Antimicrobial Stewardship Program Implementation in Gulf Cooperation Council States - A Systematic Review

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Introduction

Antimicrobial resistance (AMR) has led to the development of initiatives aimed at optimizing antimicrobial use. Coordinated interventions for promoting and monitoring safe and effective use of antimicrobials are termed antimicrobial stewardship programs (ASP). Aspects of implementation and outcomes of ASPs have been researched and reported in the literature.

To critically appraise, synthesize and present available evidence on ASP implementation in Gulf Cooperation Council (GCC) States.

1. To compare ASP interventions in GCC States to international guidelines
2. To determine the outcomes reported in studies of ASP intervention in GCC States
3. To identify facilitators and barriers to effective ASP implementation, sustainability and scalability in GCC States

Method

Population: Patients admitted to institutionalized health care settings in any GCC States
Intervention: ASP implementation
Inclusion criteria
Comparator: Pre and post implementation
Outcome: Clinical, microbiological and economic outcomes
Any type of study design
Published 2010 to date
English language only

Records identified through database searching and initial screening (n = 892)

Records after duplicates removal (n = 479)

Records screened (n = 268)

Records excluded if primary care, outpatient or dental setting (n = 211)

Records excluded for not meeting study objectives (n = 218)

Full text articles assessed for eligibility (n = 42) plus studies identified from reference list (n = 8)
Total (n = 50)

Studies included in qualitative research (n = 15)
Cross sectional survey, n = 1
Before and after control study, n = 6
Observational Cohort, n = 8

Results

Identification

Screening

Eligibility

Included

NHLBI quality assessment tool

Two ‘good quality’, two ‘poor’ and the remainder ‘fair’

Implementation weakly aligned with CDC checklist.
Majority of studies reporting only 30% of the expected CDC criteria.
Prospective audit and feedback on top of specific actions

Antibiotic consumption most commonly reported.
Very little microbiological, clinical and economic outcomes.

Key facilitators: physician, organisation support and education.
Barriers: Lack of dedicated staff, workload issues and lack of sufficient funding for implementation

Conclusion

Lack of robust studies of ASP implementation in the GCC States.
Studies should focus on CDC criteria in developing the ASP intervention
Report valid and reliable outcome (microbiological, clinical and economic)
A need for qualitative research to focus on facilitators, barriers and solutions to implementation.

References: