

Piloting vaccine last mile delivery (LMD) system in 3 Kenyan counties



Presenter: Jeniffer Adungosi
(jadungosi@clintonhealthaccess.org)

Primary Author: Jeniffer Adungosi¹
Co-authors: Faith Mutuku¹, Vincent Omondi ¹, Amadi Chamwada, George Lusiola¹, Anthony Ngatia ¹

¹Clinton Health Access Initiative

BACKGROUND

Distribution systems in lower tiers of the supply chain and at the last mile are often ineffective with ad hoc collection of vaccines by health workers.

These ad hoc systems are constrained by poor planning and resourcing resulting in stock outs or over stocking that cause interruptions in service delivery.

Similar systems exist in Kenya where healthcare workers are inadequately equipped to carry out the monthly vaccine collection exercise.

Kenya has a strong supply chain in the higher tiers but struggles in the last mile (between the subcounty based depots and the health facilities.

Guided by the MOH, CHAI conducted an in-sourced last mile distribution pilot in 190 facilities across 3 counties

METHODS

To rectify the problems in the existing structure, from August 2019 to July 2022, the Kenyan Ministry of Health, in partnership with CHAI and county leadership, piloted an in-sourced vaccine Last Mile Distribution (LMD) system.

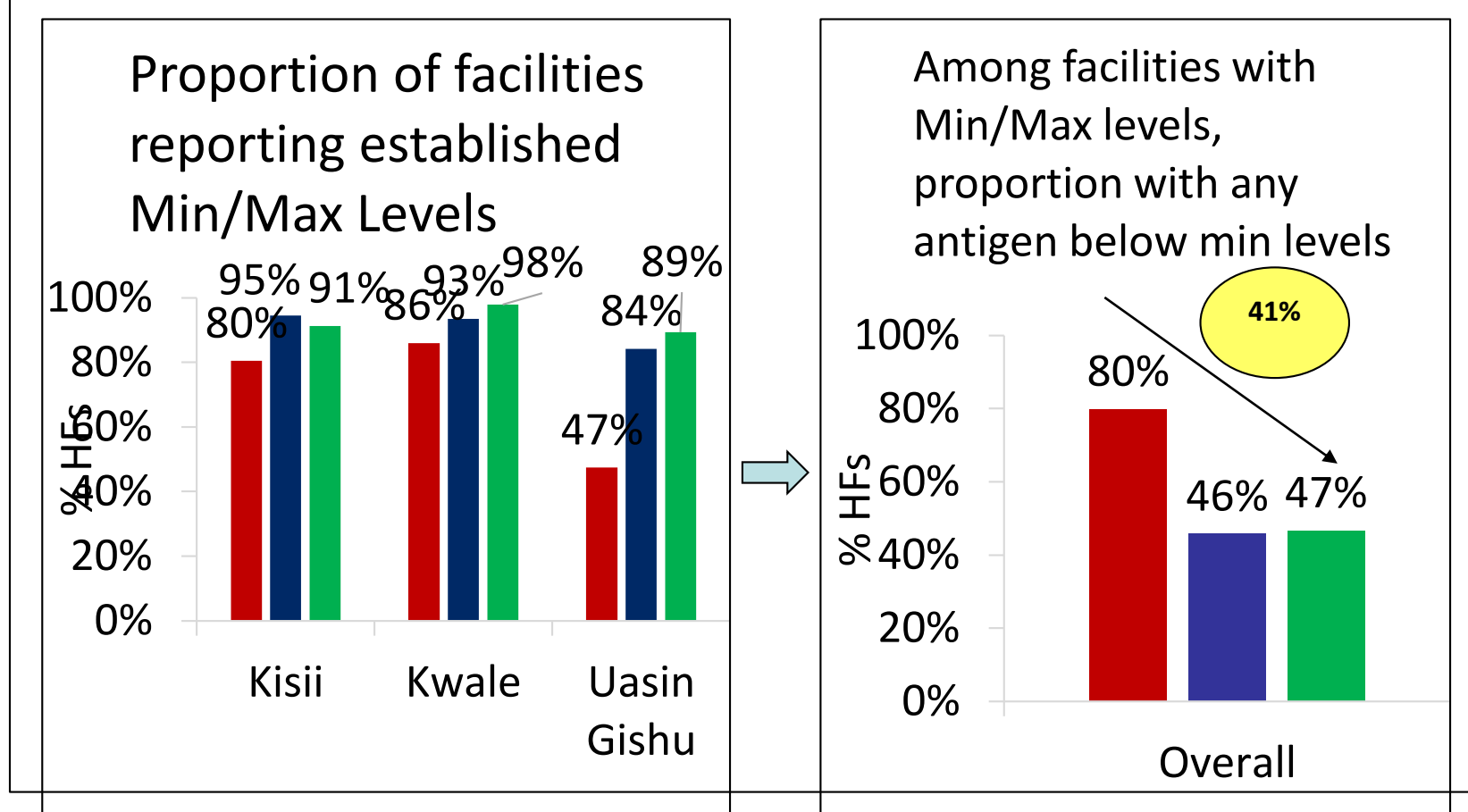
The pilots were implemented in 3 counties and incorporated 3 primary interventions:

- Strengthening the existing pull system through immunizing health facilities (IHF) placing regular orders with the sub-county vaccine stores (SCVS) and monthly distribution of vaccines by SCVS to IHFs
- Adjusting the culture surrounding distribution by turning it into an opportunity for data sharing, information passing, and inspection of operations
- Incorporating quarterly immunization performance review meetings to monitor performance and take corrective actions

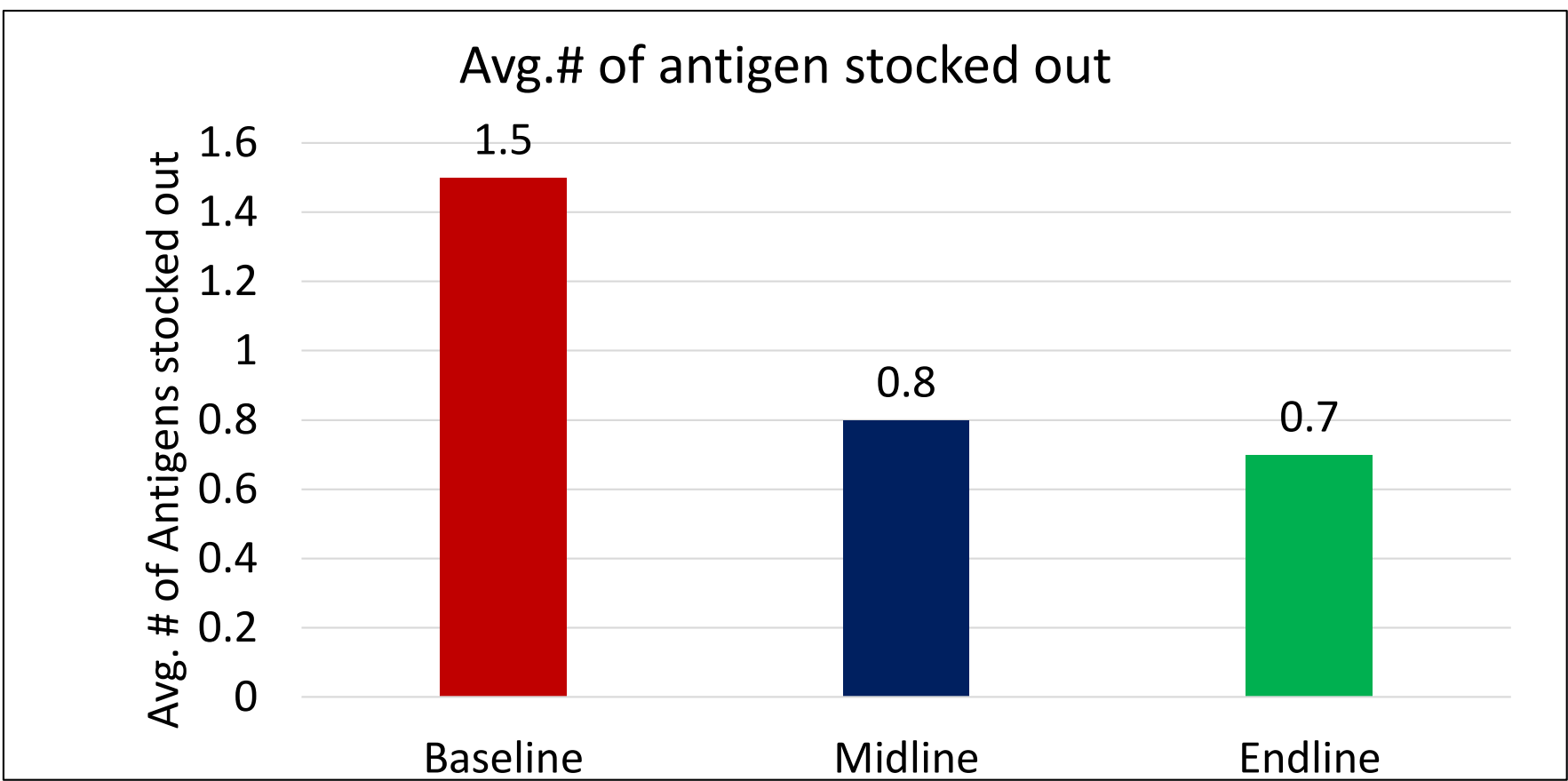
Over the course of the pilots, ~190 IHFs were studied at baseline, midline, and endline, to track changes in key indicators. Additionally, a post-pilot study was conducted in one county to track sustainability

RESULTS

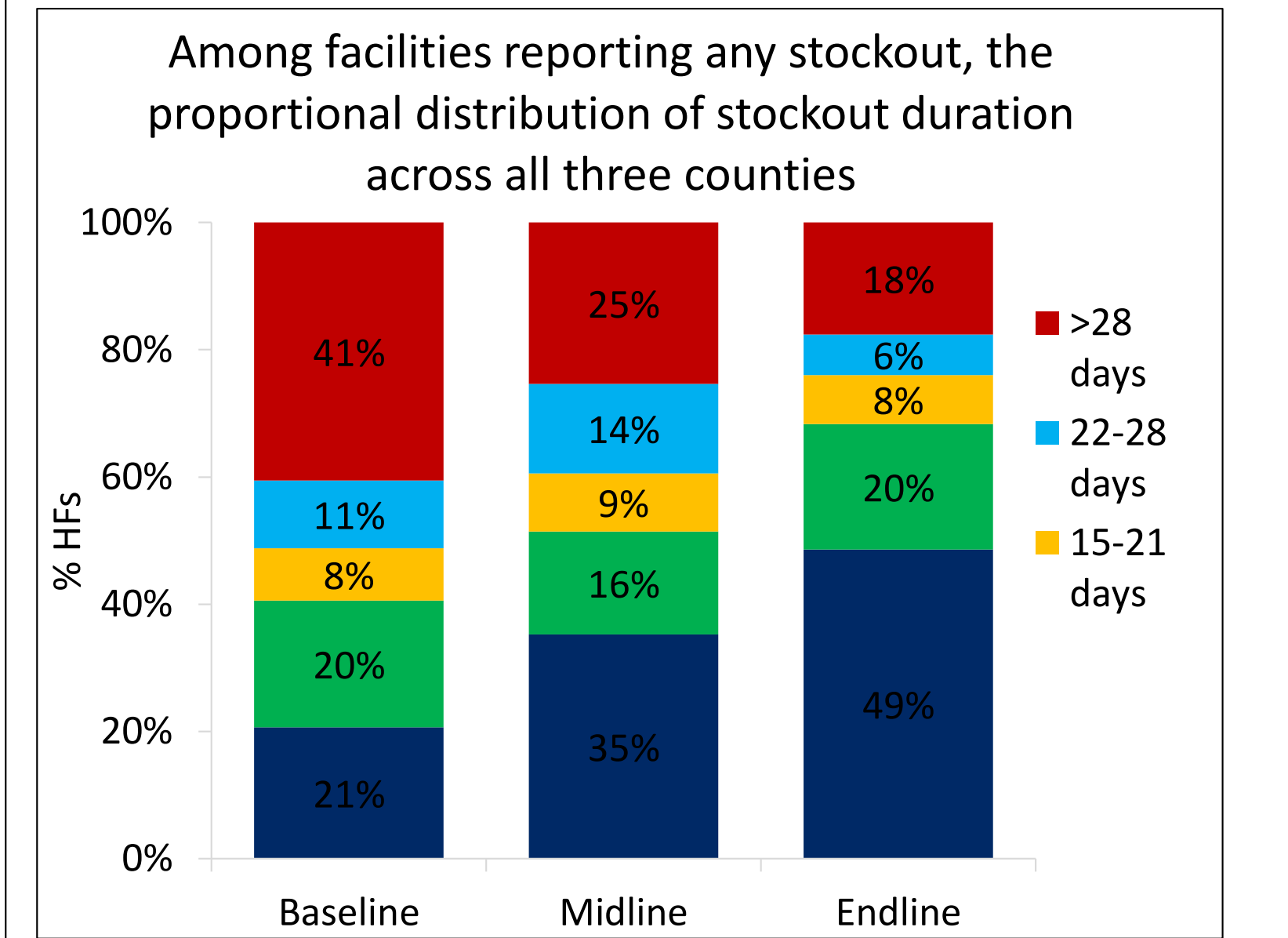
Stock Adequacy - There was a 41% decrease in IHFs with any antigens stocked below minimum level . A 30% decrease in overstocking was also achieved.



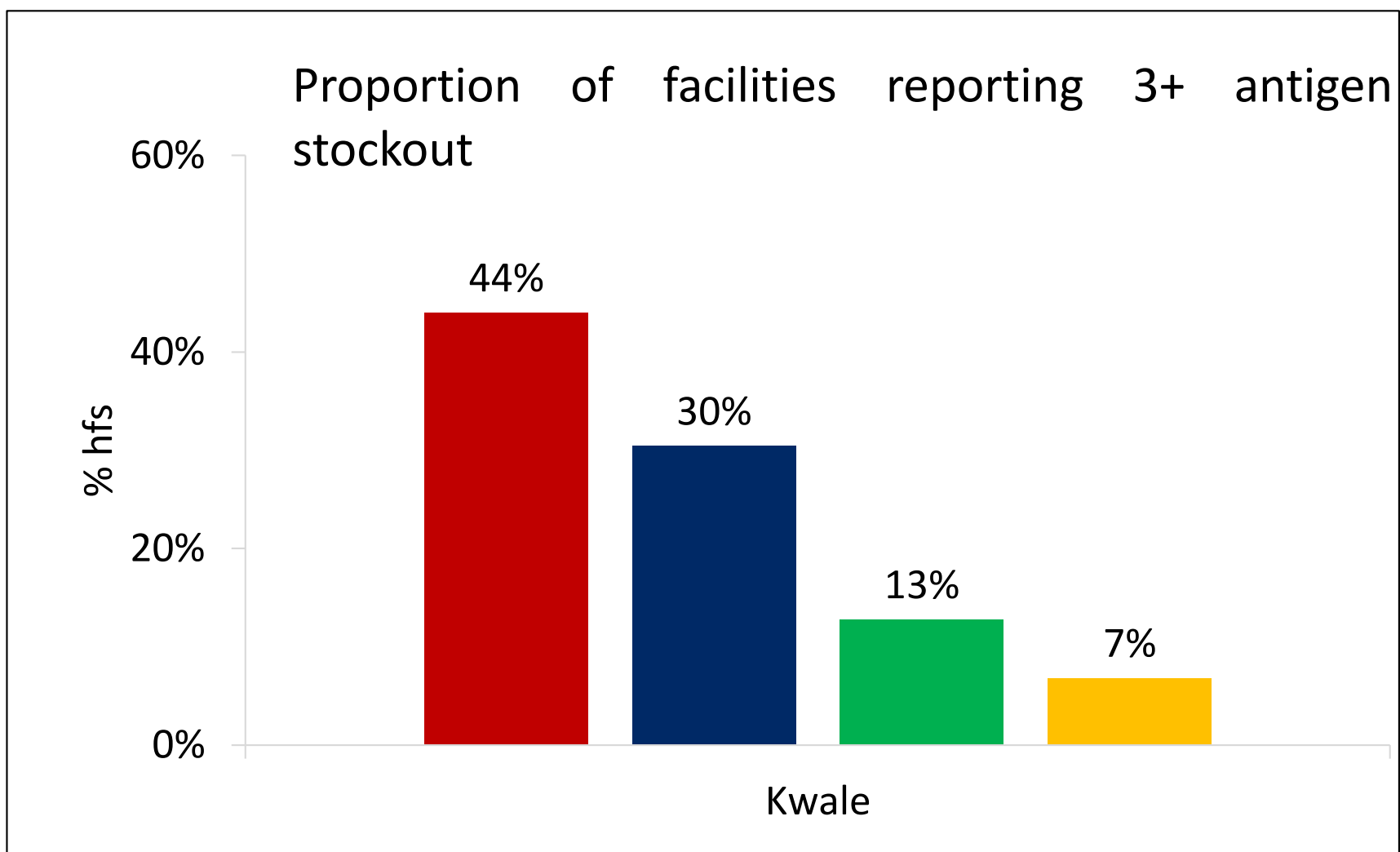
Stockout averages - Average number of antigens stocked out (out of the 9 total antigens studied) decreased from 1.5 at baseline to 0.7 at endline.



Stock out duration: There was a 57% reduction in stock outs over 28 days, and 58% increase in stock outs under seven days



Sustainability – In Kwale county, IHFs experiencing stockouts of 3 or more antigens improved further from ~13% at endline to ~7% post pilot.



SUMMARY

- The result was 57% fewer stockouts and where stockouts happened, they lasted 58% shorter compared to before.
- The LMD distribution model also provided an opportunity to conduct perform cost effective support supervision and on-site data review which resulted in . The reporting then saw an improvements in the completion rates.
- The LMD model while slightly more capital intensive had sustained improvement following the completion of the pilot in one of the 3 counties observed

CONCLUSIONS

- The LMD pilots implemented in Kenya display the potential impact of programmatic procedural changes.
- An increase in supply chain and service delivery indicators without significant capital expenditures or increasing resources led to shifted responsibilities and effective use of existing resources.
- The Kwale post pilot data provides further evidence of sustainability and scalability potential for this intervention in Kenya

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