AI-POWERED WHATSAPP CHATBOT: TRANSFORMING ANTIMICROBIAL RESISTANCE EDUCATION FOR A HEALTHIER FUTURE.

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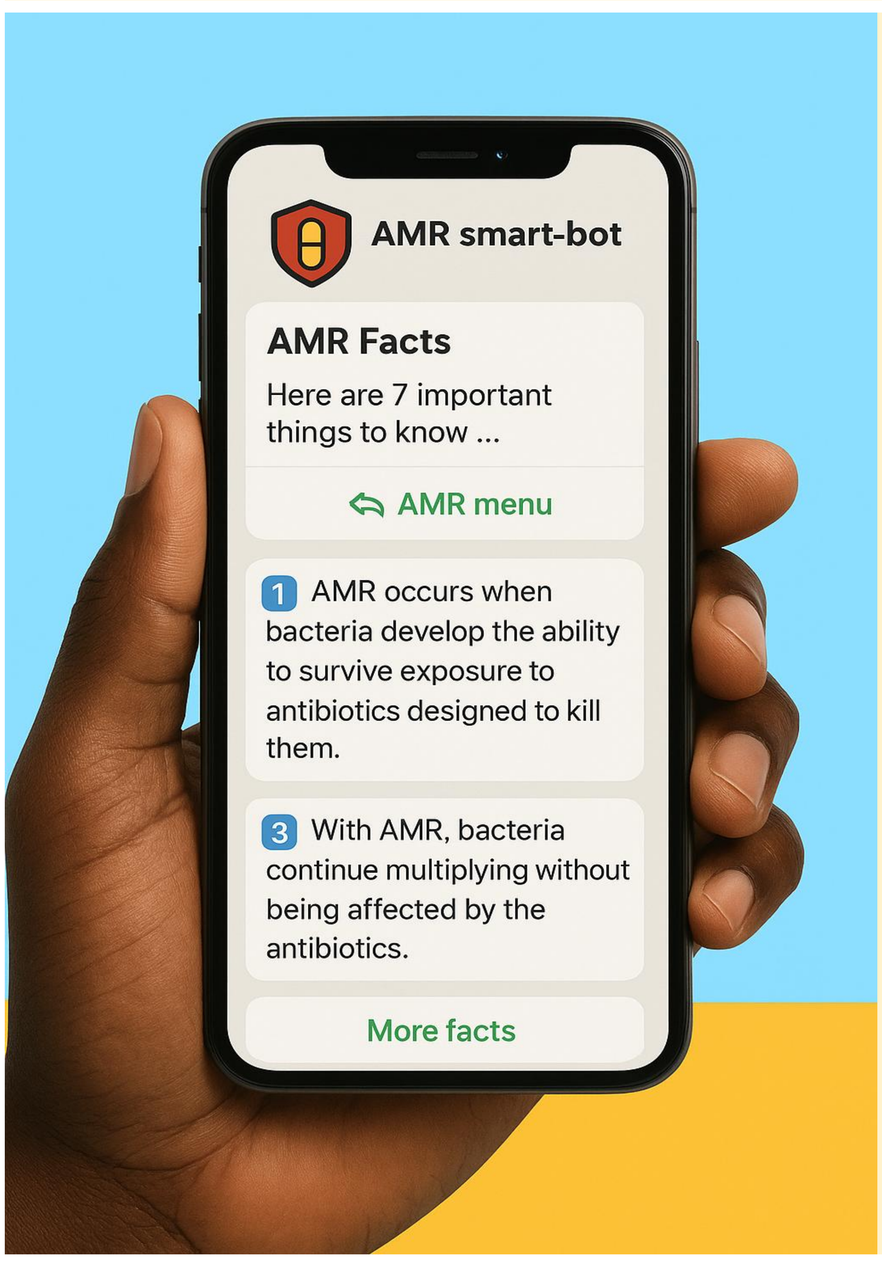
Background: Antimicrobial resistance (AMR) is a rising global public health threat projected to cause 10 million deaths annually by 2050 if no action is taken. In Uganda, high self-medication rates (≈55%) mainly with antimicrobials worsen the problem. Despite awareness efforts, real-time and personalized AMR education remains limited. The widespread use of WhatsApp offers a practical platform for scalable AMR learning.

Objectives

1. To develop and deploy an AI powered Watsapp Chatbot for real time AMR education
2. To evaluate its effectiveness in improving AMR knowledge and reducing self medication



Method

A WhatsApp-based AMR chatbot will be built using OpenAI's ChatGPT API and Twilio for real-time interaction. It will deliver verified AMR information, quizzes, myth-busting tips and symptom guidance to reduce self-medication and promote professional care. Content will be validated by local experts and aligned with Uganda's AMR Action Plan II. The pilot will be launch in English with plans to integrate local languages. Impact will be tracked through user engagement, surveys and feedback starting in Uganda with plans for scale-up.

Results (Expected)

Within 6 months, the chatbot is expected to improve AMR knowledge by 30%, reduce self-medication by 20%, achieve ≥70% user satisfaction and demonstrate a scalable model for AI-driven public health education.

Conclusion

This AI-powered WhatsApp chatbot offers a scalable, low-cost solution to improve AMR awareness in Uganda and if successful, can be adapted for other public health challenges across Africa.