

Healthcare-associated infections control and antimicrobial resistance restraint in China: A literature review

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Background: Health care-associated infections (HAIs) are one of the main factors for the increased mortality and morbidity. Meanwhile, antimicrobial resistance (AMR) is closely related to HAIs. Together they are increasingly attracting the attention of the medical field. China's population accounts for 1/5 of the world's population. It is necessary to study the status quo of HAIs and AMR in China.

Methods: A search of PubMed and Chinese databases, such as CNKI, WANFANG Data and VIP database etc. was conducted to identify articles in both English and Chinese from January 2000 to January 2015 according to the search strategies on the national status quo, monitoring, and disease burden of HAIs and AMR.

Findings: 14 of 144 articles about China's national status quo and disease burden of HAIs and AMR and all government monitoring policies are filtered for further review. The results indicate that in China the HAIs rates showed a trend of yearly decline. Regarding the use of antimicrobial drugs, domestic AMR test data show the current clinical AMR is still rising. In some hospitals, the number of HAIs caused by drug-resistant bacteria has accounted for about 30% of the number of patients with HAIs. Relevant monitoring policies have been established, including bodies, contents, means and basis, which have a significant effect on curbing the deterioration of HAIs and AMR. Moreover, in terms of the research about the disease burden of HAIs and AMR in China, there are only a few articles on the disease burden research of HAIs, and few on AMR; Current studies often focus on a single hospital and the methodology needs to be improved.

Interpretation: HAIs and AMR have caused serious economic losses to inpatients. More research needs to be conducted. To improve the methodology in disease burden research in China, Real World Study and Propensity Scoring Matching are recommended to be applied in future empirical studies. Moreover, the impact of insurance policy on HAIs and AMR need also to be further explored.

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Factors associated with pediatric emergency room utilization in an Urban community hospital in Santiago, Dominican Republic

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Program/Project Purpose: In low resource settings, maximizing effective use of emergency room (ER) services is imperative. This problem is anecdotally observed in the public hospital setting in Santiago, Dominican Republic (DR). There are no studies presently published examining ER use in this pediatric population or reasons caregivers choose to utilize the pediatric ER. Financial and systemic limitations have been previously cited as important contributors to the high pediatric mortality rate in the DR.

Structure/Method/Design: In this cross-sectional study, a survey was administered to caregivers (e.g. mother, grandparent) of children in the ER at Hospital Especializado Juan XXIII over an eight-week period. Survey questions included perceived urgency of illness, education level, monthly income, and frequency of ER visits in the last six months. We defined low education as having no high school education and low income as earning less than 10,000 pesos per month. Logistic regression modeling was used to analyze associations with frequent ER use, defined as four or more visits within the last six months.

Outcome & Evaluation: A total of 117 caregivers in the pediatric ER were administered our survey. Most caregivers were female (110/117; 94%) with a median age of 28 (IQR, 24–35) years. The child's problem was reported as "extremely urgent" by 72% (76/106) of respondents, though 82% (80/97) of the children were triaged as non-urgent. In a multivariable model, children of caregivers with any high school education had 69% lower odds of having frequent ER use in the last six months (OR, 0.31; 95% CI, 0.13–0.75; p=0.009), compared to children of caregivers with no high school education, after adjusting for the income category of the caregiver.

Going Forward: Perceived urgency of pediatric medical problems may contribute to increased use of the ER for non-urgent medical problems. Low education level is associated with increased pediatric ER use over a six-month period. Assessing utilization of pediatric ERs in the public healthcare system in Santiago could provide a framework for targeted educational and systemic changes, supporting the ultimate goal of providing the best possible care for pediatric patients in low-resource settings.

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Lessons learned from implementing a hospital-based trauma registry in rural Cameroon

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Program/Project Purpose: Over 90% of the world's injury-related deaths occur in low- and middle-income countries, yet epidemiological data of trauma in these highly impacted countries is scarce. Trauma registries, an effective tool for injury surveillance, can guide quality improvement efforts in both high- and low-resource settings. We aimed to implement a sustainable, robust trauma registry in rural Cameroon, making it the first of its kind.