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disease control, better health

Assessing the acceptability and feasibility of digitalising the community health worker programme in Uganda

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Digitalisation of community health programmes is highly acceptable to community health workers and could improve health services

Introduction

Since 2020, Malaria Consortium has collaborated with the Ugandan Ministry of Health to develop and implement the Electronic Community Health Information System (eCHIS). The eCHIS platform incorporates a digital tool for community health workers (CHWs) that enhances quality service provision and offers real-time surveillance support for community health. The digital tool assists CHWs with case management for reproductive, maternal, neonatal and child health, as well as for HIV/tuberculosis, and provides support tools for nutrition and water, sanitation and hygiene. eCHIS is led and fully owned by the Ministry of Health and is the only community mobile health tool endorsed for use in Uganda. We assessed the acceptability, feasibility and usability of the eCHIS digital tool among CHWs.

Methods

- A total of 365 CHWs providing integrated community case management (iCCM) in Buikwe district were trained and equipped with smartphones installed with the eCHIS digital tool.
- Of these, 141 CHWs were randomly selected to assess the feasibility, usability and acceptability of eCHIS.
- We used questionnaires to assess whether CHWs were able to use the eCHIS tool and follow guidelines while treating sick children, as well as to explore challenges with the use of the digital tool.
- We implemented a quasi-experimental design to assess what impact digitalising the community health programme has on key child health outcomes.
- Health management information system registers were reviewed from 20 health facilities in the intervention district (Buikwe) and 20 in the control district (Kayunga).
- We used STATA 12 to analyse the study data.

Results

- Our analysis reveals that 98 percent of the village health teams assessed were able to use the eCHIS applications with ease.
- Most (90 percent) CHWs were satisfied with using the digital tool instead of paper-based support materials as it saved time.
- Over one year, 94 percent of CHWs consistently used eCHIS.
- The accuracy of malaria and pneumonia assessments improved from 70 to 78 percent, (p-value: 0.027) and 56 to 64 percent (p-value: 0.019), respectively.
- The number of children under five attending an outpatient department for malaria, diarrhoea and pneumonia declined from 41 percent pre-intervention to 32 percent post-intervention (p-value: <0.001) in Buikwe, compared with 49 to 46 percent in Kayunga (p-value: <0.001).
- Malaria-related mortality fell from 71.7 to 59.5 per 100,000 population in Buikwe district versus 76.1 to 73.1 per 100,000 in Kayunga district.

Conclusion

Our results show that the eCHIS digital tool is an acceptable, user-friendly and feasible method of enhancing community health in Uganda. Comparative impact assessments show improved health outcomes (in outpatient department attendance, admissions and deaths) in the district in which eCHIS was used, compared with the control district. It is likely that the impact observed on health indicators is as a result of having shifted to the eCHIS intervention.

Results

Figure 1. Outpatient department attendance due to malaria, diarrhoea and pneumonia by month

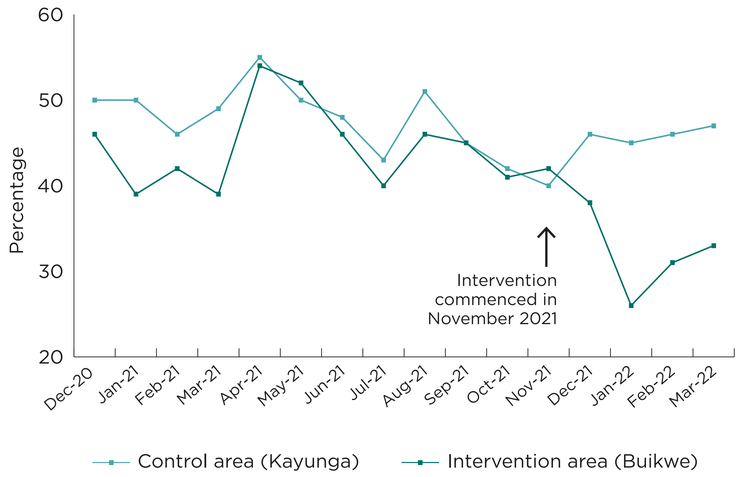


Figure 2. Map of Uganda showing the location of Buikwe (intervention district) and Kayunga (control district)

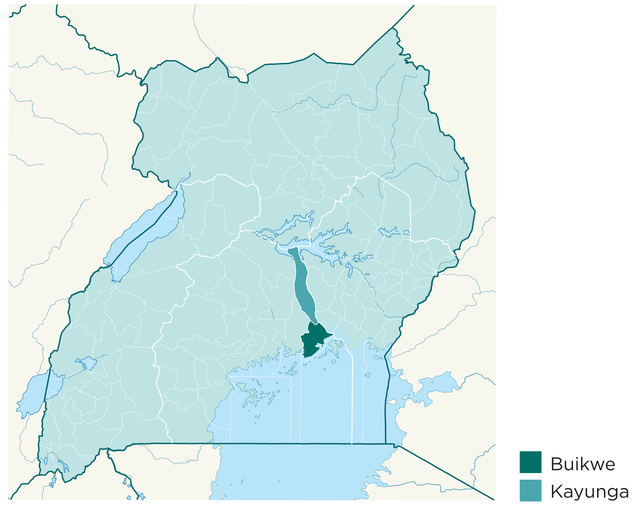
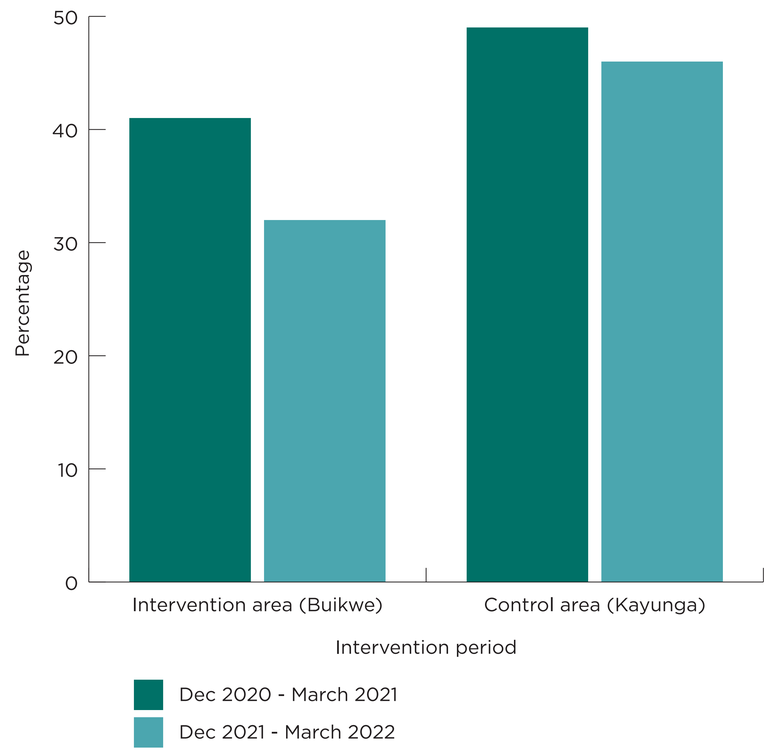


Figure 3. Outpatient department attendance of under-fives with malaria, diarrhoea and pneumonia before and after the digital intervention in the intervention district and control district



Further reading

Malaria Consortium. Capacity statement: Digital health. London: Malaria Consortium; 2020.