

Tech

When Numbers Save Lives:

How Kenya is Using AI to Make Family Planning Commodities More Accessible

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For years, FP forecasting in Kenya meant long nights, heavy spreadsheets, and three national teams trying to make sense of messy, incomplete data. One wrong assumption could trigger stock-outs that left women without their preferred method, or overstocks that wasted millions of shillings.

“Just extracting and cleaning data used to take at least a full day. And that was before we even started forecasting,” recalls Daniel Mumbia, a monitoring and evaluation officer at the Division of Reproductive and Maternal Health (DRMH). But today, something remarkable is happening: what once took days now takes minutes. Indeed, for the first time, Kenya is using forecasts that reflect real demand, down to the facility level.

This is the story of how Kenya put AI to work for women, strengthening the backbone of FP commodity security and advancing its FP2030 commitments.

When FP commodities don't reach clinics, the failure affects people. A mother turned away because injectables are out of stock must return home, arrange transport again, or switch to a method she didn't want. A teenager seeking emergency contraception may find the shelf empty.

Kenya recognised this challenge early. Manual forecasting was holding the system back. More importantly, it was preventing women from exercising their reproductive rights.

Before 2023, Kenya's FP forecasting was manual and Excel-heavy, slow to respond to changing demand, fragmented across consumption, service, and demographic teams, based on only 12 months of data, and prone to human error and incomplete reporting

The Ministry of Health (MoH), with inSupply Health, set out to fix this by redesigning the process around speed, transparency, accuracy, and trust. Artificial Intelligence (AI) became the



Results clearly show:

Accuracy gains that protect women from stock outs

- DMPA-IM: AI achieved a MAPE of 6.5%
- 5-year implants: MAPE 8.6% vs 16.6% for manual forecasts
- Emergency contraception: AI corrected data that had manual MAPE above 100%

Up to 27% of anomalies corrected before forecasting

AI cleaned 1,699+ data points monthly, an impossible task manually.

Time savings for staff

Manual preparation that once took 2–3 days per team now takes less than 10 minutes.

Institutionalisation

By 2024, MOH was confidently forecasting eight of thirteen FP commodities using AI, marking the shift from pilot to practice.

These are women’s wins. When data is cleaner, forecasts are stronger. When forecasts are stronger, procurement is smarter. When procurement is smarter, women get the methods they want, when they want them. This transformation is deeply anchored in Kenya’s FP2030 commitments. By reducing stock-outs and detecting supply bottlenecks early, the AI-enabled forecasting system directly strengthens Commitment 3,

ensuring that FP commodities reach the last mile and women experience uninterrupted access to the methods they prefer.

It also advances Commitment 7, which calls for better availability and use of quality FP data. Automated data cleaning, anomaly detection, and real-time forecasting have given Kenya a data system it can finally trust, one that planners can use with confidence to make timely, evidence-based decisions.

Equally important, the shift to more accurate forecasts supports Commitment 8 on increasing domestic financing for FP commodities. When forecasts are reliable, budgeting becomes sharper, wastage is reduced, and government has stronger justification for investing domestic resources, bringing Kenya closer to its goal of fully financing FP commodities by 2026.

Kenya’s success has caught attention. AI-driven forecasting is now expanding into MNCH and essential medicines, making the entire supply chain more resilient. The big takeaway is AI did not replace people, it empowered them. It gave them back time. It gave them better data. And it gave them confidence to forecast with clarity. According to a National Quantification Team Member, “AI isn’t magic, it simply makes our work faster and more reliable. The real change is that we now trust the data we use to plan.”

With these developments, a once-manual, error-prone process became one of Kenya’s biggest breakthroughs in meeting its FP2030 goals. Ultimately, the country is shaping a future where no woman is turned away because a shelf is empty, and where forecasting becomes an act of protecting choice, rights, and dignity. Because when the system sees clearly, women are seen clearly too.

assistant instead of a decision-maker. Kenya’s new AI forecasting system uses 60 months of facility-level data from 10,000+ facilities.

It automatically:

- Extracts data from KHIS
- Cleans and standardises it
- Detects anomalies
- Flags stockout-driven dips
- Tests multiple forecasting models
- Picks the most accurate one, and
- Generates national forecasts instantly

Planners can now see the data before and after cleaning, allowing them to approve adjustments or explain context such as health worker strikes, non-reporting, or unusual spikes. This visibility rebuilt trust.

It also built capacity since planners learned AI was a tool and not a black box. The AI tool helped to show patterns quickly and freed time for real discussions with less time spent on analysis and more on understanding the story behind the data.



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The writers work with InSupply Health