Data insights and targeted workflow improve uptake of new HIV drug at scale

case study

vantage health technologies

A part of the BROADREACH™ group

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At a glance

The problem:

Reluctance to move HIV patients from the TEE regimen to TLD, causing supply chain challenges. Additionally eligible patients were not receiving the benefits of the new drug.

The Solution:

Added workflow prompts in Vantage for healthcare workers to use during transition and initiation discussions.

The Outcome:

Initiation rose from 47% to 82%, and transition from 10% to 39% within six months.

Technology

- Vantage
- Microsoft Azure

Client

- BroadReach Health Development
- DoH

Both patients and their physicians are understandably risk-averse in their choice of drug regimens, even when clinical innovation produces promising new therapies that offer strong evidence for improved health outcomes.

When South Africa's Department of Health (DoH) decided, in November 2019, to replace Tenofovir-Disoproxil Emtricitabine Efavirenz (TEE) with Tenofovir-Lamivudine-Dolutegravir (TLD) as the primary first-line regimen for most HIV-positive patients on antiretroviral therapy, uptake was slower than expected.

Like many antiretroviral therapies for HIV, both TEE and TLD consist of a "cocktail" of drugs combined in a single pill. Dolutegravir, one of the ingredients in TLD, is an integrase inhibitor which is widely accepted around the world as being more effective than Efavirenz in TEE at lowering viral load, with less likelihood of developing resistance. TLD is a more palatable option for patients with less side-effects.

What was the challenge?

Part of the resistance to change came from the fact that the treatment was new and less familiar to both patients and medical professionals. This was exacerbated by some clinical trial evidence that TLD might increase the risk of neural tube defects in pregnant women, creating concerns for many patients and their doctors. The result was that several months into the government mandated transition to TLD, few patients were willing to switch to the regimen, preventing them from receiving the potential benefits. Additionally, demand for the older treatment, TEE, remained higher than planned, causing a stock management problem.

Adapting the workflow

Under the PEPFAR funded USAID Accelerating Program Achievement to Control the Epidemic (APACE), BroadReach Health Development partnered with the DoH in both Mpumalanga and KwaZulu-Natal to support their HIV prevention and treatment efforts. BroadReach was therefore mandated to support the rollout of TLD within the facilities and districts it supported.

Using their technical expertise and situational understanding of the challenge, BroadReach leveraged Vantage, the AI-enabled population health management platform, to help rapidly roll out TLD. Vantage was able to support staff to make the right decision at the right time – consistently and at scale.

BroadReach staff have long used Vantage Work, a performance management platform, to provide structured workflows to guide them through the decision-making sequence to perform their duties. These frontline HIV workers focus on HIV testing, initiating antiretroviral therapy (ART), and ensuring patients remain in lifelong care to be virally suppressed.

To support the rollout of TLD, additional measures were required to ensure uptake of the drug. The agility of Vantage allowed BroadReach to add steps to the workflow so that field staff would be able to more accurately assess whether a patient was eligible for the TLD regimen, as well as to gain their consent.

Staff were prompted on the app to enter whether the patient was eligible with a simple "yes/no" captured in the app. For consent, if the staff answered "no", they could additionally enter the reason provided as free text.

"Using the updated workflows that were driven by Vantage, helped our team and DOH's team of 2000 health professionals to change behaviours at scale. The simple steps drove the teams to make large-scale change, quickly" DHIRSHA NAIDOO, COP

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Test and adjust

A few weeks after the workflow updates were implemented, we reviewed the data to assess its effectiveness. The initial data showed that fewer patients were deemed to be eligible than the formal clinical guidelines would typically suggest.

Fewer than half (49%) of ART initiation patients (i.e., newly diagnosed patients starting on treatment) had been assessed as eligible for initiation on TLD, and only 13% of existing ART patients had been assessed as eligible for transition to TLD. Among those eligible, however, consent was quite high, with 97% of newly diagnosed HIV patients consenting to initiate and 83% of existing patients consenting to transition onto TLD.

Since the results were not yet at optimal levels, BroadReach clinical leadership decided to further update the workflow. If a staff member answered that a patient was not eligible for TLD, they received a follow-up prompt asking them to select one or more specific reasons, which were aligned to the clinical guidelines.

An additional step was also added for staff to report cases in which eligible, consenting patients had not been put on TLD due to stock issues. They received a follow-up prompt, encouraging them to report the issue to more senior staff so that it could be investigated and resolved.

The Vantage Health Development team was able to quickly implement the changes in Vantage, and supported training field staff on the changes to the app.

Fewer patients were eligible than the clinical guidelines suggested

49% of ART initiation patients were eligible for TLD

13% of existing ART patients were eligible for TLD

Among those eligible, consent was high

97% of newly diagnosed HIV patients consented to initiate onto TLD.

83% of existing ART patients consented to transition onto TLD.

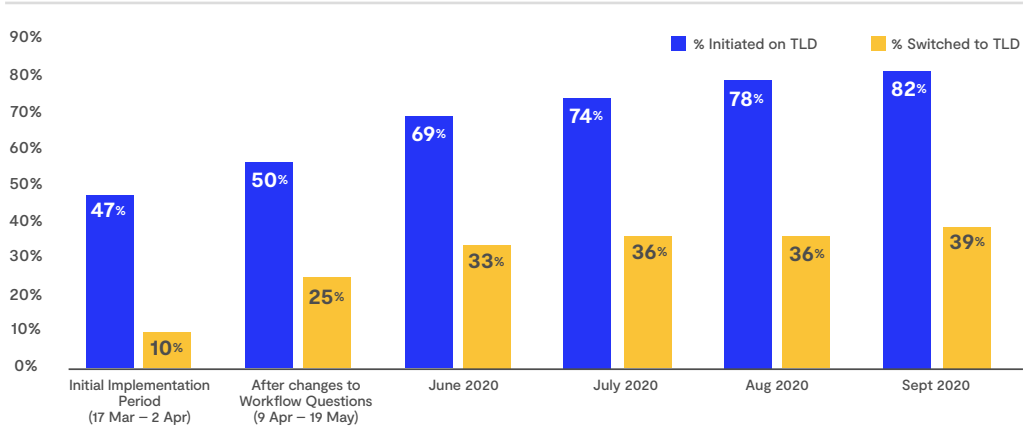
Rapid results and the right trajectory

The results spoke for themselves. Thanks to the combination of training and the reinforcement provided by the app workflow, within six weeks the percentage of patients assessed as eligible for TLD rose from 49% to 66% for initiations and from 13% to 32% for transitions.

The percentage of those eligible who consented to TLD fell somewhat, suggesting that the distinction between the clinician's judgement and the patient's judgement was previously being hidden behind the eligibility criterion. More clearly separating the two also enabled BroadReach to capture richer free-text data, providing greater insight into common barriers to treatment.

A few months after the initial implementation, the app data showed that uptake of TLD continued to grow as on-the-ground practices and engagement, supported by the Vantage app, increased adoption. Among patients receiving care from BroadReach staff, over the course of the next six months, the overall percentage of patients initiating on TLD rose from an initial 47% to 82%, factoring in eligibility, consent, and stock issues. The percentage of patients transitioning to TLD over the same period went from only 10% to 39%.

Furthermore, with field staff accustomed to the new workflow, the flexibility of Vantage has supported further incremental changes where necessary to enable healthcare workers to provide even more nuanced care. For example, for those who are ineligible specifically for TLD, staff are prompted to consider whether they still might be able to benefit from Dolutegravir as part of another appropriate regimen.



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