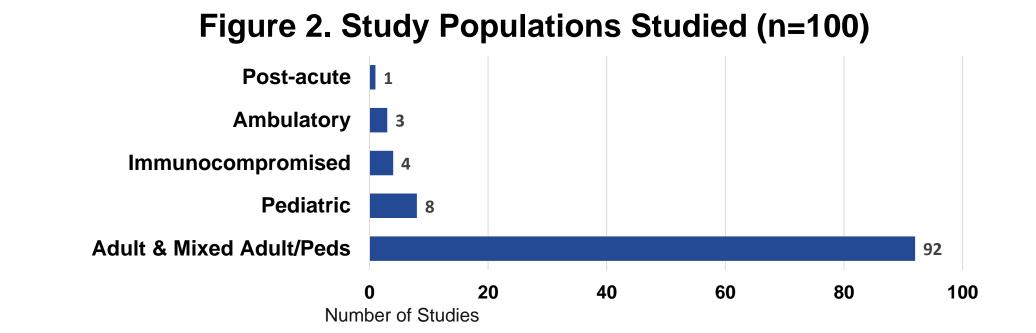


Figure 3. Interventions Studied (n=100)

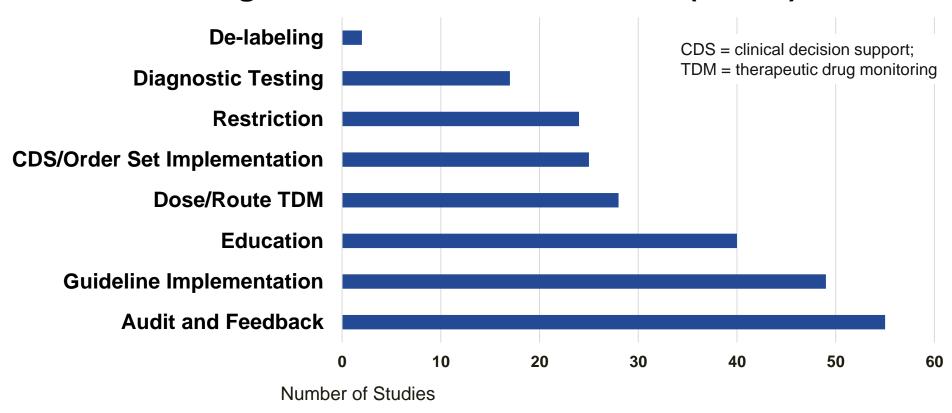
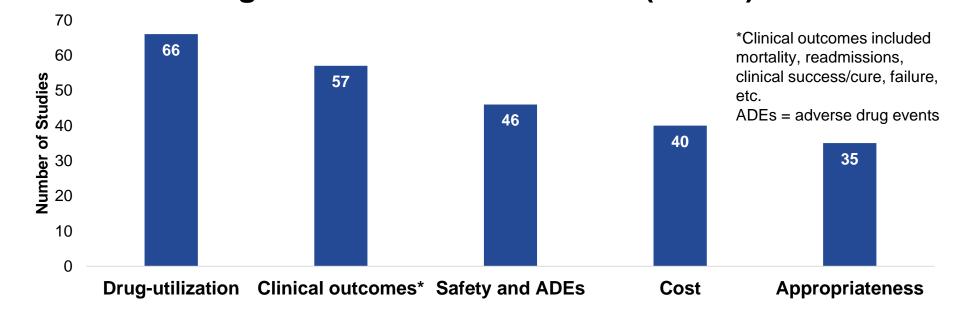


Figure 4. Outcomes Studied (n=100)



Results

Key Findings

- Almost 40% of the studies described the role and impact of the ID/ASP pharmacist in the stewardship intervention
- Majority of studies involved a single-site (84%) and inpatient (89%) focus
- Mean impact factor of journals with first author in ASP research was 3.52 compared to 5.25 as middle authors only

Table 1: Top journals publishing pharmacist-authored ASP interventional research since 1995

Journal	Number of studies
Infection Control & Hospital Epidemiology	14
American Journal of Health System Pharmacists	10
Pharmacotherapy	10
Antimicrobial Agents and Chemotherapy	7
Clinical Infectious Diseases	5

Discussion

- ID pharmacists play a key role in interventional antimicrobial stewardship research
- Best practices in pharmacist-led stewardship research include:
 - Engage in high-quality research and disseminate results in a range of journals, including high impact factors to broaden audience reach
 - Advocate for pharmacist first authorship when appropriate
 - Describe the pharmacist(s) role and the pharmacy practice model in the ASP intervention in the methods section
 - Collaborate to conduct multi-center studies with increased generalizability
 - Diversify ASP research by expanding into less-studied populations including ambulatory, pediatric, and immunocompromised groups



References and disclosures available at link