INDLELA
BEHAVIOURAL INSIGHTS FOR BETTER HEALTH

Policy Brief

PREDICT: Prioritizing Retention Efforts using Data Intelligence and Cohort Targeting in People Living with HIV in South Africa

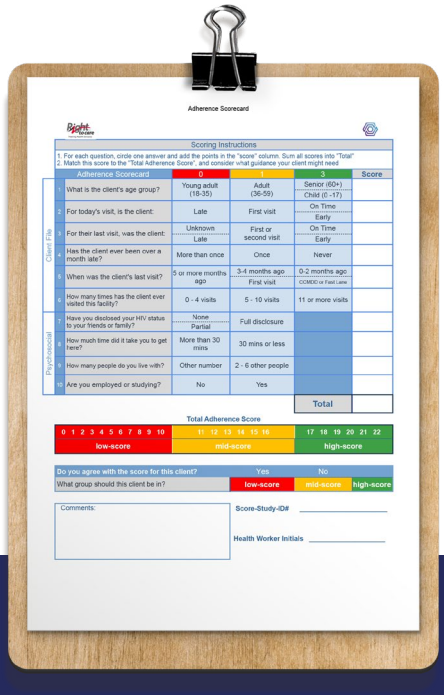
Increasing the number of care recipients initiating and successfully maintaining viral suppression on antiretroviral therapy is critical to reach the HIV response targets in South Africa.

Yet, given limited resources, heterogeneity in care recipient needs, and differentiated models of care, there is a need for an effective way to triage risk of loss-to-follow-up and tailor care for care recipients.

INTERVENTION

Right to Care, Palindrome Data, and HE2RO developed the PREDICT project, which utilizes machine learning to leverage care recipient medical record data to build a predictive model that generates a risk score for people living with HIV (PLHIV).

Indlela partnered with these groups to co-create behaviourally-informed healthcare worker triaging tools to leverage these analytics in service provision. Using the risk scores generated by the PREDICT model, these tools were intended to tailor treatment services for care recipients and nudge provider support on the care recipient treatment journey.

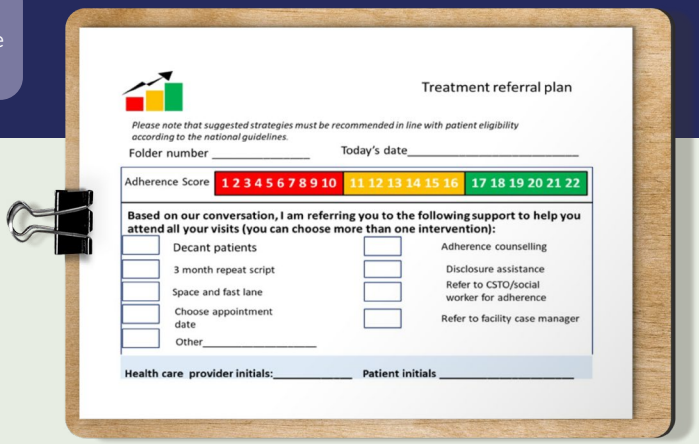


ADHERENCE SCORECARDS:

Paper-based and digital scorecards that help healthcare workers identify care recipients who are at risk for missing a scheduled visit.

TREATMENT REFERRAL PLAN:

This risk score is then converted to a treatment referral plan that helps care recipients plan for their next visit.



BEHAVIOURAL SCIENCE PRINCIPLES

The tools incorporate behavioural economics principles in their design.

The adherence scorecard **reduces friction** in helping healthcare workers easily translate the algorithmic prediction to a simple 3-level risk score. It helps healthcare workers **counter present bias** and **overcome optimism bias** by helping them understand a care recipient's historical appointment visits. The scorecard addresses **algorithm aversion** by allowing providers to maintain autonomy in making care decisions, guided by the algorithm.

The treatment referral plan **reduces choice overload** by displaying a simple list of treatment options, and makes these **more salient** by linking them to each risk score. This also helps **counter ambiguity aversion** by making the options for treatment clear and visible.

STUDY DESIGN

Objective: This study intended to evaluate the fidelity, feasibility, acceptability, and effectiveness of adherence scorecards and treatment referral plan on clinic visit attendance for PLHIV eligible for and on antiretroviral (ART) treatment.

Study population: 2,400 adult care receipts in 4 Right to Care clinics in Mpumalanga Province

Study groups: The quasi-experimental design compared clinic visit attendance and tool usage by providers between 4 intervention arms and through qualitative data collection:

- Digital scorecard + referral form
- Digital scorecard
- Paper scorecard + referral form
- Paper scorecard

RESULTS

Fidelity: The scorecard and treatment referral plan was implemented at 10% of all visits occurring at study sites during the project period.

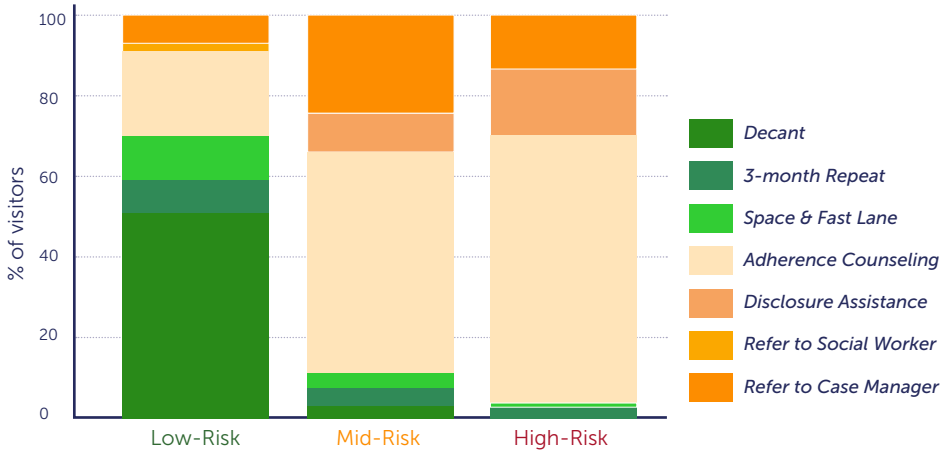
Feasibility: Healthcare workers reported that the tool became easier to use over time. The paper-based tools took on average longer to complete than the digital tools.

Acceptability: Healthcare workers revealed:

- High enthusiasm for using the tools
- High appreciation for value of tools
- Very high (97.8%) agreement with the score
- Limited time to learn to use and implement tools
- Low technological literacy and aversion to new technology

Effectiveness: HCWs were not specifically nudged to choose interventions based on risk mapping in this study. When the adherence score card was used, fewer "low risk" care recipients were offered adherence counseling, and more "high risk" care recipients were offered support services as shown in the graph.

Healthcare services tailored to care recipient needs



"You now hear some patients saying that, 'I'm not gonna disappoint you. Now I'm gonna come on my due date', and that is positive"

"many of them at the clinic are using the intervention, but at some stage the staff was complaining that it is too much work to do. The patients are too many"

"My experience on this scorecard and what I have learnt is that it makes the patient to voice out..... So it makes the patient feel free to communicate with the nurse. "

KEY FINDING 1	KEY FINDING 2	KEY FINDING 3	KEY FINDING 4
The adherence scorecard and referral plan tools allow for more effective, customized, and appropriate care recipient visits. However, further demand creation and advocacy for triaging ART clients by risk level is needed for implementation at scale.	The tools facilitate conversations between healthcare workers and care recipients, helping identify those with the most pressing needs, and also helped care recipients feel a sense of agency over their own outcome and the path forward.	The tools help healthcare workers identify people who need support and help them link care recipients to the right model of care according to treatment guidelines.	Future research on the PREDICT tools should seek to measure outcomes measuring return to care and care recipient risk score reduction.

Investment in collecting, maintaining, and sharing high quality care recipient data may offer more opportunities for creation of such tools, to effectively tailor care, improve healthcare worker efficiency, and ultimately improve care recipient health outcomes.

Using predictive analytics with existing data can streamline resource management and alleviate healthcare worker bandwidth constraints.

Investment in tools that customize services for care recipients may increase retention in care.

These tools can help healthcare workers effectively implement national treatment guidelines and link care recipients to the right model of care.

Indlela Policy Brief #2
June 2023
indlela.org/bit-project-briefs/#3

Health Economics and Epidemiology Research Office
HE²RO
Wits Health Consortium
University of the Witwatersrand

Penn
University of Pennsylvania

Center for Health Incentives & Behavioral Economics