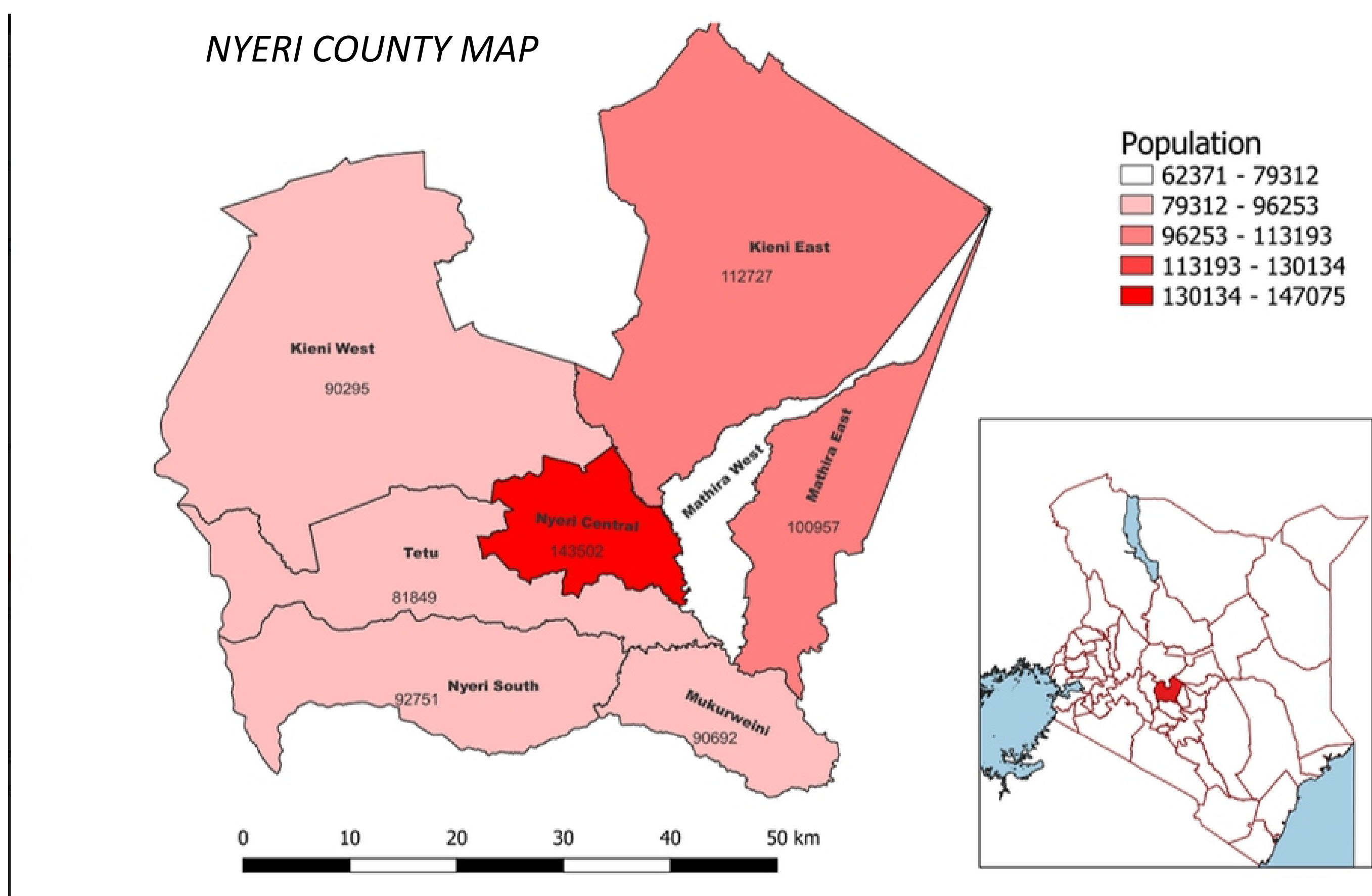




OPTIMIZING DIGITAL HEALTH AND DATA USE TO STRENGTHEN COVID-19 VACCINATION OUTCOMES IN NYERI COUNTY, KENYA (2020-2023)

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BACKGROUND



Advancing health security requires the strategic integration of science, innovation, and equity. The COVID-19 pandemic exposed critical gaps in health systems while simultaneously accelerating the adoption of digital technologies.

In Kenya, Nyeri County implemented the Chanjo digital platform to support the national vaccination program, aiming to strengthen real-time data management, improve service delivery, and promote equitable access to vaccination services.

OBJECTIVE

To assess how the optimized use of digital health systems and real-time data-informed strategies improved Covid-19 vaccination strategies and program performance among eligible populations in Nyeri County.

METHODS

We conducted a cross-sectional analytical study using routinely collected program data from 2020 to 2023. Data was extracted from the Chanjo platform and triangulated with county health records. Key indicators included vaccination uptake, system utilization and performance of critical modules such as inventory management and Adverse Events Following Immunization (AEFI) reporting. Descriptive statistical analysis was used to evaluate coverage trends and system performance. Additionally, programmatic review assessed how real-time data dashboards were applied to guide micro-planning, resource allocation, and targeted outreach interventions.

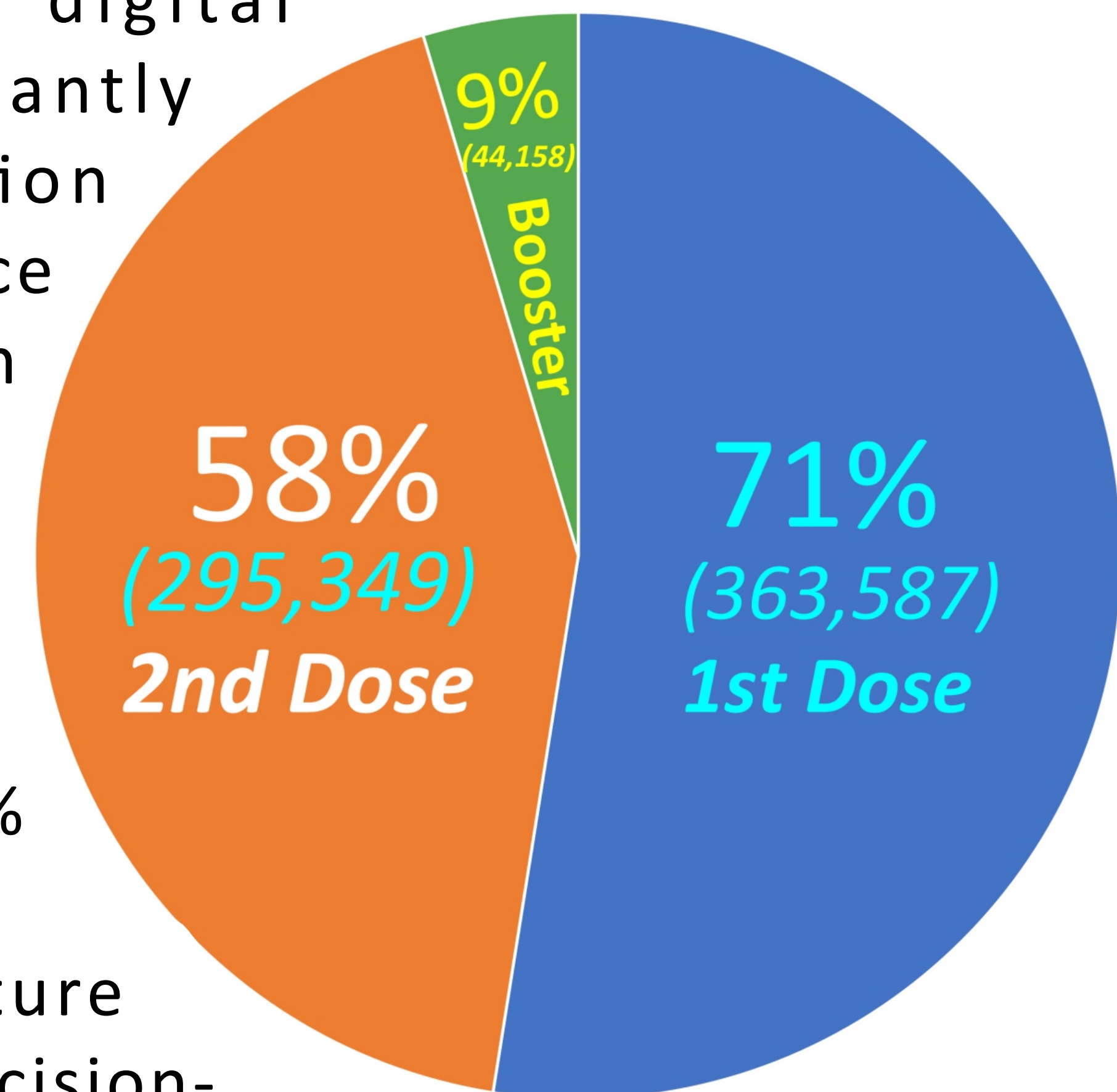


Community sensitization

KEY FINDINGS:

The integration of digital technology significantly enhanced vaccination program performance and health system responsiveness. By June 2023, 71% of the eligible population had received at least one vaccine dose, while 58% were fully vaccinated.

Real-time data capture facilitated timely decision-making, efficient resource allocation, and improved coordination of vaccination activities. Despite these gains, gaps were identified in specific system components, with inventory commodity management and Adverse Events Following Immunization (AEFI) reporting modules performing below optimal levels (less than 50%), highlighting areas for system strengthening.

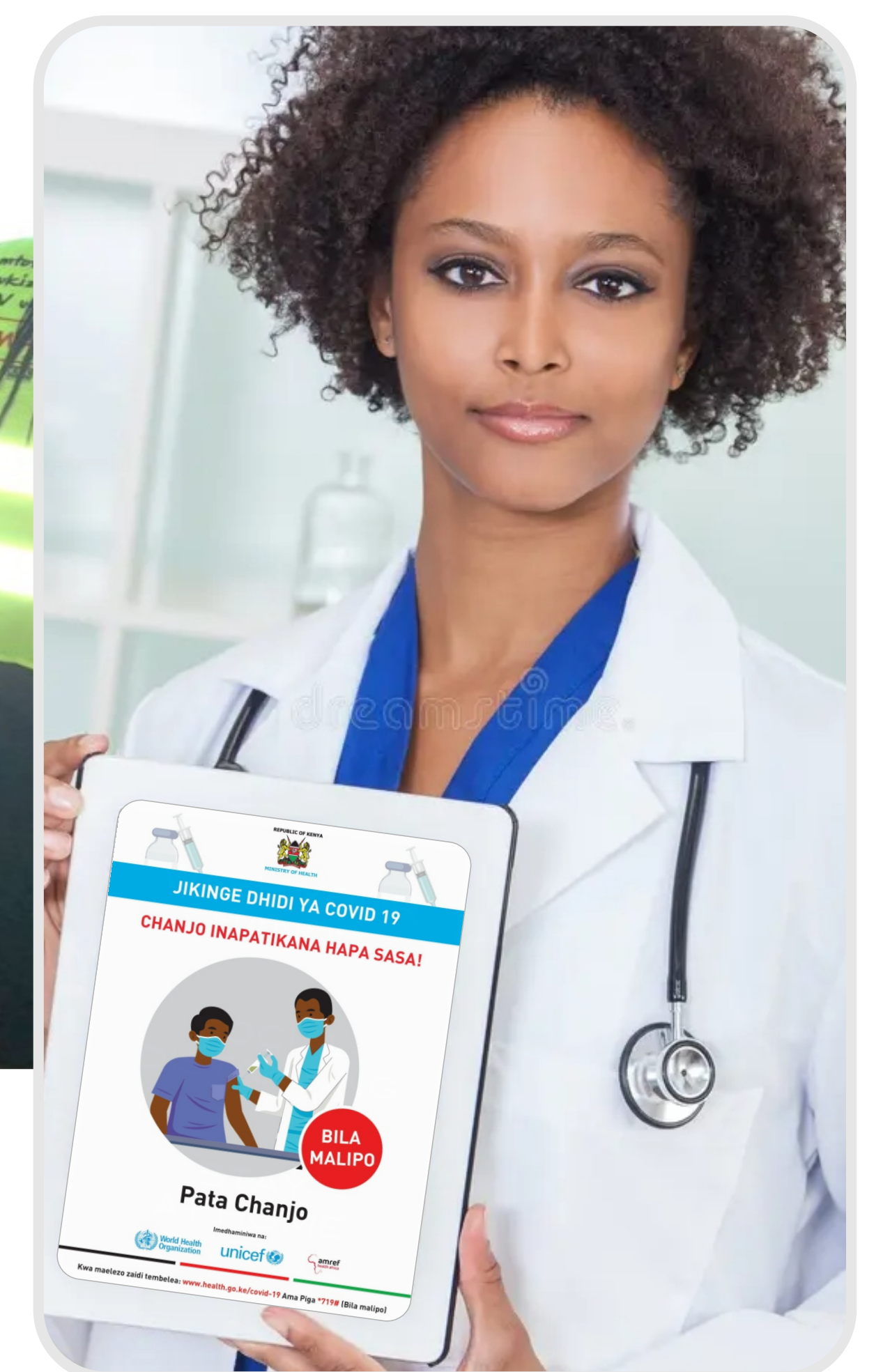


CONCLUSION

Beyond technology adoption, the deliberate use of digital data for decision-making is a key driver of improved vaccination outcomes and health system resilience. Scaling such data-driven approaches can enhance preparedness and response to future public health emergencies, particularly in resource-limited settings.



Health workers carrying out the vaccination exercise during the door to door vaccination campaign



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- Nyeri County Residents
- UNOPS