

Enhancing Disease Surveillance: Zambia's Cholera Tracker 2019 to 2024

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Introduction

In Zambia, managing outbreak data, as exemplified by recent crises like Cholera and Covid-19, has presented significant challenges. The 2023-2024 cholera outbreak alone recorded over 23,221 cases and 740 deaths. To address this, Zambia implemented the electronic Integrated Disease Surveillance (e-IDSR) system, aiming to overcome data management barriers during outbreaks.

Methods

Launched in 2019 and later enhanced in 2023, Zambia's e-IDSR, powered by DHIS2, initially focused on capturing aggregate data at the district level across all 116 districts. However, it underwent upgrades to capture patient-level data, including for cholera, among the 16 immediate notifiable conditions outlined in the IDSR guidelines. Additionally, decentralization of data capturing from the district level to the facility level was implemented. The aggregate ND2 form was upgraded to include four sections: suspected cases, cases sent to the lab, confirmed cases, and deaths. The patient-level data entry process begins with demographic and GPS data entry, followed by stages for laboratory requests and results, case investigation, clinical information, and patient outcomes. The DHIS2 android application allows cases to be captured on mobile devices at facility

level. Off-line capturing supports ongoing use in areas with poor internet access. Automated data exchange of laboratory results from the DISA laboratory system to eIDSR provides faster access to laboratory results.

Results

During the cholera outbreak, the e-IDSR system recorded epidemiological data for over 33,980 cases, with approximately 30% having GPS coordinates across the 10 affected provinces. Lower-level facilities gained access to their data for epidemiological analysis, including utilization of the case investigation stage. Around 10% of cases had clinical and laboratory information entered. Although the integration of the system with laboratory systems showed promise, full establishment is pending.

Conclusion

The implementation of e-IDSR marks a pivotal step in outbreak data management. Real-time data capture and accessibility empower targeted interventions at specific levels. With e-IDSR, Zambia is better equipped to respond effectively to outbreaks, highlighting the importance of such systems in bolstering epidemiological and public health efforts. In conclusion, Zambia's Cholera Tracker demonstrates the potential of electronic



surveillance systems in revolutionizing disease outbreak response and management.