

Mitigating the Burden of Antimicrobial Resistance in Urban Health Systems: A Community-Based Participatory Approach

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Abstract. Antimicrobial resistance (AMR) poses a significant threat to public health globally, particularly within urban environments where healthcare infrastructures are strained. This study employs a community-based participatory approach to address the multifaceted challenges of AMR in urban health systems. Utilizing qualitative and quantitative methods, we engaged local stakeholders to identify critical barriers to effective AMR management. Our findings reveal that enhancing community awareness and fostering collaboration among healthcare providers significantly mitigates AMR threats. The implications of this research suggest that integrating community perspectives can lead to more effective public health strategies against AMR, reinforcing the necessity of localized interventions in urban settings.

Keywords: Antimicrobial Resistance, Public Health, Community-Based Participatory Research, Urban Health Systems, Infectious Disease Management, Healthcare Collaboration, Health Policy

Introduction

Antimicrobial resistance (AMR) is an escalating global health crisis, increasingly recognized as a pressing challenge in both developed and developing nations. Defined as the ability of microorganisms to withstand the effects of antimicrobials that once successfully treated them, AMR undermines the efficacy of antibiotics, leading to

prolonged illness, increased healthcare costs, and a greater risk of mortality. Recent projections indicate that by 2050, AMR could result in ten million deaths annually worldwide, surpassing cancer and diabetes as a leading cause of mortality. The rapid urbanization of populations further exacerbates this issue, as densely populated areas often experience increased rates of AMR due to factors such as inadequate healthcare access, poor sanitation, and the overuse of antibiotics. Furthermore, the COVID-19 pandemic has highlighted the vulnerabilities within urban health systems, revealing how disruptions can amplify the challenges of managing infectious diseases and their resistance. Within this context, it is paramount to explore innovative, community-focused strategies to combat AMR. This paper presents a comprehensive investigation into the role of community engagement in addressing AMR within urban health systems. By adopting a community-based participatory approach, we aim to empower stakeholders and facilitate collaborative solutions that are tailored to the unique needs of urban populations. The following sections will outline our research methodology, present key findings, and discuss the implications of our results for public health policy and practice.

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