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Using AI & to Personalise Care in HIV programmes

PALINDROME DATA

CQUIN 8th Annual Meeting | December 9-13, 2024 – Johannesburg, South Africa

AI is key to Personalisation of HIV Care at Scale

One-size-fits-all

Low Yield Generic Interventions

AI Tailored & Targeted Interventions to meet Complex needs

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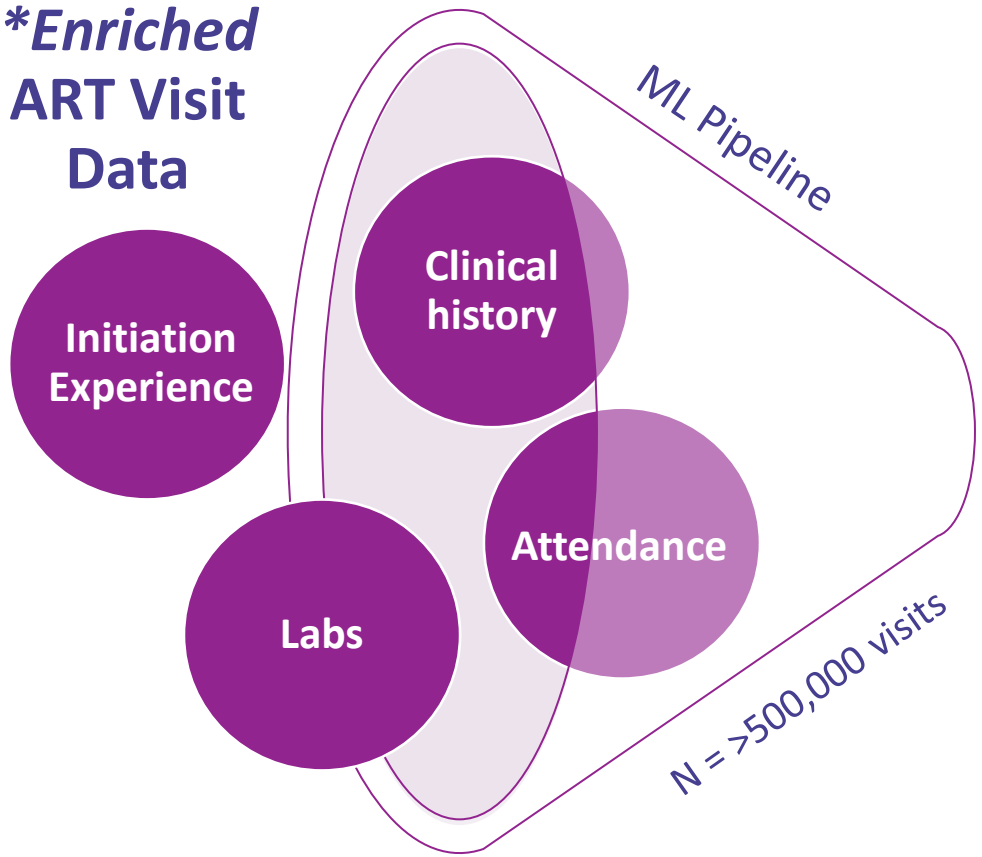
Method:
Predict Interruption using EMR visit data & Machine Learning

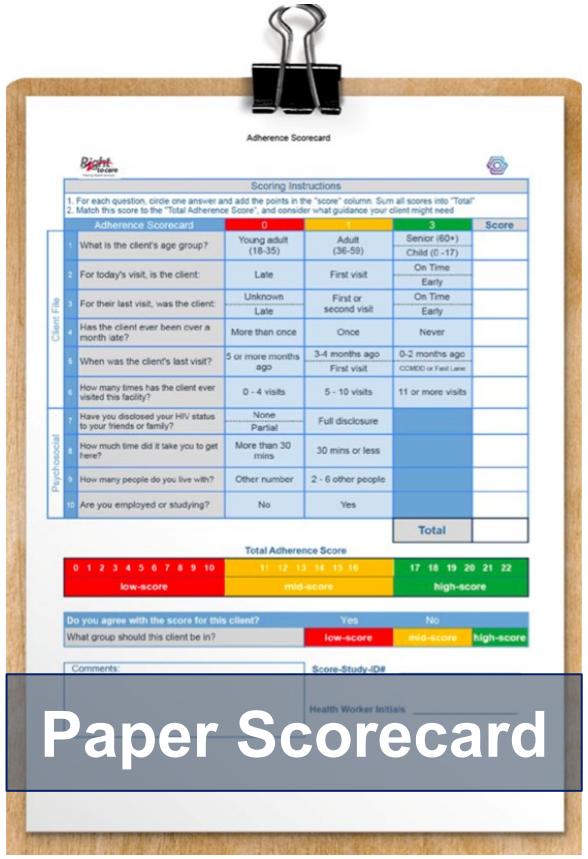


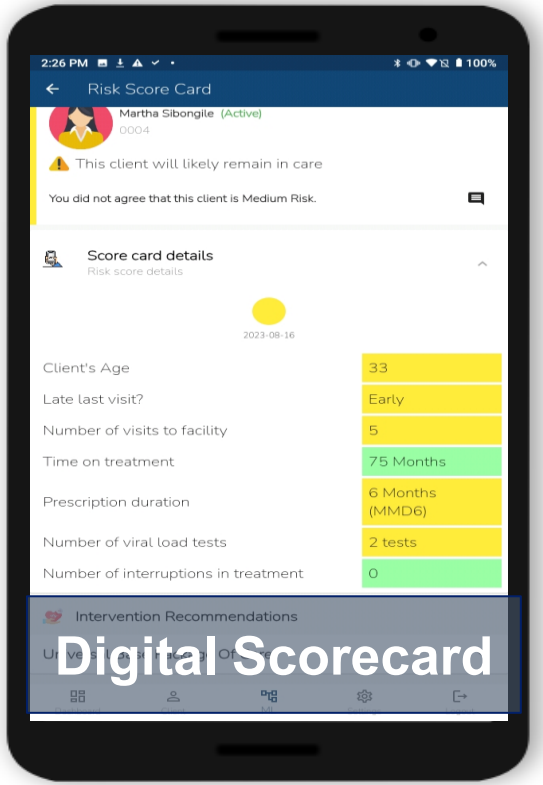
Interruption-in-Treatment ML Predictions

Screening Tool

*Maskew et al, 2022, https://www.nature.com/articles/s41598-022-16062-0

Application: Feasible point of care risk tool





- ✓ Predict risk of IIT or high VL
- ✓ 98% Predictions Agreeable for Healthworkers
- ✓ Fast < 2 mins
- ✓ is Personalising care

In Study – How Improve Outcomes

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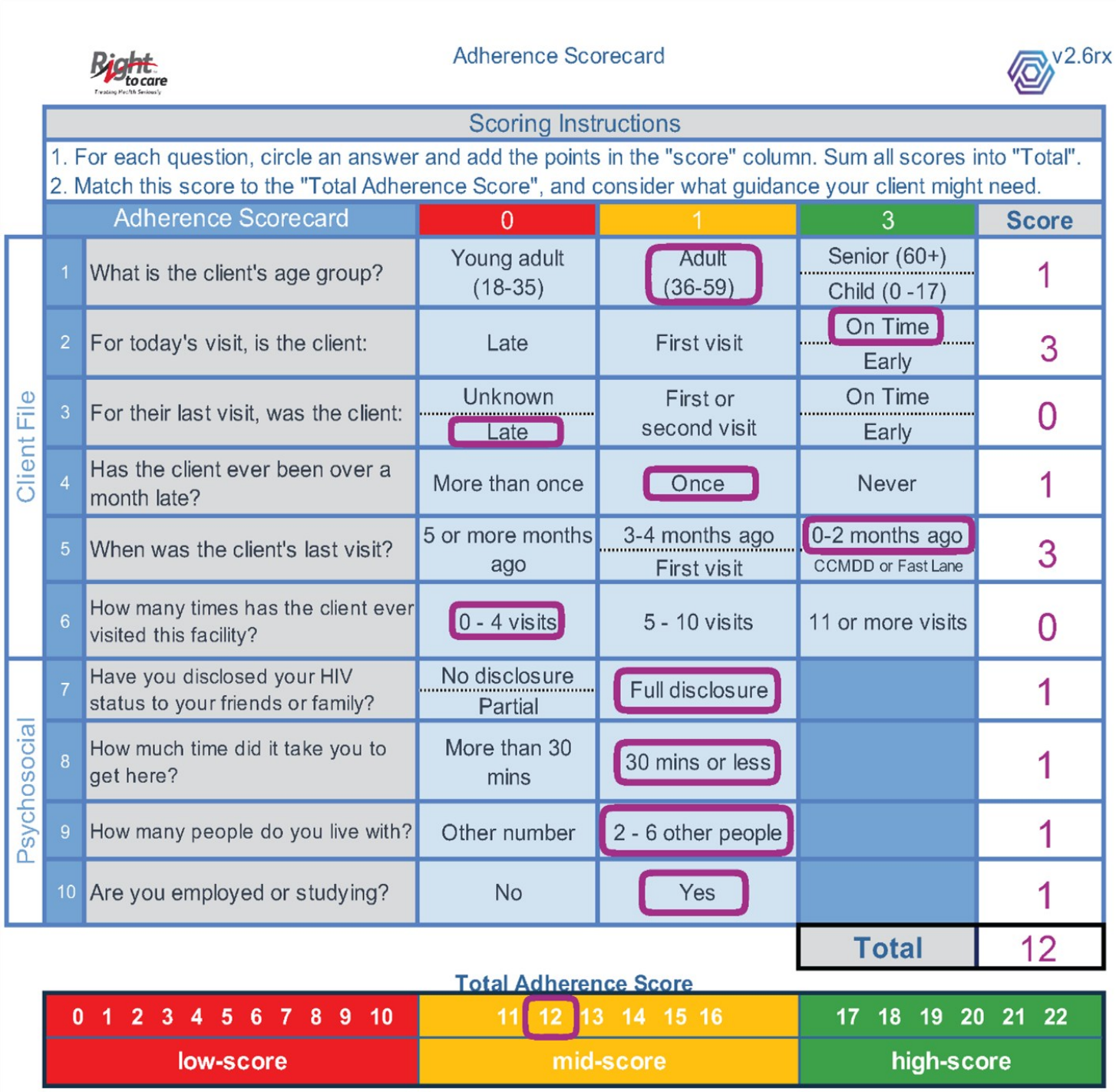
How is it used in a clinic?

‘File History’ - helps identify how *stable* is the treatment journey

‘Psychosocial’ section - helps identify and discuss patient struggles



Adherence Scorecard

v2.6rx

Scoring Instructions

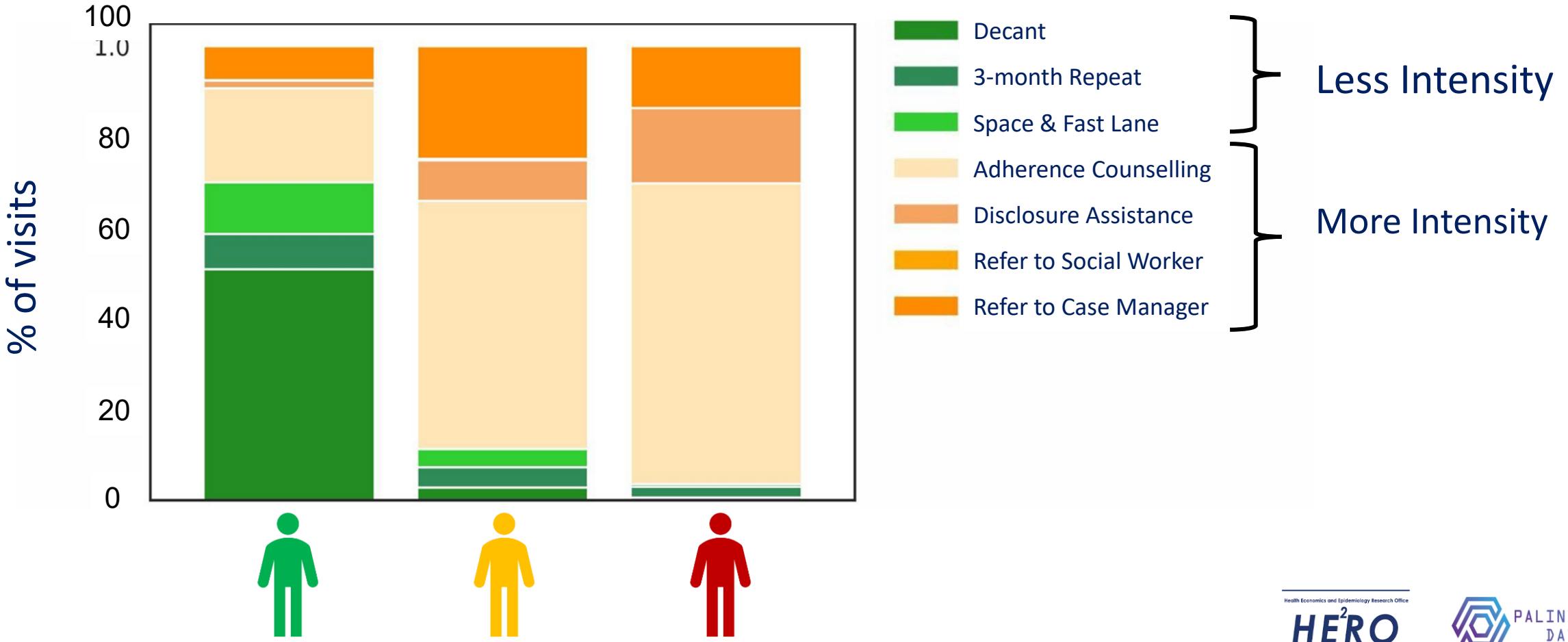
1. For each question, circle an answer and add the points in the "score" column. Sum all scores into "Total".
2. Match this score to the "Total Adherence Score", and consider what guidance your client might need.

		Adherence Scorecard	0	1	3	Score
Client File	1	What is the client's age group?	Young adult (18-35)	**Adult (36-59)**	Senior (60+) / Child (0 -17)	1
	2	For today's visit, is the client:	Late	First visit	**On Time** / Early	3
	3	For their last visit, was the client:	Unknown / **Late**	First or second visit	On Time / Early	0
	4	Has the client ever been over a month late?	More than once	**Once**	Never	1
	5	When was the client's last visit?	5 or more months ago	3-4 months ago / First visit	**0-2 months ago** / CCMDD or Fast Lane	3
	6	How many times has the client ever visited this facility?	**0 - 4 visits**	5 - 10 visits	11 or more visits	0
Psychosocial	7	Have you disclosed your HIV status to your friends or family?	No disclosure / Partial	**Full disclosure**		1
	8	How much time did it take you to get here?	More than 30 mins	**30 mins or less**		1
	9	How many people do you live with?	Other number	**2 - 6 other people**		1
	10	Are you employed or studying?	No	**Yes**		1
					Total	12

Total Adherence Score

0 1 2 3 4 5 6 7 8 9 10	11 **12** 13 14 15 16	17 18 19 20 21 22
low-score	mid-score	high-score

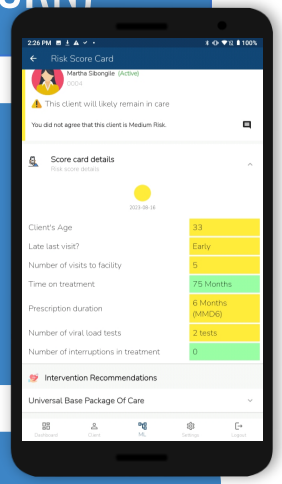
HCW personalising care using risk profile



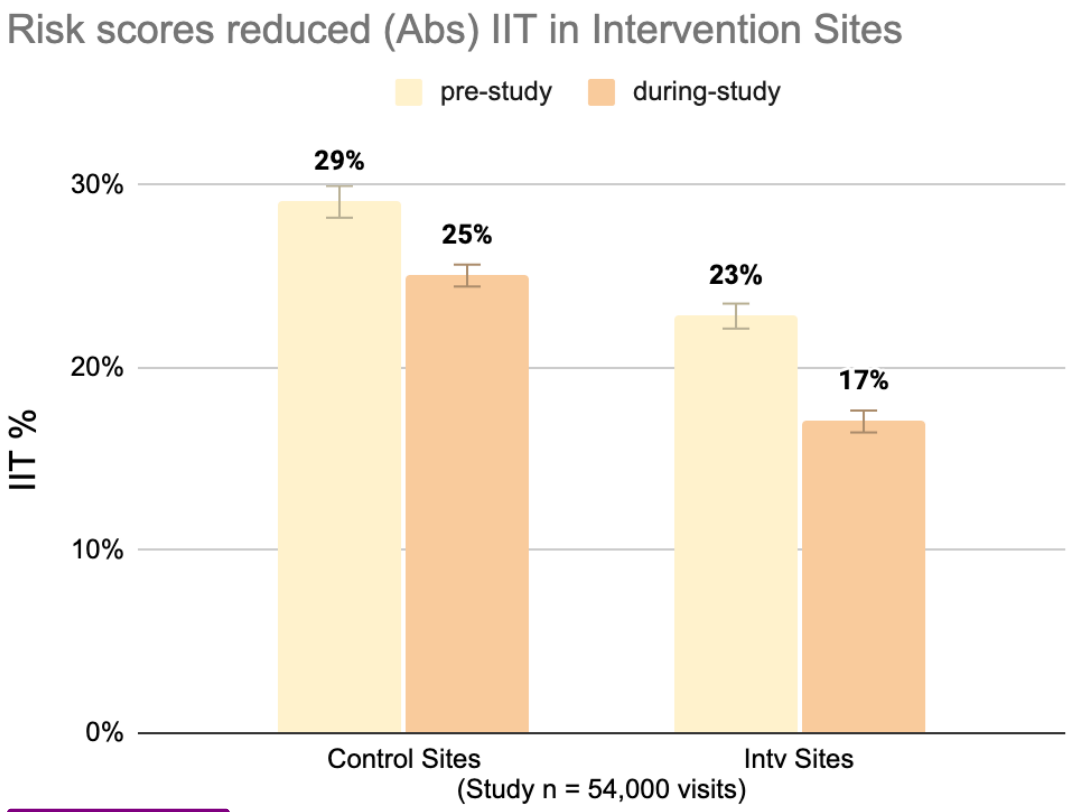
Nigeria Integration: AI Case Management Risk-Scoring

Palindrome Data **integrated** its AI & ML functionality into an existing National EMR System in Taraba and Kwara states (Jhpiego and CCRN)

- 49 facilities,
- 180 mobile case managers,
- >50,000 patient visits



Studying HIV patient management using a breakthrough AI risk-scoring case management tool integrated into existing EMR (LAMIS+)



Preliminary pre-print results!

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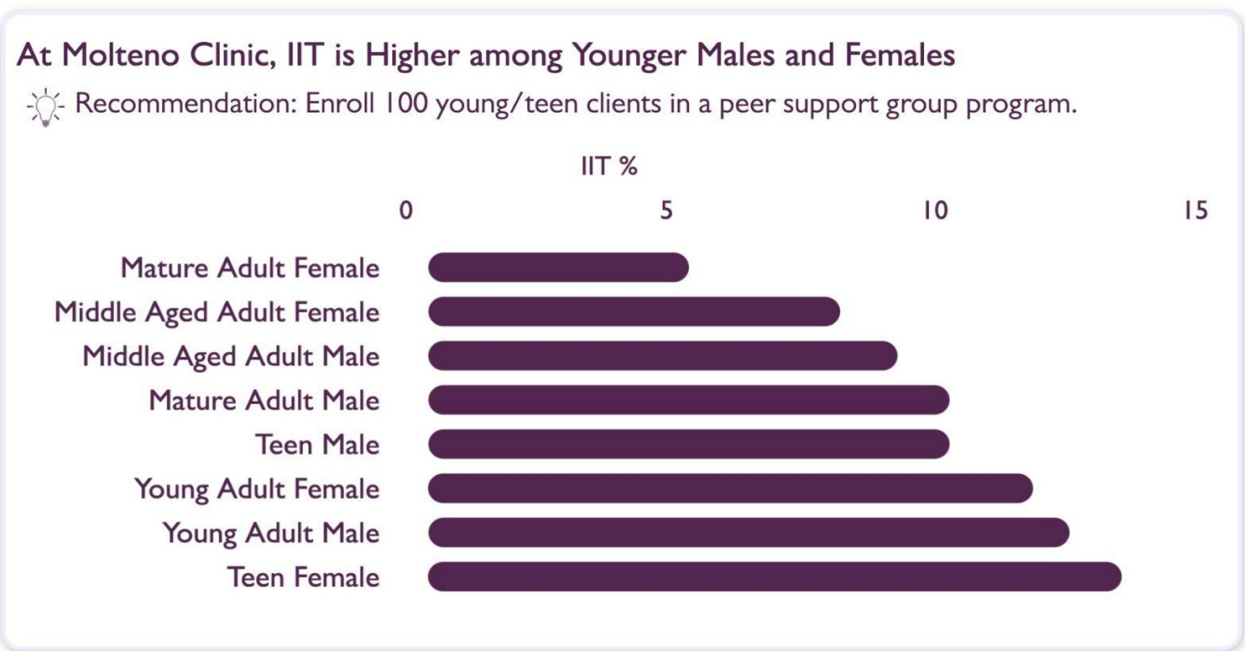
Lesedi AI: Sub-National Programme Recommendation Engine



Ask Lesedi AI to Recommend

Here are some suggestions for age and gender groups at the highest risk of IIT:

* **Teen Female:** Focus on **improving communication and support systems** for this group. This could include dedicated youth-friendly resources, peer support groups, and increased involvement of parents or guardians in treatment planning.

* **Young Adult Male: Address potential barriers to adherence** such as stigma, mental health issues, and lack of access to services. This could involve offering confidential and accessible mental health services, promoting open dialogue about HIV, and ensuring convenient access to medication and support.

* **Young Adult Female: Provide tailored support and education** that addresses the unique challenges faced by young women. This could include information on managing HIV during pregnancy, family planning, and the impact of HIV on fertility.

The LLM Can:

- Explain insights, graphs and data intuitively
- Generate recommendations from general context
- Generate recommendations from public guidelines

We're experimenting with traceable action:

- Make insights and graphs easy to share
- Generate text to explain local situation and challenges
- Supporting meetings and decision making practically

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Thank You!