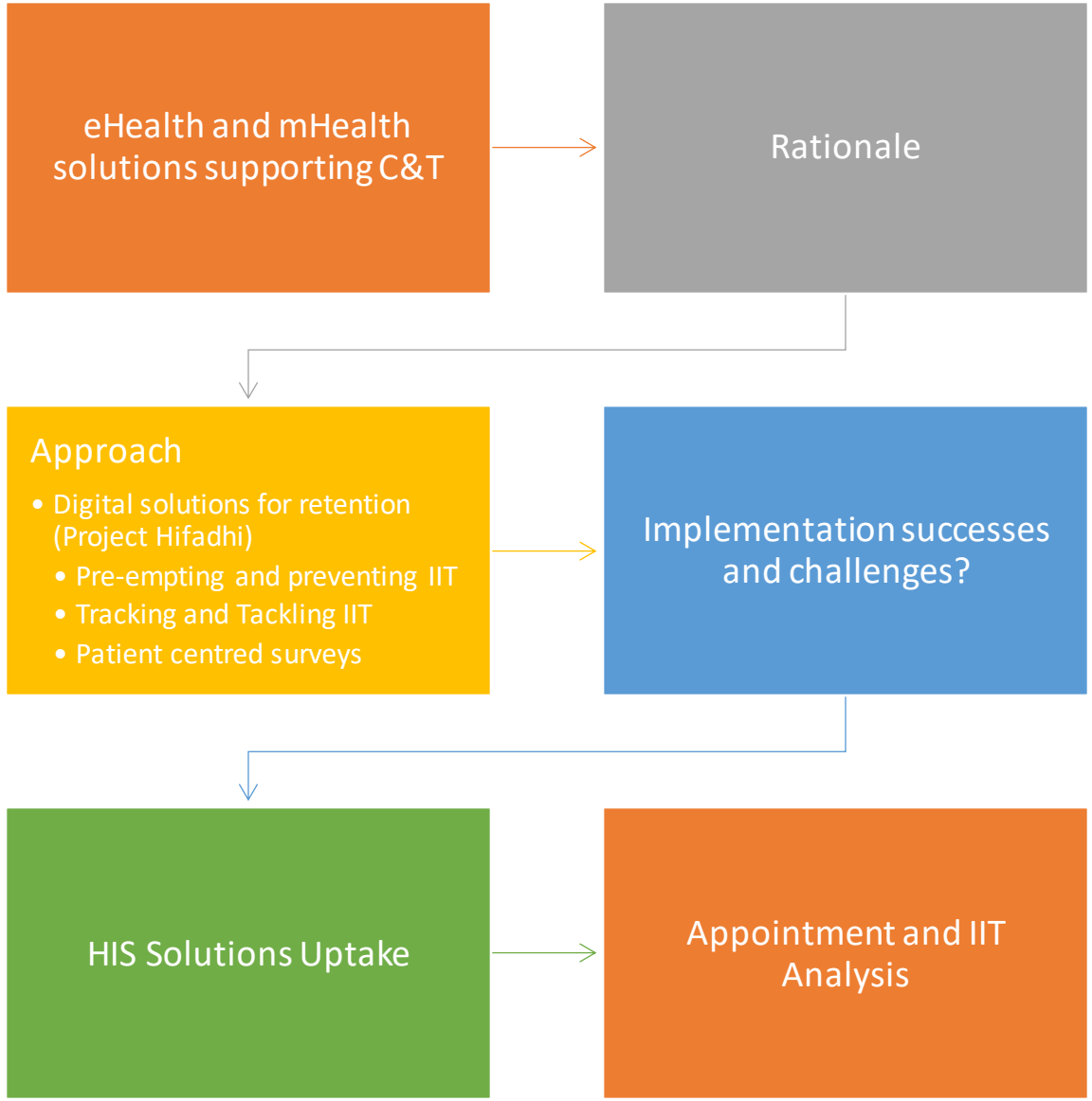
Continuity of Treatment (CoT)

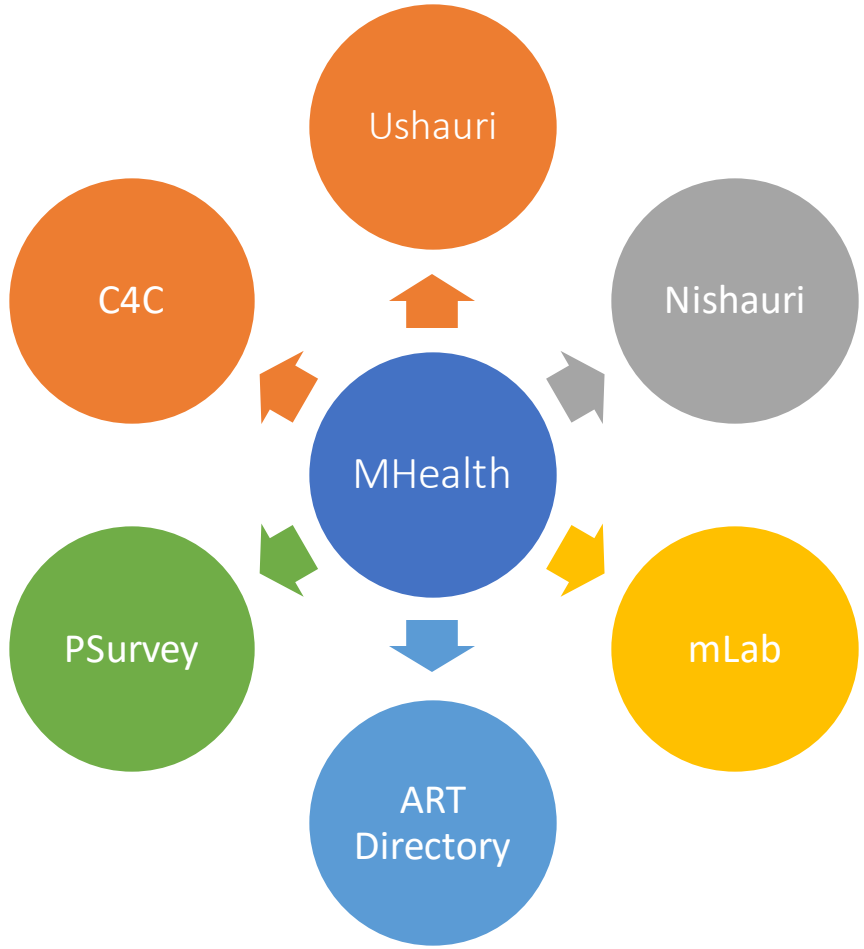
Missed opportunities and intensive approach

Presentation Outline



eHealth Modules Supporting C&T

mHealth Modules Supporting C&T



Rationale

The digital solution are designed and developed to address the need to:

1. Improve patient care management
2. Provide timely interventions through clinical decision support features
3. Seamlessly identify clients currently active on ART to support MOH and PEPFAR reporting
4. Send patient appointment reminders
5. Identify and track clients who miss their appointment
6. Track client movement across facilities
7. Understand client needs for program improvement

HIFADHI

HIV Treatment Continuity using Full Accountability of Data, Health Information Systems and Program Interventions

HIS Support for Hifadhi

01 – IIT Pre-empting & Prevention

- Robust appointment management (client profile),
- Use of USHAURI and Nishauri for appointment reminders
- Machine learning to predict IIT; IIT report and alerts
- Clinical decision support features i.e., missed appointment alerts

02 – IIT Tracking and Tackling

- Defaulter tracing form and register
- Ushauri Tracing module
- Appointment and attrition Report
- Comparison of two TX_CURR reports, IIT line lists tracking at all levels
- ART Directory for tracking client movement (TOs, transit).
- Mortality audits: understanding deaths among PLHIV to identify points of intervention, AHD detection and management

03 – WHAT NEXT: Patient Perspectives with pSurvey

- Understanding AHD who had dropped off treatment
- Understanding clients with previous history of dropping off treatment
- Understand causes of non viral suppression from a client perspective
- understand delayed linkage onto treatment program post HIV diagnosis

HIS features for Pre-empting and preventing IIT

HIS Support for Hifadhi: Client facing

Health System Challenge	Digital Health Intervention	Technology Solution

• Patients forgetting or missing appointment
• At risk patients miss appointments or become IIT more often
	• Send SMS reminders to all patients
	• Use of ML to target higher IIT Risk Clients with text messages
		• Ushauri
		  • SMS reminder
		  • Calling platform

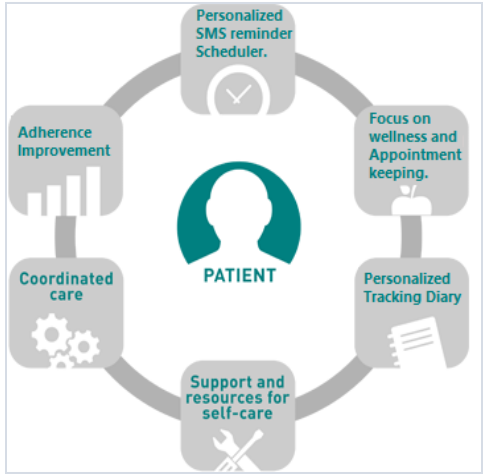
• Patients with smartphones do not like/read SMS
• Patients lack access to information about their treatment
	• Share reminders through a mobile app rather than SMS
	• Easily accessible data on mobile phone to empower and promote self-care/family care through easy tracking of own ART, weight VL, regimens
		• Nishauri personal Health Journal,
		  • FAQ
		  • SMS chatbot
		  • Family listing
		  • Weight monitoring

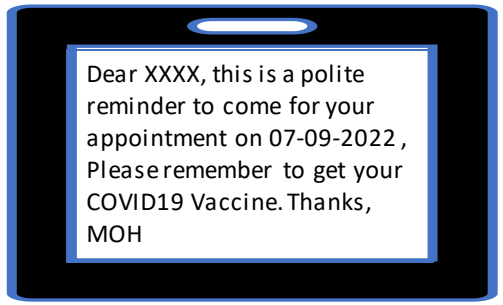


Pre-emptive Measures: Engaging clients through Ushauri

Ushauri helps providers engage clients via SMS for Optimal outcomes

USHAURI
Getting Better One Text At A Time





SMS text Reminder

Stakeholders/ Partners access reports interactive data dashboard through web portal

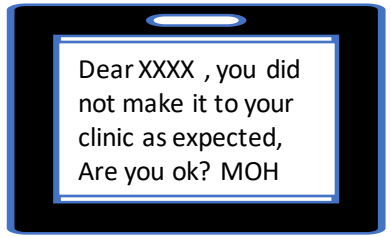
The care and treatment team can add new client, book a new appointment, and trace all defaulter using a mobile device.

Wellness text Message

Appointment date

Missed appointment

Defaulter tracing SMS Message & actions



An active and healthy Patient

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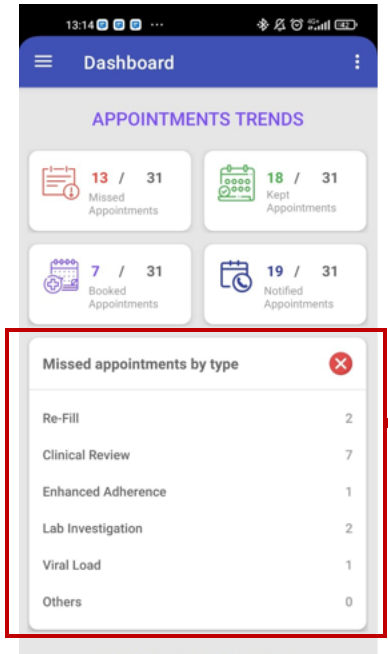
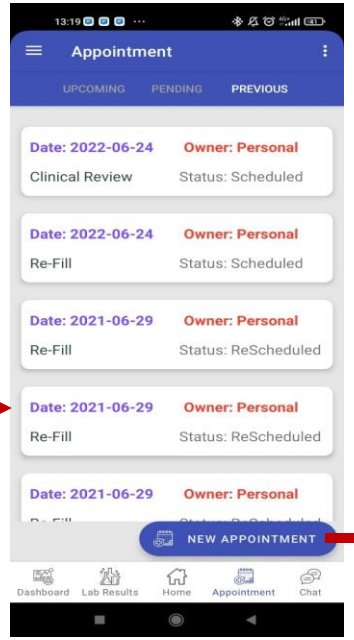
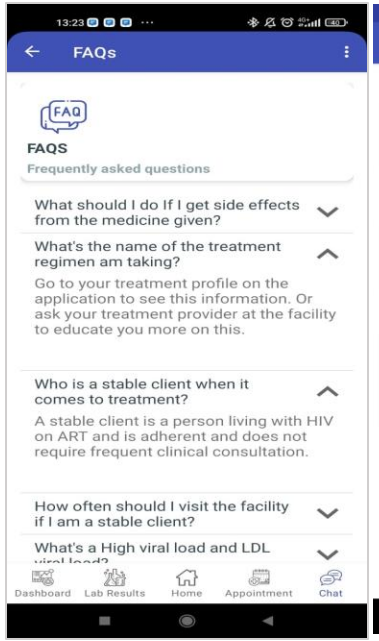
Pre-emptive Measures: Empowering clients through Nishauri

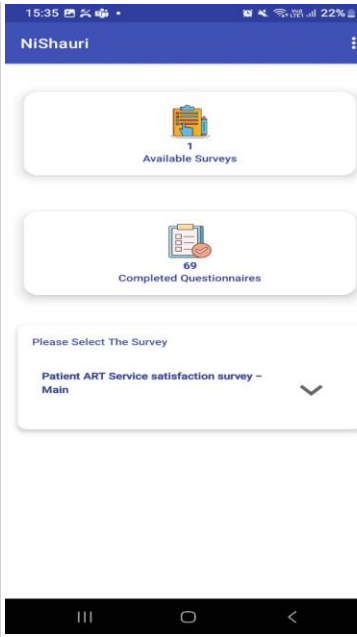
Nishauri is a smart phone application for use by patients as a personal health journal and for engaging with providers

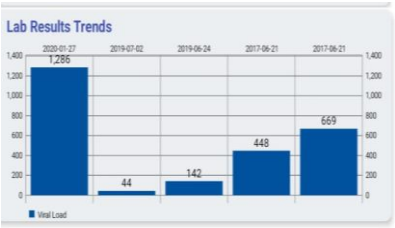
- Integrates all Ushauri services with additional features on VL, surveys and FAQs











- Clients can view their appointments by type
- Schedule and change their preferred appointment date

- View FAQs on HIV to improve their understanding and aid in awareness on care management
- Respond to targeted surveys for program improvement

Clients can view appointment keeping trends and their scores

Through Nishauri clients can also:

- Mother Baby Pairing
- Request VL results
- List their dependents

HIS Support for Hifadhi: Provider facing

Health System Challenge	Digital Health Intervention	Technology Solution
• Providers do not have access to information on missed appointments • Providers manually record tracing defaulter tracing attempts	• Provide appointment listing and honoring status in EMRs • Defaulter tracing form and register • Missed appointment tracking report	• Clinical Decision Support Features in EMR • Defaulter tracing and logging module in EMR • Return to Care form in EMR
• Providers have difficulty targeting interventions for IIT at risk clients during a clinical visit • Providers have inadequate information for targeted IIT prevention intervention for at risk clients • Providers have difficulty identifying IIT risk clients in between visits • Inability to link cases to case managers	• Alerts and flags on patient profile on IIT risk • IIT risk factors provided on patient profile • IIT at risk line-list with IIT risk category/Risk score/ appointment list • Linking cases to case managers	• HIFADHI IIT Clinical Decision Support in EMR and NDW • Missed appointment and IIT linelist in EMR • High IIT risk client linelist in EMR

Proactive Actioning: ML for Intelligent Decision Support

Intelligent decision support: Predicting clients at High IIT risk for action

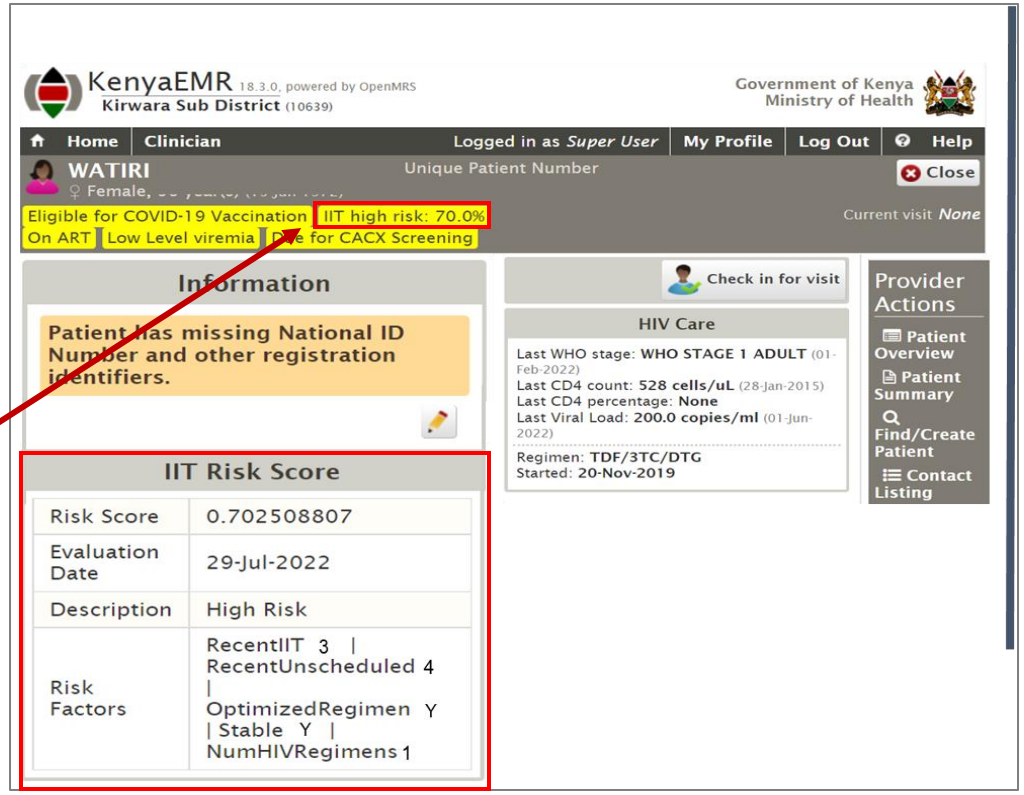
What is it?

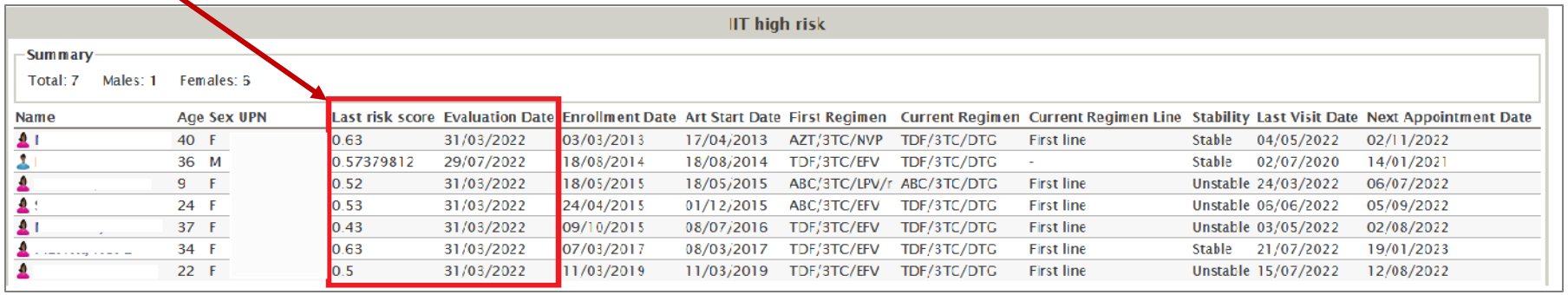
- An intelligent early warning solution that relies on a ML algorithm to flag patients at high risk of experiencing IIT

How it works at the frontline 1/2

- Clinical decision flags in EMRs to alert clinicians of patients at elevated risk of IIT
- Clinical risk factors relevant to client risk score
- High IIT risk patient line-list in EMRs.

Clinical decision support:
Intelligent Alerts and high IIT risk line-lists





Name	Age	Sex	UPN	Last risk score	Evaluation Date	Enrollment Date	Art Start Date	First Regimen	Current Regimen	Current Regimen Line	Stability	Last Visit Date	Next Appointment Date
I	40	F		0.63	31/03/2022	03/03/2013	17/04/2013	AZT/3TC/NVP	TDF/3TC/DTG	First line	Stable	04/05/2022	02/11/2022
I	36	M		0.57379812	29/07/2022	18/08/2014	18/08/2014	TDF/3TC/EFV	TDF/3TC/DTG	-	Stable	02/07/2020	14/01/2021
	9	F		0.52	31/03/2022	18/05/2015	18/05/2015	ABC/3TC/LPV/r	ABC/3TC/DTG	First line	Unstable	24/03/2022	06/07/2022
S	24	F		0.53	31/03/2022	24/04/2015	01/12/2015	ABC/3TC/EFV	TDF/3TC/DTG	First line	Unstable	05/06/2022	05/09/2022
I	37	F		0.43	31/03/2022	09/10/2015	08/07/2016	TDF/3TC/EFV	TDF/3TC/DTG	First line	Unstable	03/05/2022	02/08/2022
	34	F		0.63	31/03/2022	07/03/2017	08/03/2017	TDF/3TC/EFV	TDF/3TC/DTG	First line	Stable	21/07/2022	19/01/2023
	22	F		0.5	31/03/2022	11/03/2019	11/03/2019	TDF/3TC/EFV	TDF/3TC/DTG	First line	Unstable	15/07/2022	12/08/2022

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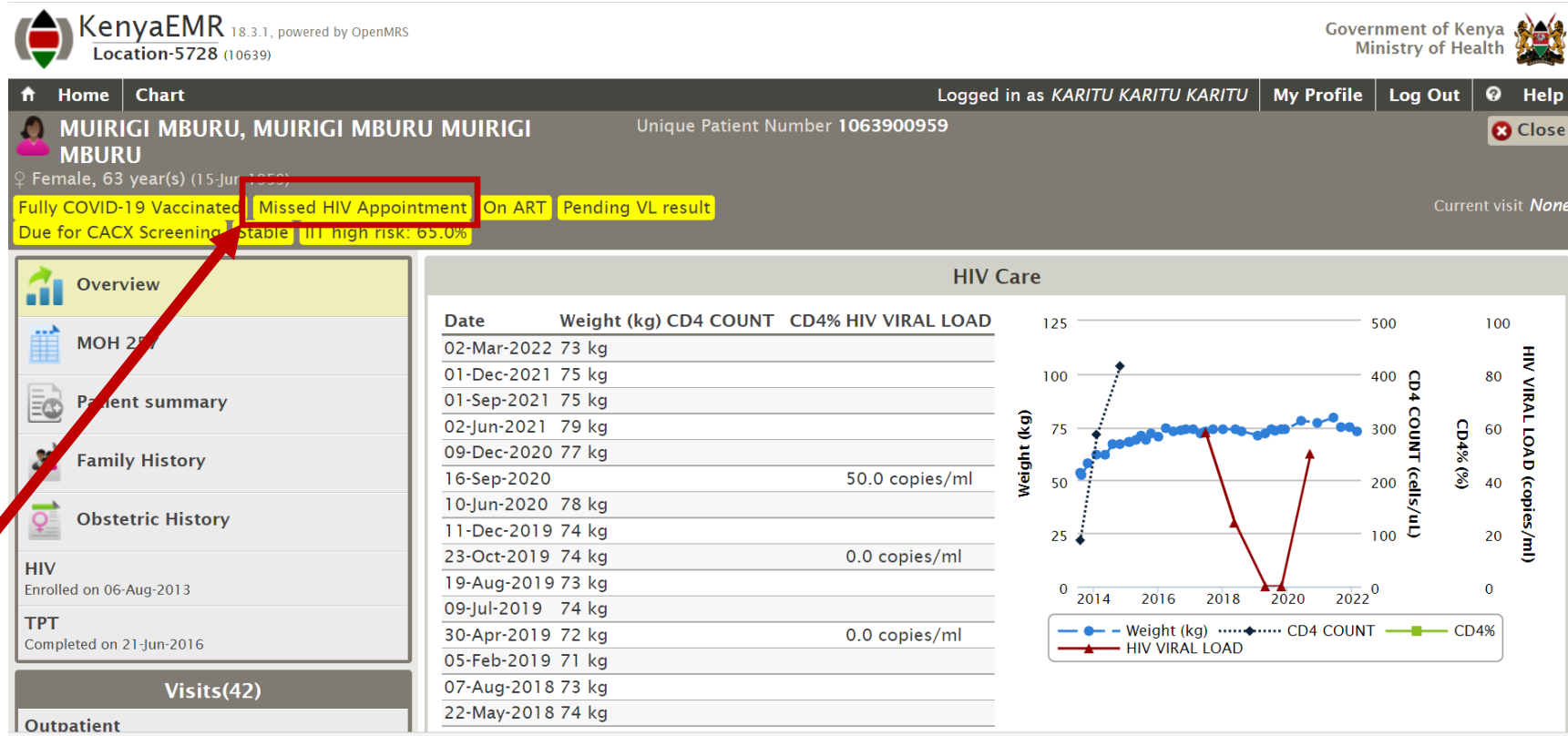
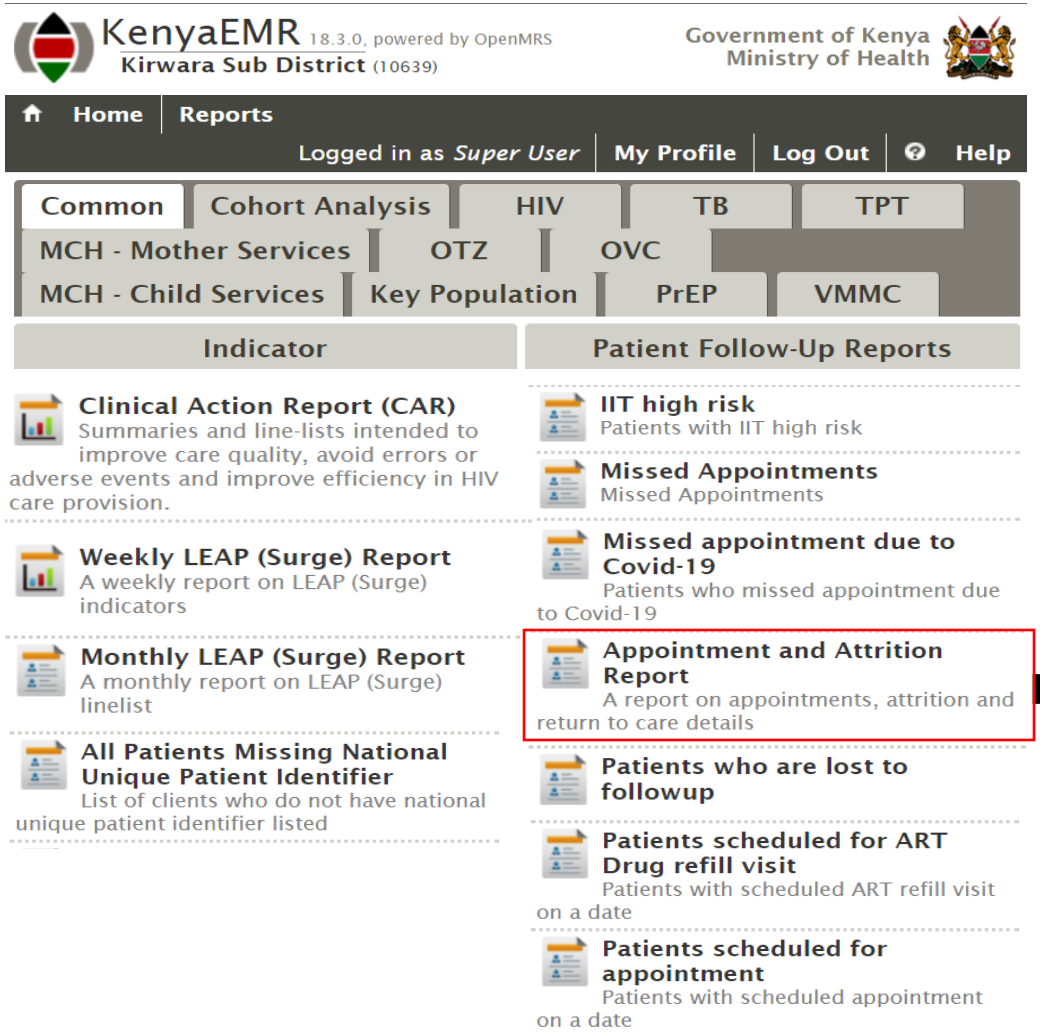
Clinical decision support features for service eligibility & patient status

- Upon checking in a client, Providers will see Patient status
  - Summary page has useful summaries and encounter forms
  - Provides visual Clinical Decision Support flags/alerts on:
    - Service eligibility
    - ART regimen
    - Patients' status based on last appointment *
    - IIT risk score
    - Other flags



IIT Prevention : Missed appointment tracking and corresponding reports

KenyaEMR reports that support missed appointment tracking and patients that have experienced IIT



Availability of appointment, attrition and return to care indicators and line lists for all indicators.

Appointment, Attrition and Return To Care Indicators		
Health Facility: XXXX Sub County Hospital MFL Code: XXXXX		
Reporting period: Month:January Year:2022		
	Indicator	**Number of Patients**
1.0	Current on ART	856
2.0	Appointments scheduled within reporting period	927
3.0	All clients scheduled within reporting period and missed their appointment	80
4.0	Clients who were missed appointment and returned to care within 7 days since their interruption	56
5.0	Clients who were missed appointment and returned to care between 8 and 30 days since their interruption	17
6.0	Clients who have missed an appointment for more than 30 days	7
7.0	Clients who were missed appointment and returned to care after 30 days since their interruption	2
8.0	Clients who have missed appointment for more than 30 days and have not yet returned to care as of reporting date	5

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Appointment Management and Attrition Report

Linelist of Patients Appointments and Attrition

Health Facility: XXXXX MFL Code: XXXXX

Reporting period: Month:July Year:2022

CCC No	NUPI	DOB	Age at Reporting	Telephone No	Sex	Popolation Type	Date confirmed HIV Positive	Date enrolled in HIV	ART Start Date	Current Regimen	Last VL Result	Last VL Date	Last Visit Date	Appointment Date
1[redacted]		05/08/1985	36	[redacted]	M	General Po	03/07/2014	03/07/2014	03/07/2014	TDF/3TC/DTG	LDL	30/06/2022	05/07/2022	05/07/2022
1[redacted]		15/06/2008	14	[redacted]	F		21/11/2011	23/11/2011	02/02/2012	TDF/3TC/DTG	LDL	26/04/2022	07/07/2022	06/07/2022
1[redacted]		15/06/1986	36	[redacted]	F		22/03/2013	28/03/2013	12/04/2013	TDF/3TC/DTG	LDL	08/04/2021	18/07/2022	28/07/2022
1[redacted]		15/06/1984	38	[redacted]	F	General Po	14/09/2012	14/09/2014	08/08/2016	AZT/3TC/ATV/r	LDL	19/01/2021	05/07/2022	05/07/2022
1[redacted]		12/12/1989	32	[redacted]	F	General Po	30/07/2014	09/03/2014	31/07/2014	TDF/3TC/DTG	25724	03/02/2022	01/07/2022	01/07/2022
1[redacted]		21/06/1987	35	[redacted]	F	General Po	24/12/2009	11/02/2009	26/10/2011	TDF/3TC/DTG	LDL	03/02/2022	14/07/2022	14/07/2022
1[redacted]		15/06/1990	32	[redacted]	F	General Po	08/10/2012	15/05/2013	18/08/2016	TDF/3TC/DTG	LDL	05/04/2022	05/07/2022	05/07/2022
1[redacted]		18/08/1976	45	[redacted]	F	General Po	02/12/2013	03/12/2013	07/07/2015	TDF/3TC/DTG	LDL	22/10/2020	06/07/2022	06/07/2022
1[redacted]		03/06/2003	19	[redacted]	F	General Po	09/08/2011	09/08/2011	09/06/2015	AZT/3TC/ATV/r	LDL	13/04/2022	24/06/2022	21/07/2022
1[redacted]		15/06/1977	45	[redacted]	F		15/09/2011	28/09/2011	06/03/2012	TDF/3TC/DTG	LDL	22/01/2021	07/07/2022	06/07/2022
1[redacted]		21/06/2006	16	[redacted]	M	General Po	02/12/2011	06/12/2011	06/03/2012	AZT/3TC/ATV/r	3521	17/02/2022	04/07/2022	01/07/2022
1[redacted]		15/06/2002	20	[redacted]	F		10/01/2012	19/01/2012	28/01/2014	TDF/3TC/DTG	LDL	17/12/2020	12/07/2022	07/07/2022
1[redacted]		15/06/2009	13	[redacted]	M	General Po	16/04/2012	24/04/2012	14/05/2013	ABC/3TC/DTG	LDL	12/04/2022	06/07/2022	06/07/2022
1[redacted]		15/06/1985	37	[redacted]	F		02/05/2012	10/05/2012	25/06/2015	TDF/3TC/EFV	LDL	22/02/2022	16/05/2022	20/07/2022
1[redacted]		15/06/1968	54	[redacted]	F	General Po	06/06/2012	12/06/2012	03/04/2014	TDF/3TC/DTG	0	23/04/2020	11/07/2022	11/07/2022
1[redacted]	[redacted]	15/06/1971	51	[redacted]	F	General Po	07/08/2012	14/08/2012	14/10/2013	TDF/3TC/EFV	LDL	10/05/2022	23/06/2022	26/07/2022
1[redacted]		15/06/2007	15	[redacted]	F	General Po	19/02/2013	20/02/2013	13/03/2014	TDF/3TC/DTG	LDL	06/04/2021	07/07/2022	07/07/2022
1[redacted]		22/02/1980	42	[redacted]	F	General Po	25/02/2013	26/02/2013	03/03/2014	TDF/3TC/EFV	LDL	11/04/2022	22/06/2022	27/07/2022
1[redacted]		15/06/2008	14	[redacted]	F	General Po	01/03/2013	23/03/2013	12/04/2013	ABC/3TC/DTG	LDL	14/10/2020	18/07/2022	28/07/2022

Indicators | **Patient Appointments** | Missed Appointments | RTC <7 days after Missed Appt | ...

The available line lists in the workbook

An output in excel format from the KenyaEMR system on Appointment and attrition report

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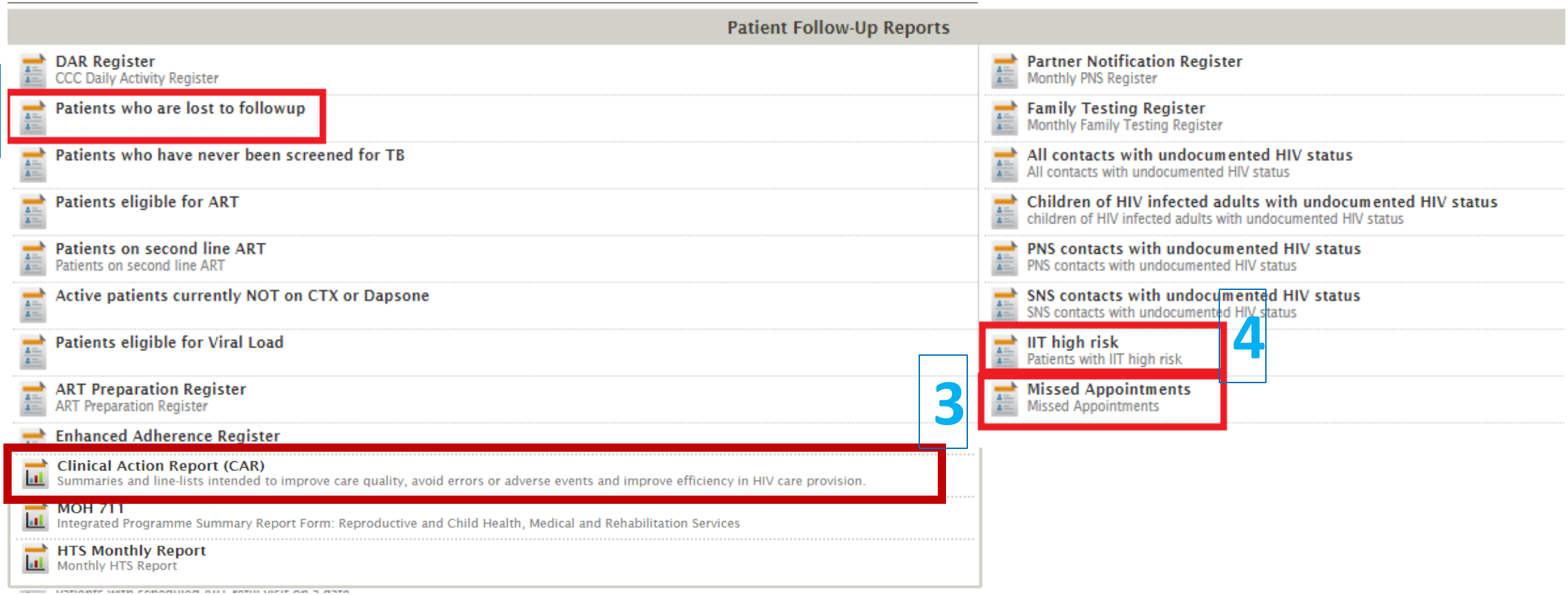
Tracking and Tackling IIT: Corrective Measures

Standard Reports

- Provides a one stop point for identification of program gaps
- Allows for reviews on status of facilities' HIV program for post event corrective action
- Form a basis for quality improvement discussions by care teams



Actionable oriented reports: Clinical Action Report

- Provides a one stop point for gaps identification in areas of high priority for the program
- Form a basis for quality improvement team discussions
- As with other standard reports, allows for drill down to patient levels
- It's a call to action for health care providers to achieve improved health outcomes

Clinical Action Report (CAR)

Description

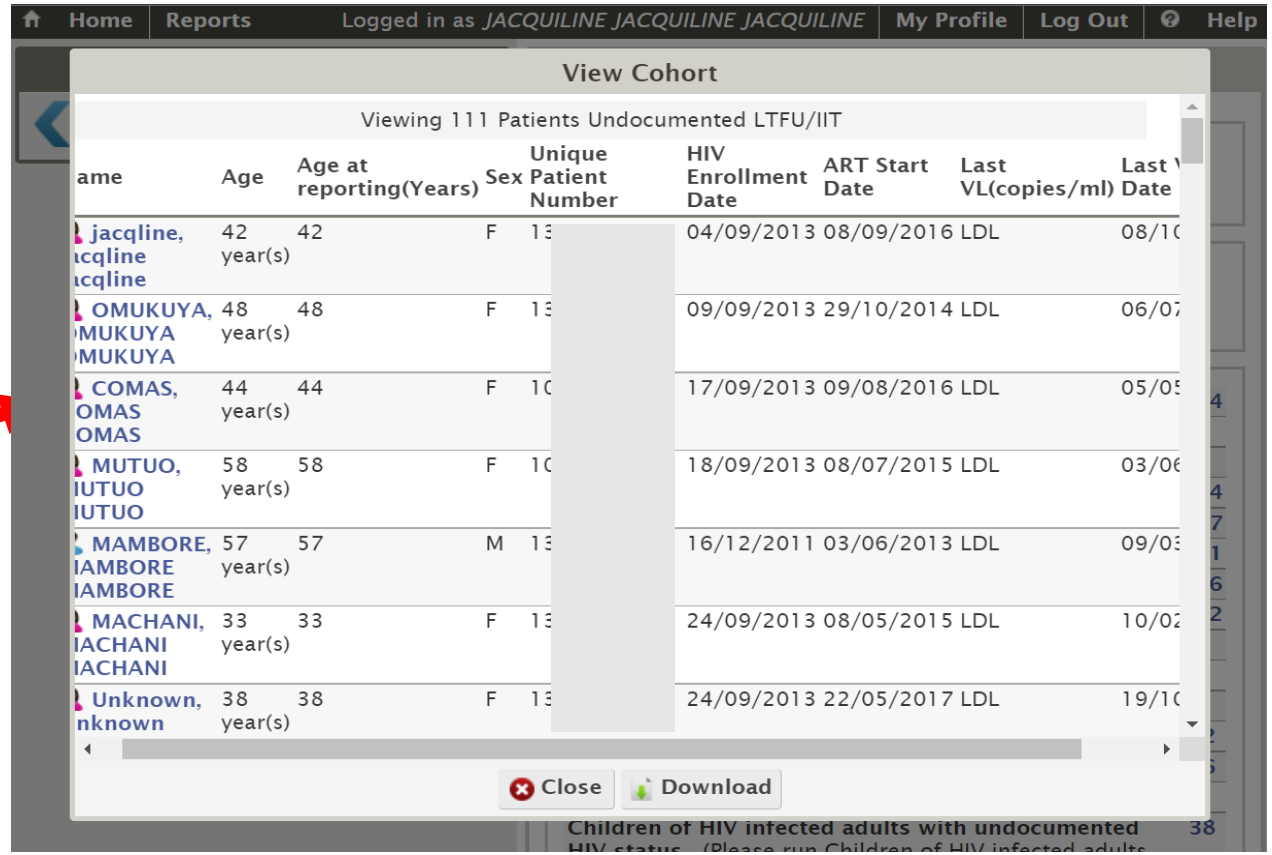
Summaries and line-lists intended to improve care quality, avoid errors or adverse events and improve efficiency in HIV care provision.

Parameters

Start Date: **01-Apr-2022**
End Date: **30-Jun-2022**
: **-1**

Clinical-Action: Clinical Action Report

Current on ART without valid VL	343
Current on ART with Unsuppressed Valid VL	2
Current on ART with Unsuppressed invalid VL	4
Current on ART Clients without NUPI	377
Recent defaulters (Missed appointment within 30 days)	353
Undocumented LTFU/IIT	899
Not Vaccinated for Covid-19	231
Not Assessed for Covid-19 vaccination	153
CALHIV not on DTG regimen	1
CALHIV not enrolled in OVC	3
Adolescents not enrolled in OTZ	2
HEI with undocumented HIV status	72
HEI not Linked to Mothers	37
HIV+ and NOT Linked	3
Children of HIV infected adults with undocumented HIV status (Please run Children of HIV infected adults with undocumented HIV status for linelist)	38
PNS Contacts with undocumented HIV status (Please run PNS contacts with undocumented HIV status for linelist)	27
SNS Contacts with undocumented HIV status (Please run SNS contacts with undocumented HIV status for linelist)	0
Number of deaths (Please run mortality linelist for details)	0



Accounting for all attritions : IITs

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Ministry of Health

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TX CURR Line lists (Monthly)

Description

TX CURR Linelists showing differences in TX CURR numbers at different reporting dates

Parameters

End Date: **01-Aug-2022**

TX Curr Line Lists - Monthly Indicator: Shows differences between two reporting dates in terms of patients include/excluded

Number of patients present in the current report but missing in previous report	9
New on ART	2
Return to Care	3
Transfer in	1
Number of patients present in the previous report but missing in the current report	9
Died	0
Lost to followup	8
Transferred Out	1
Stopped Treatment	0

KenyaEMR allows comparisons between two reporting time periods and the patients that have been added or lost.

View Cohort

Viewing 9 Patients Number of patients present in the previous report but missing in the current report

Name	Age	Age at reporting(Years)	Sex	Unique Patient Number	HIV Enrollment Date	ART Start Date	Last VL(copies/ml)	Last VL Date
Wamii, Wamii Wamii	52 year(s)	52	M		17/01/2013	25/06/2015	0.0	24/01/2020
NYAMBURA KIRAGU, NYAMBURA KIRAGU NYAMBURA KIRAGU	63 year(s)	63	F		16/06/2009	26/08/2009	LDL	29/06/2020
NJERI KIGIA, NJERI KIGIA NJERI KIGIA	37 year(s)	37	F		12/04/2016	12/04/2016	LDL	26/08/2020
Wangu, Wangu Wangu	29 year(s)	29	F		29/06/2016	29/06/2016	58405.0	06/08/2018
Nyamboke, Nyamboke Nyamboke	56 year(s)	56	M		02/03/2020	15/03/2021		
Loreen, Loreen Loreen	44 year(s)	43	F		18/09/2020	18/09/2020	LDL	27/04/2021
Gachuri, Gachuri Gachuri	46 year(s)	46	M		28/04/2021	28/04/2021		
WAITHERA NJERI, WAITHERA NJERI	39 year(s)	38	M		01/08/2021	01/08/2021		

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HIS Support for Hifadhi: Care coordination

Health System Challenge	Digital Health Intervention	Technology Solution
• Providers in two facilities are unable to coordinate transfers • Providers do not know when to expect a transfer • Feedback mechanism for transfers arrival/completion • Inadequate data on transfer completion	• Alert system notifying providers in different facilities on transfers • Notification to receiving facilities on TCA for transferring patients • Notification for transfer arrival • Analytics on transfer for program use	• ART Directory and Referral System • Referral Analytics

Accounting for all attritions: Transfer Ins and Outs

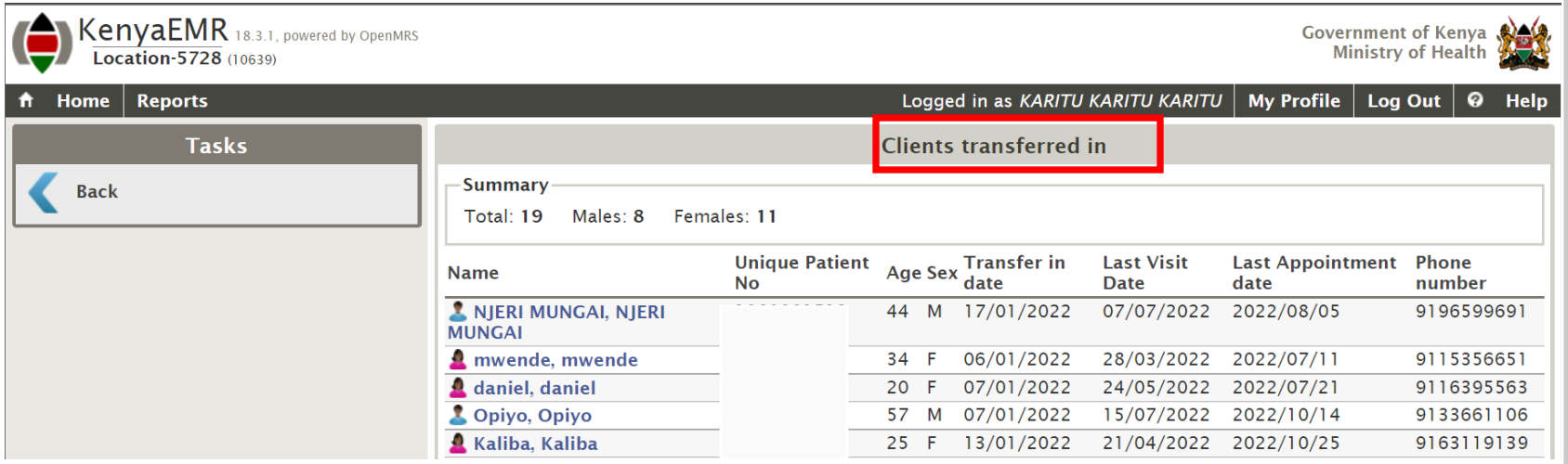
- Standard report and line list for transfer out and transfer in clients by period
  - Captures whether successful TO verification is achieved for continuity of care

Clients transferred out

Summary

Total: 26 Males: 7 Females: 19

Name	Unique Patient No	Age	Sex	Transfer out date	Transfer out effective date	Transfer out verified	Transfer out verification date	Last Visit Date	Last Appointment date	Phone number
Kiboshi, Kiboshi		60	F	04/04/2022	04/04/2022	-	-	17/01/2022	2022/04/04	9135536093
Wachu, Wachu		21	F	28/04/2022	28/04/2022	Yes	28/04/2022	23/03/2022	2022/04/25	9111339906
Muireri, Muireri		46	F	11/04/2022	11/04/2022	Yes	11/04/2022	06/12/2021	2022/05/16	9139316603
Bwan, Bwan		46	F	31/03/2022	31/03/2022	No	-	28/02/2022	2022/03/28	9195910190
Munga, Munga		34	F	14/03/2022	14/03/2022	No	-	11/03/2021	2021/04/15	9191191010
NJERI KIGIA, NJERI KIGIA		37	F	30/06/2022	06/07/2022	Yes	30/06/2022	02/03/2022	2022/08/30	9196199969
WAMBUI GICHAGU, WAMBUI GICHAGU		46	F	24/06/2022	23/09/2022	Yes	24/06/2022	24/06/2022	2022/09/23	9191566593
WANGUI NGARACHU, WANGUI NGARACHU		29	M	14/03/2022	14/03/2022	No	-	28/07/2021	2021/10/27	9191016931



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Location-5728 (10639)

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Ministry of Health

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Clients transferred in

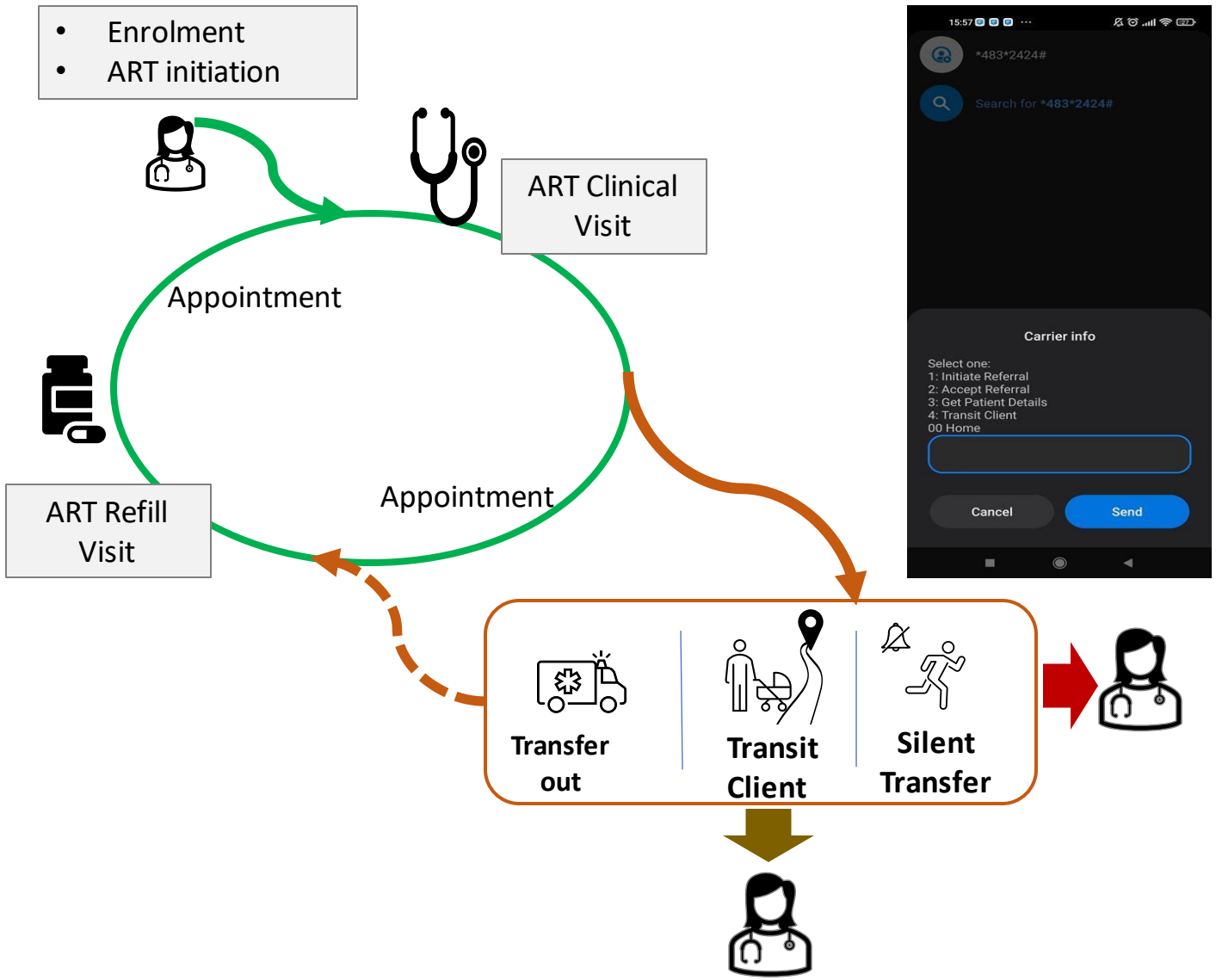
Summary

Total: 19 Males: 8 Females: 11

Name	Unique Patient No	Age	Sex	Transfer in date	Last Visit Date	Last Appointment date	Phone number
NJERI MUNGAI, NJERI MUNGAI		44	M	17/01/2022	07/07/2022	2022/08/05	9196599691
mwende, mwende		34	F	06/01/2022	28/03/2022	2022/07/11	9115356651
daniel, daniel		20	F	07/01/2022	24/05/2022	2022/07/21	9116395563
Opiyo, Opiyo		57	M	07/01/2022	15/07/2022	2022/10/14	9133661106
Kaliba, Kaliba		25	F	13/01/2022	21/04/2022	2022/10/25	9163119139

KeHMIS

Accounting for all attritions: Tracking patient movements via ART e-Directory



Enhancements to improve tracking of patient movement Across Facilities

Features

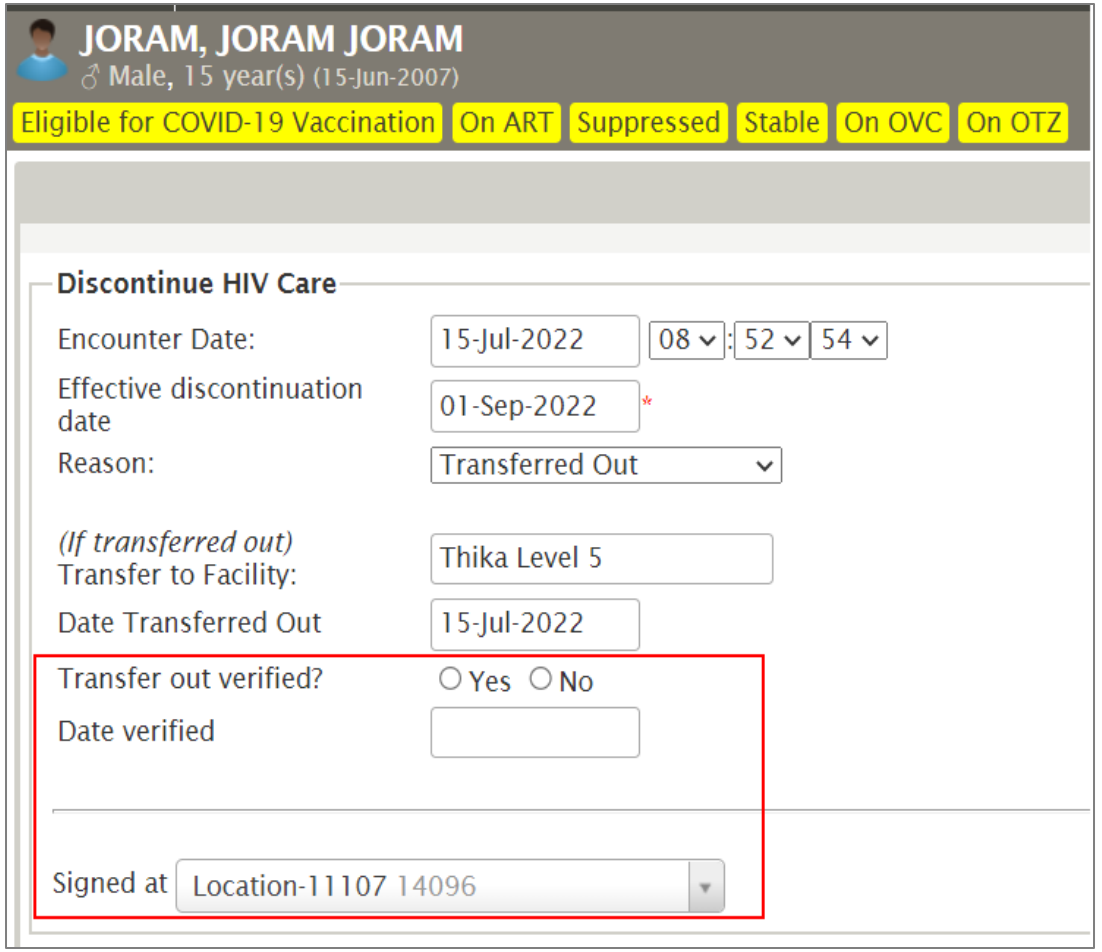
- Through ART directory providers can:
- Set and share their facility contact
- Search other facilities contacts to:
  - Notify them of a TO
  - Verify TO completion
  - Other reasons
- Enable facilities set their contact more easily
- An electronic referral process
  - **Initiate and Accept** transfer of patients
  - Feedback on **Transfer Completion** between facilities
  - Notify a patient home facility of **Silent Transfers**
  - Notify a patient's home facility of **Transit** patients

KeHMIS

EMR feature that track growth of HIV treatment cohort

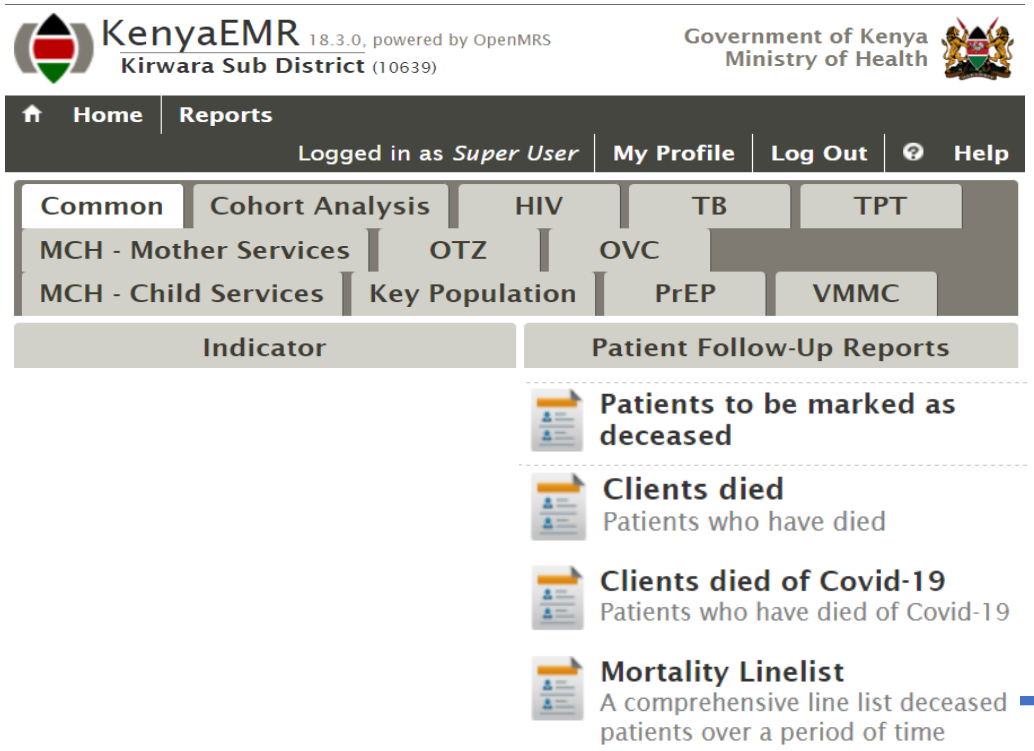
Tracking Transfers Out of HIV treatment cohort

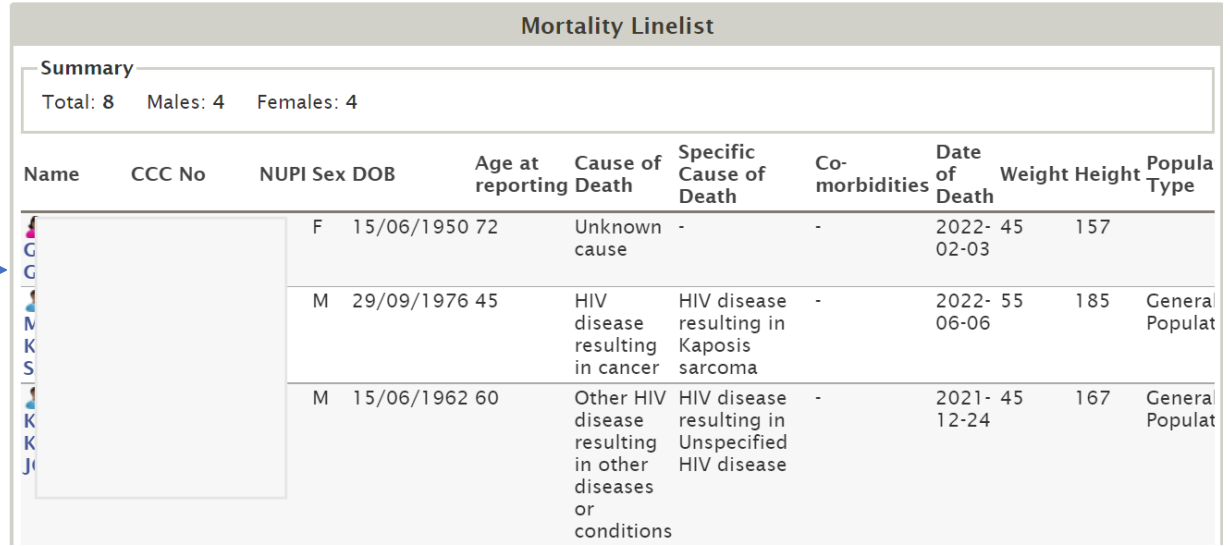
- Studies have shown that cases of IIT often result from improperly managed patient transfers
- KenyaEMR supports users to record exits and verify transfers
  - Patients can be transferred Out
  - Completion of transfers can be documented through KenyaEMR's TO verification feature
  - Through ART Directory, providers will now better coordinate client movement through real time notifications



KeHMIS

Accounting for all attritions: Deaths





Mortality Linelist

Summary

Total: 8 Males: 4 Females: 4

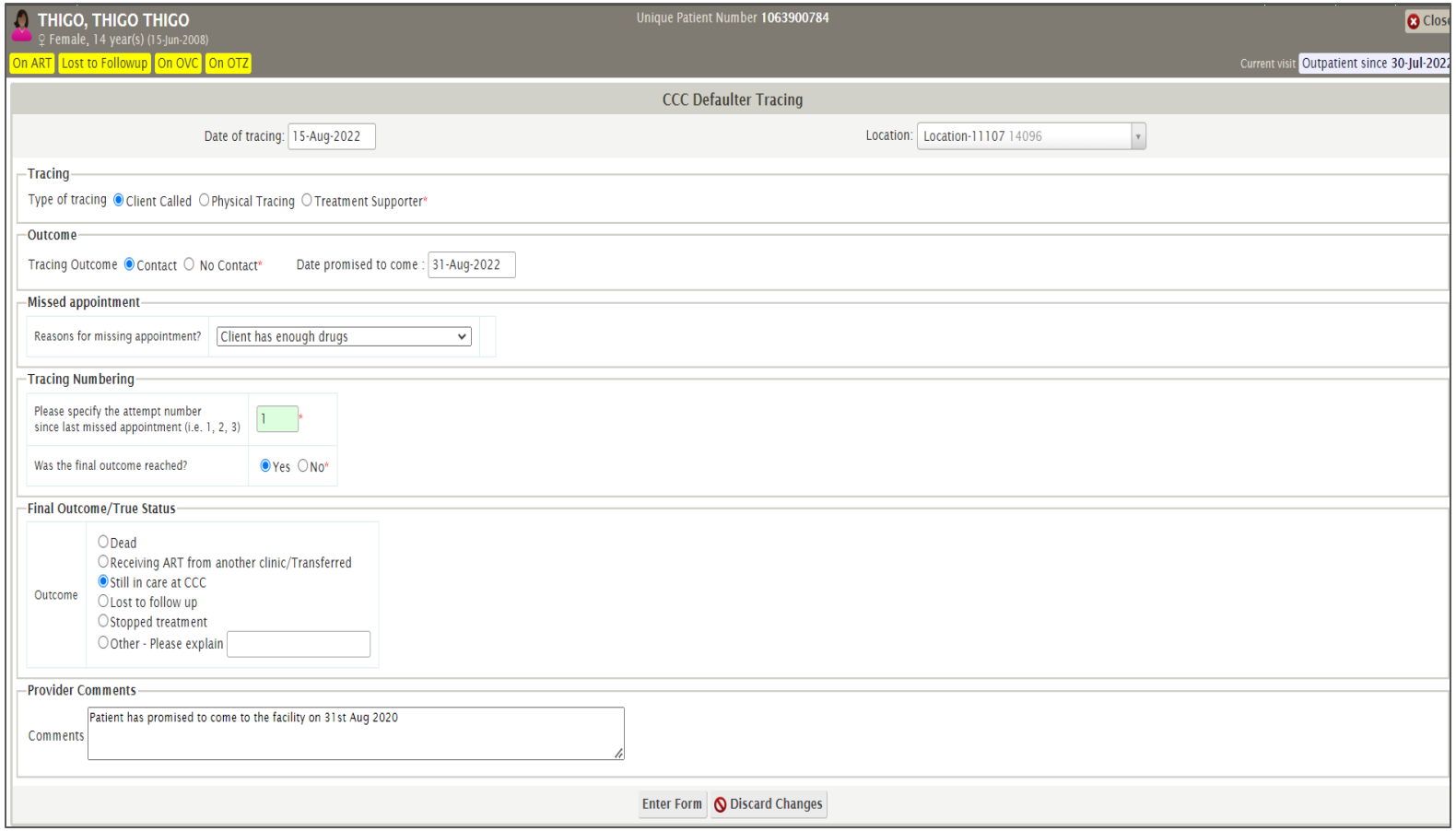
Name	CCC No	NUPI	Sex	DOB	Age at reporting	Cause of Death	Specific Cause of Death	Co-morbidities	Date of Death	Weight	Height	Popula Type
G G			F	15/06/1950	72	Unknown cause	-	-	2022-02-03	45	157	
M K S			M	29/09/1976	45	HIV disease resulting in cancer	HIV disease resulting in Kaposis sarcoma	-	2022-06-06	55	185	General Populat
K K J			M	15/06/1962	60	Other HIV disease resulting in other diseases or conditions	HIV disease resulting in Unspecified HIV disease	-	2021-12-24	45	167	General Populat

- 37 indicators are available in the Mortality report
- Report can be viewed or downloaded in CSV or Excel format

Name; CCC No; NUPI; DOB; Weight; Age at Reporting; Sex; Population Type; Date confirmed HIV Positive; Date enrolled in HIV; ART Start Date; Cause of death; Specific cause of death; Date of death; First Regimen; Current Regimen; Current Regimen Line; Last WHO Stage; Last WHO Stage Date; Last VL; Last VL Validity; Last VL Justification; Last VL Date; Active in PMTCT; Active in OVC; Active in OTZ; Active in TB; IPT Start Date; IPT Outcome; IPT Outcome Date; Stability; Differentiated Care Model; Last Visit Date; Self Visit Date; Next Appointment Date; Months of Prescription; Refill Date

Defaulter tracing using KenyaEMR

- In this case example, the patient is LTFU/ IIT
- Provider may access clients' record for tracing purposes
- KenyaEMR supports different approaches for defaulter tracing
  - Providers can conduct defaulter tracing in person or via phone
  - Supports multiple attempts and record outcomes of each attempt
  - Final Outcome of tracing efforts are recorded
  - The output of tracing efforts is availed on defaulter tracing register or missed appointment tracking report

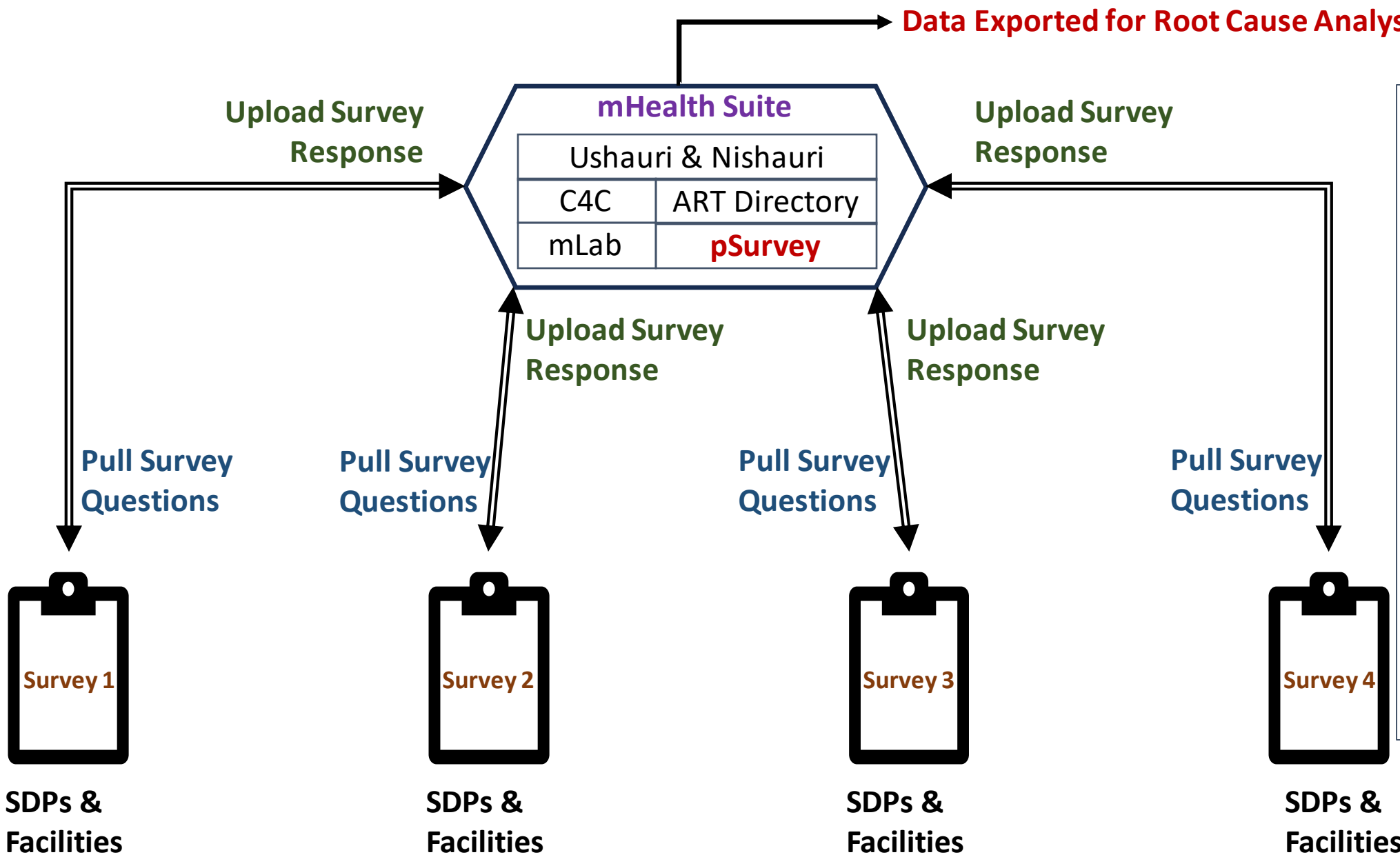


Missed Appointment Tracking Report

Name	id	Date of Birt	Age	Sex	Telephor	Unique P	Village_E	Date app	Date App	No of da	Tracing attempt	Tracing method	Last Tracing Date	Last Tracing outcom	Date patient promised to com	Final outcome	Last Tracing comment	Patient status	Effective Discontinuation Dat	RTC Date	Case Manage
	319	15/06/1984	39	F	9.1E+09	1.2E+09	kikoko|tu	########	31/08/20	0								Active			
	613	15/06/1983	40	F	9.2E+09	1.3E+09	ndiani|ka	########	31/08/20	0								Active			
	722	15/06/1986	37	F	9.1E+09	1.2E+09	Kaluli|Ka	########	31/08/20	0								Active			
	479	15/06/1961	62	F	9.1E+09	1.2E+09	ndiani|N	15/03/20	31/08/20	0								Active			
	4007	15/06/1991	32	F	9.1E+09	1.2E+09	KINZE	########	31/08/20	0								Active			
	702	11/5/1995	28	F	9.2E+09	1.2E+09	KILUNGU|	########	31/08/20	0								Active			
	172	2/5/1988	35	F	9.1E+09	1.2E+09	mukaa|ki	########	31/08/20	0								Active			
	2481	15/06/1966	57	F	9.2E+09	1.8E+09	kilungu|K	########	31/08/20	0								Active			
	2462	15/06/1961	62	F	9.1E+09	1.2E+09	kilungu|N	########	31/08/20	0								Active			
	2012	15/06/1980	43	F	9.1E+09	1.2E+09	ikalyoni|	17/03/20	29/08/20	2								Active			
	504	15/06/1968	55	F	9.1E+09	1.2E+09	maiani|k	16/03/20	29/08/20	2								Active			
	2648	15/06/1956	67	F	9.1E+09	1.8E+09	MUTANDA	14/03/20	29/08/20	2								Active			
	2636	15/06/1953	70	M	9.1E+09	1.2E+09	Mutanda	14/03/20	29/08/20	2								Active			
	107	15/06/1959	64	F	9.1E+09	1.2E+09	musalala	14/03/20	29/08/20	2	1	Client Called	30/08/2023	Contact	30/08/2023	Still in care at CCC		Active			
	634	15/06/1988	35	F	9.2E+09	1.2E+09	kithangat	########	28/08/20	3								Active			
	726	27/02/1989	34	F	9.1E+09	1.1E+09	Kalongo|	19/07/20	25/08/20	6								Active			
	160	15/10/2004	18	F		1.2E+09	kathanga	########	25/08/20	6								Active			
	340	15/06/1972	51	F	9.1E+09	1.2E+09	maiani|k	########	25/08/20	6								Active			
	340	15/06/1972	51	F	9.1E+09	1.2E+09	maiani|k	16/06/20	25/08/20	6								Active			
	4253	2/2/1986	37	F	9.1E+09	1.3E+09	Kithia|Kil	27/07/20	24/08/20	7								Active			
	459	15/06/1975	48	F	9.1E+09	1.2E+09	kithangat	31/05/20	24/08/20	7								Active			
	2258	15/06/1988	35	F	9.2E+09	1.2E+09	kaluluma	24/07/20	23/08/20	8								Active			
	565	15/06/1988	35	M	9.2E+09	1.2E+09	kajiando	24/07/20	23/08/20	8								Active			
	54	16/02/1992	31	M	9.1E+09	1.2E+09	Maiani|N	27/07/20	23/08/20	8								Active			
	352	15/02/1976	47	M	9.1E+09	1.2E+09	Ndumani	24/07/20	23/08/20	8								Active			

Patient Centred Surveys

Patient Engagement: Undertaking Root Cause Analysis for improved program outcomes using pSurvey

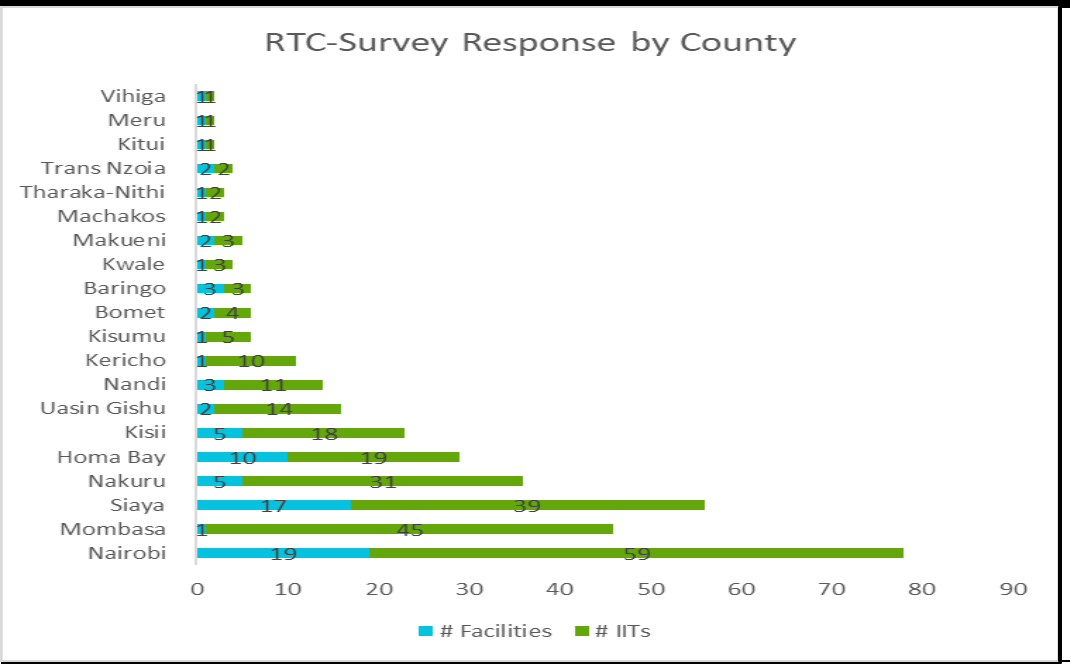


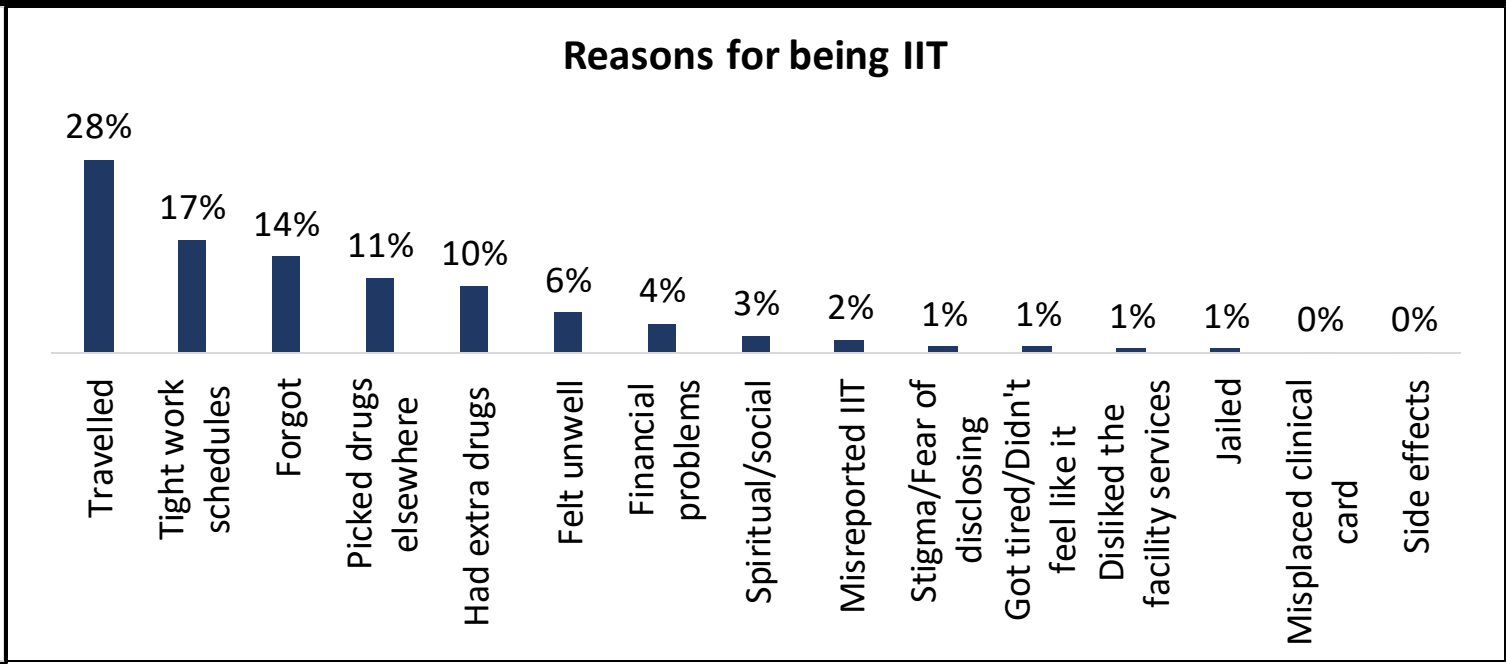
Consolidating Surveys implemented on pSurvey by different stakeholders

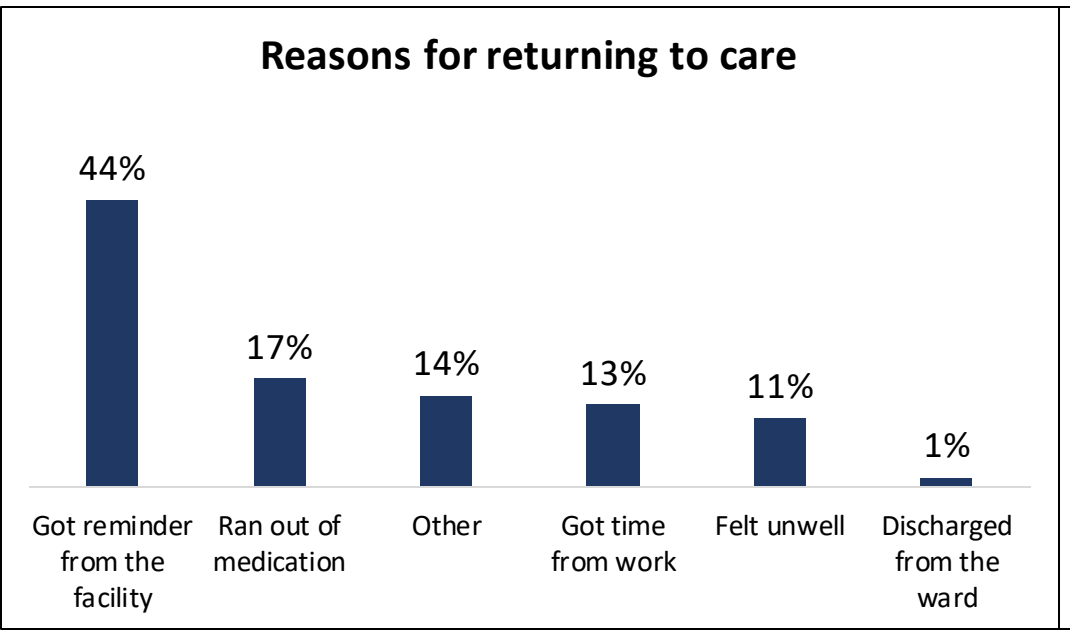
Types of Surveys:

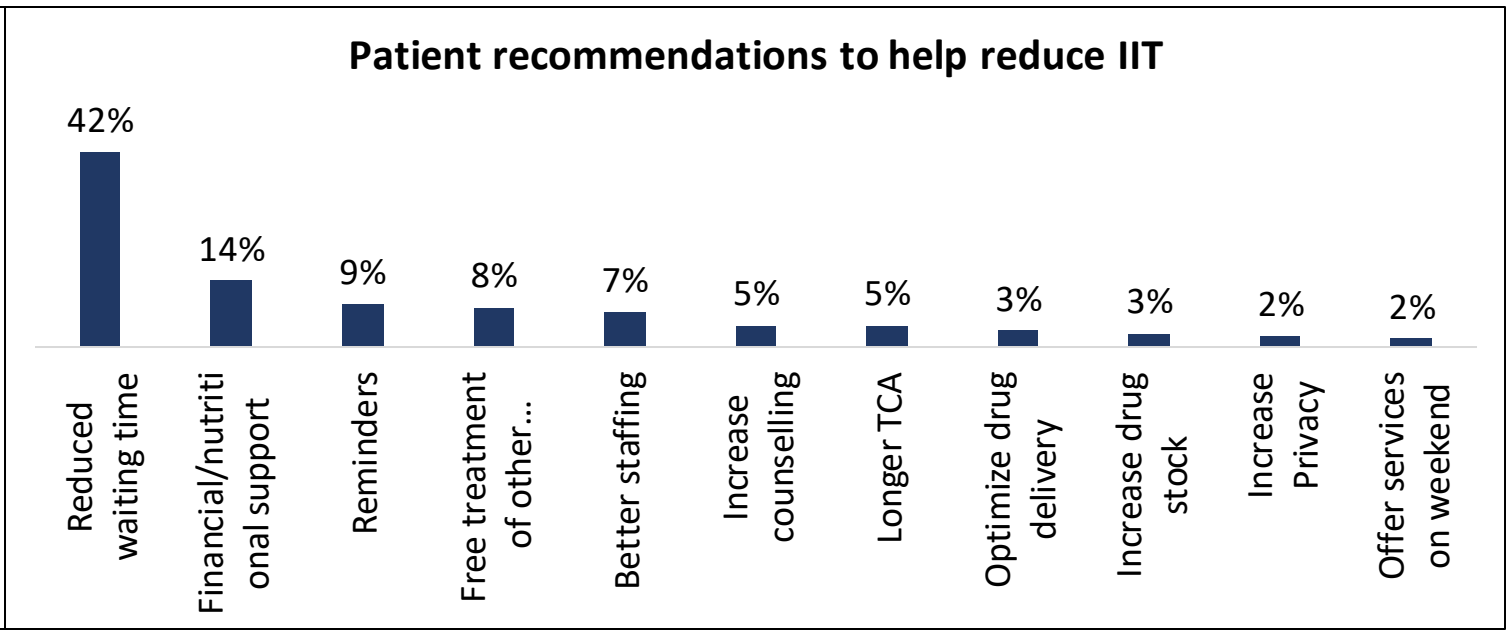
- MOH & CDC initiated Survey eg ART verification
- HIS Partner initiated surveys eg LTFU Survey
- Service Delivery Partner initiated surveys on program gaps

Use case: RTC pSurvey to understand patient perspectives of factors contributing to IIT (n=274)



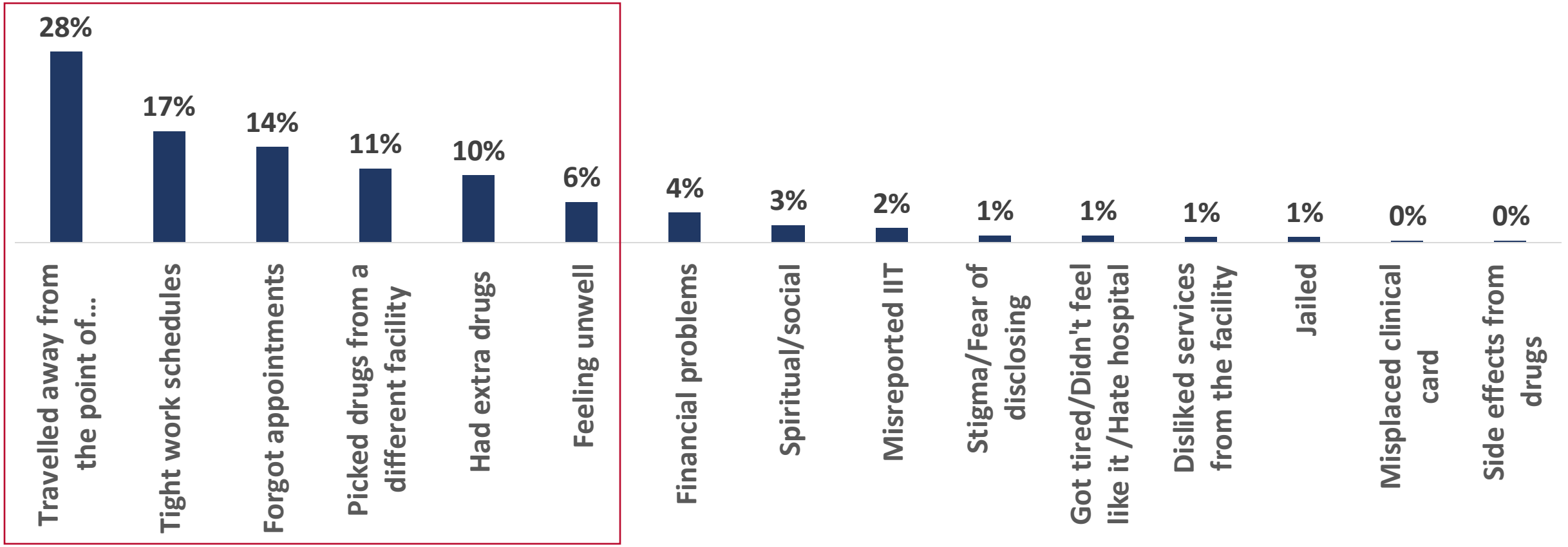






Factors contributing to IIT (N=274)

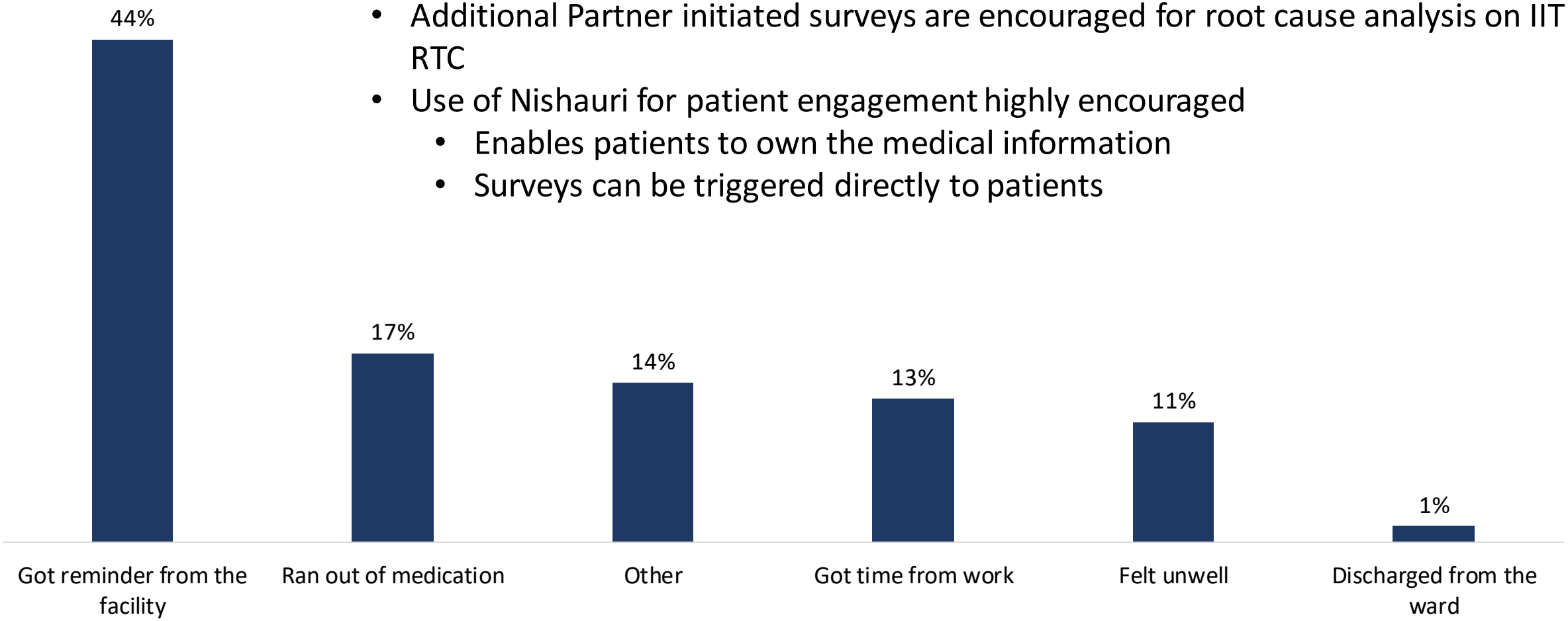
- Adopt Ushauri SMS reminders for the **14%** of patients who forgot appointment
- Use of ART referral feature for **11%** of the patients that picked drugs at different facility
- Adopt Nishauri and Ushauri for **28%, 17%, 10% and 6%** of the patients who travelled, had tight working schedules, had extra drugs and feeling to either reschedule appointments, advise the patients or support with community distribution of ART drugs



*One patient can have more than one reason for becoming IIT

Reasons for returning to care(N=274)

- Patients reported that SMS reminders is a key reason for returning to Care
  - Use of Ushauri for calls and text is highly encouraged
- Additional Partner initiated surveys are encouraged for root cause analysis on IIT and RTC
- Use of Nishauri for patient engagement highly encouraged
  - Enables patients to own the medical information
  - Surveys can be triggered directly to patients



HIS Uptake

Product	# C&T Sites	# Active Sites
EMR	3004	2082
Ushauri	3004	1520
ART Directory	3004	101
Psurvey	3004	2503
Nishauri	3004	90

Implementation successes & Challenges

Successes

- Paperless tracking of clients
- Improved patient care management through CDS
- Improved appointment management through.
  - Appointment reminders
  - Alerts
  - Reporting

Challenges

- Slow uptake of some solutions
- Cost of SMS and USSD
- Growing program needs which requires constant updating of HIS solutions
- Internet accessibility

Supporting Continuity of Treatment through Individual Level Data

Accounting for Every Client

Analysis of Missed Appointments

Analytic Approach (1/3)

The analysis aims to determine whether clients attended their appointments on time or missed them.

This is achieved through a data merge between the visits and pharmacy tables of entries dating January 2019 onwards.

Records with the furthest next appointment date are retained in cases where a visit and pickup occurred on the same day.

The analysis is conducted 2 months retrospectively and focuses on appointments within the last 6 months (i.e, with August 2023 data, appointments that are assessed are between January 2023 and June 2023).

Analytic Approach (2/3)

Based on the difference between the next appointment date and the actual date of visit, clients are then classified as:

- Came before,
- On time,
- IIT then RTT,
- Still IIT, or
- Lost in the HMIS system

Analytic Approach (3/3)

Clients who were lost in the HMIS system are identified using a data set that contains the date when each facility last uploaded data to the National Data Warehouse.

In the case that a client's appointment has elapsed by more than 30 days and their respective facility is yet to upload data to determine if they came back or not, this client is considered as lost in HMIS.

Computation logic - *30 days have elapsed since the expected appointment, but the facility has not uploaded data to determine the true status of the patient.*

Clients who had stopped treatment, transferred out, or died are categorized separately.

Information is then aggregated by county, partner, facility, age, gender, DSD status, and pregnant/breastfeeding status.

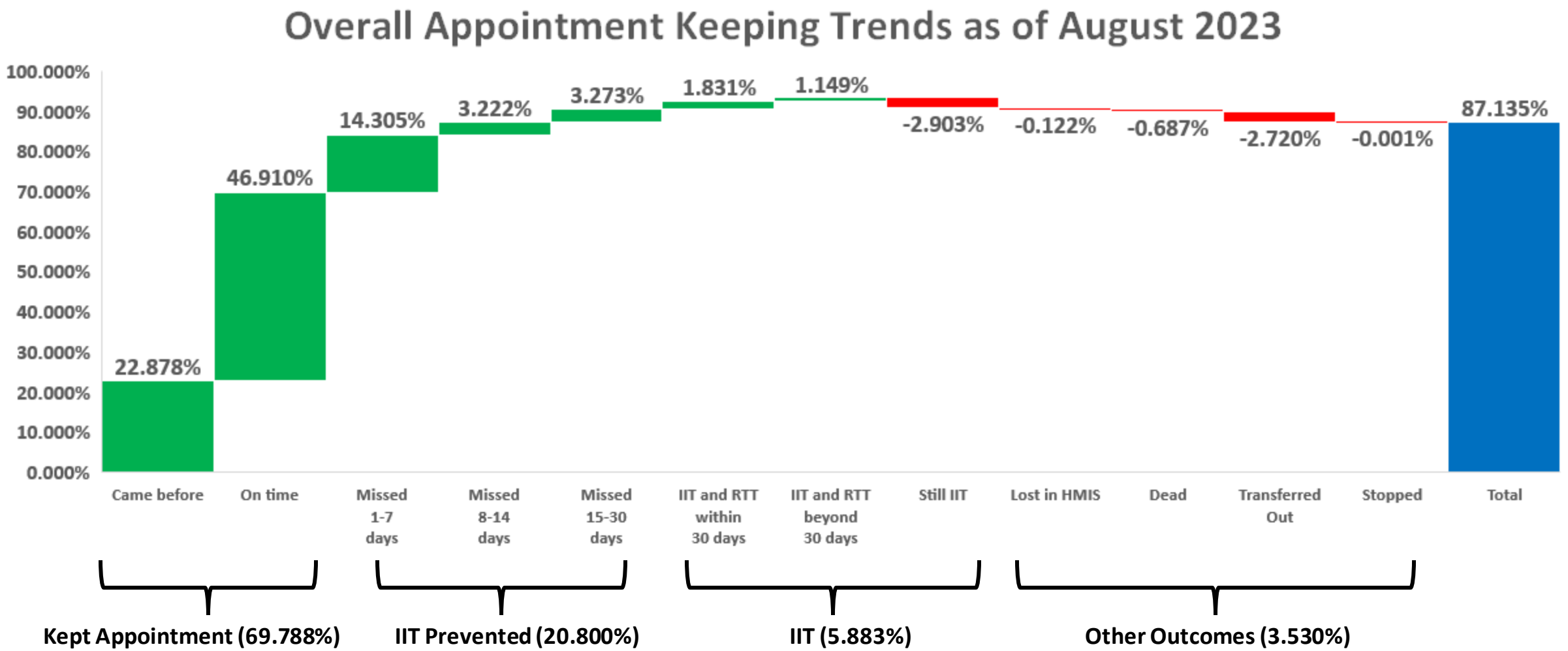
Analytic Approach Examples

Client No.	Facility Name	Previous Status (July 2023)	Next appointment	Facility upload date	Documented Outcome in EMR	Current Status (Aug 2023)
1.	X	IIT	17/04/2022	01/08/2022	-	IIT
2.	Y	IIT	17/04/2022	01/04/2022	-	Lost in HMIS
3.	Z	IIT	17/04/2022	01/08/2022	Dead	Dead

Notes:

- Client 1: The facility has uploaded data in August, but the details show that the client has not visited the facility and therefore remains IIT.
- Client 2: The facility has not uploaded data to NDW since April, therefore we are unable to accurately determine the status of this client whose appointment was in April when computing their status in August. This client is classified as "Lost" in HMIS instead of IIT.
- Client 3: The facility has uploaded data in August and the details show that the client has been documented as dead and therefore, the outcome is updated as Dead.

Results as of August 2023 - Overall



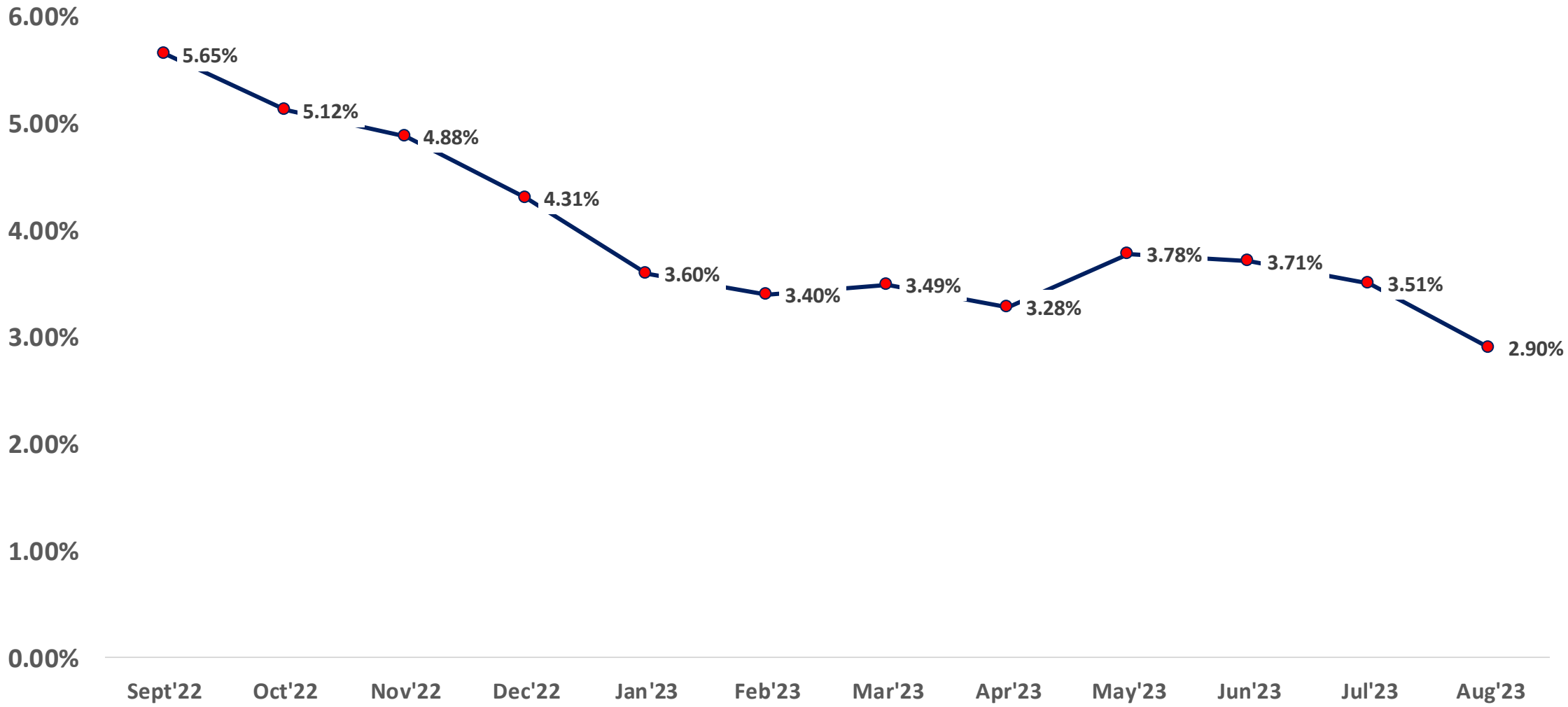
Results as of August 2023 – By County (1/2)

Partner Name	Total Appointments	Kept Appointment (Came Before or On Time)		IIT Prevented (Came Within 30 Days)		RTT		Still IIT		Lost in HMIS	
		N	%	N	%	N	%	N	%	N	%
Baringo	5,904	3,198	54%	1,619	27%	432	7%	236	4%	214	4%
Bomet	10,174	5,484	54%	2,722	27%	1,055	10%	621	6%	-	-
Bungoma	24,996	17,138	69%	5,068	20%	1,023	4%	854	3%	-	-
Busia	33,471	24,983	75%	5,713	17%	929	3%	762	2%	-	-
Elgeyo Marakwet	3,938	2,024	51%	1,295	33%	261	7%	184	5%	-	-
Embu	10,911	7,759	71%	2,129	20%	387	4%	294	3%	-	-
Homa Bay	129,044	90,494	70%	29,157	23%	3,261	3%	2,488	2%	35	0%
Kajiado	17,806	10,209	57%	5,123	29%	1,084	6%	570	3%	-	-
Kakamega	36,554	25,937	71%	7,538	21%	716	2%	1,073	3%	31	0%
Kericho	15,350	8,952	58%	4,033	26%	1,007	7%	803	5%	-	-
Kiambu	45,423	30,322	67%	10,656	23%	1,427	3%	1,352	3%	13	0%
Kilifi	28,169	20,331	72%	4,841	17%	766	3%	1,352	5%	-	-
Kirinyaga	11,428	7,847	69%	2,588	23%	158	1%	408	4%	83	1%
Kisii	28,273	22,257	79%	3,605	13%	719	3%	800	3%	-	-
Kisumu	111,223	76,374	69%	23,444	21%	2,575	2%	5,158	5%	249	0%
Kitui	21,612	15,990	74%	3,634	17%	526	2%	635	3%	-	-
Kwale	12,860	8,198	64%	3,383	26%	485	4%	287	2%	-	-
Laikipia	9,825	6,687	68%	2,158	22%	370	4%	179	2%	16	0%
Machakos	31,096	24,810	80%	4,141	13%	492	2%	689	2%	-	-
Makueni	23,407	18,502	79%	3,415	15%	384	2%	386	2%	-	-
Meru	21,137	14,256	67%	4,660	22%	775	4%	833	4%	12	0%

Results as of August 2023 – By County (2/2)

Partner Name	Total Appointments	Kept Appointment (Came Before or On Time)		IIT Prevented (Came Within 30 Days)		RTT		Still IIT		Lost in HMIS	
		N	%	N	%	N	%	N	%	N	%
Migori	72,092	56,444	78%	9,732	13%	1,501	2%	2,642	4%	25	0%
Mombasa	50,032	31,855	64%	13,267	27%	2,103	4%	808	2%	-	-
Murang'a	18,045	12,962	72%	3,698	20%	391	2%	328	2%	-	-
Nairobi	168,036	114,196	68%	38,139	23%	5,122	3%	4,103	2%	85	0%
Nakuru	46,473	31,350	67%	9,772	21%	1,917	4%	1,391	3%	121	0%
Nandi	13,182	7,594	58%	3,622	27%	981	7%	532	4%	1	0%
Narok	11,279	6,054	54%	3,564	32%	733	6%	481	4%	-	-
Nyamira	12,807	9,054	71%	1,891	15%	255	2%	708	6%	608	5%
Nyandarua	10,217	7,187	70%	2,056	20%	372	4%	245	2%	-	-
Nyeri	19,636	14,197	72%	3,807	19%	535	3%	386	2%	-	-
Samburu	1,959	1,007	51%	683	35%	114	6%	61	3%	-	-
Siaya	104,593	81,204	78%	17,153	16%	756	1%	2,175	2%	26	0%
Taita Taveta	6,770	4,280	63%	1,728	26%	277	4%	147	2%	-	-
Tharaka-Nithi	7,493	4,845	65%	1,975	26%	295	4%	186	2%	-	-
Trans Nzoia	19,393	12,035	62%	4,931	25%	762	4%	501	3%	-	-
Turkana	9,097	4,445	49%	2,835	31%	811	9%	557	6%	19	0%
Uasin Gishu	35,020	25,538	73%	6,523	19%	771	2%	871	2%	-	-
Vihiga	16,047	10,979	68%	3,946	25%	362	2%	271	2%	-	-
West Pokot	3,907	1,428	37%	1,547	40%	628	16%	177	5%	-	-
Grand Total	**1,258,679**	**878,406**	**70%**	**261,791**	**21%**	**37,518**	**3%**	**36,534**	**3%**	**1,538**	**0%**

IIT Trend Analysis



Recommendations

Goal	Action
Accurately track Continuity of Treatment (CoT)	Support facilities to ensure that all patient visits and outcomes are updated in EMR for every patient; Ensure upload of data to NDW
Eliminate lost in HMIS in NDW	Ensure timely upload of data to the NDW
Alignment of CoT metrics from disparate data sources	Alignment analysis – EMR/DATIM/NDW/3PM; Standardization of indicator definitions – lost in HMIS
Data availability to support data driven decision making	Self-service portal; CoT/Hifadhi dashboard to be developed in the NDW

WORKING TOGETHER TOWARDS REDUCING OUR IIT BELOW 1% ACROSS ALL POPULATIONS

Thank you