

Reasons for Late Antiretroviral Therapy Pill Pick-up in Namibia

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ABSTRACT

BACKGROUND: In Namibia, 250,000 people (14.3% of the population) are living with HIV as of 2014. Although ART coverage has increased to over 70%, adherence barriers remain and surveillance data have shown poor performance in population-level on-time pill pick-up. These data are concerning as 48-hour treatment interruptions are associated with increased HIV drug resistance. Data characterizing reasons for missed pill pick-ups are lacking.

OBJECTIVES: We aimed to identify patients' reasons for missing pill pick-ups via patient tracing to inform service implementation optimizing on-time pill pick-up.

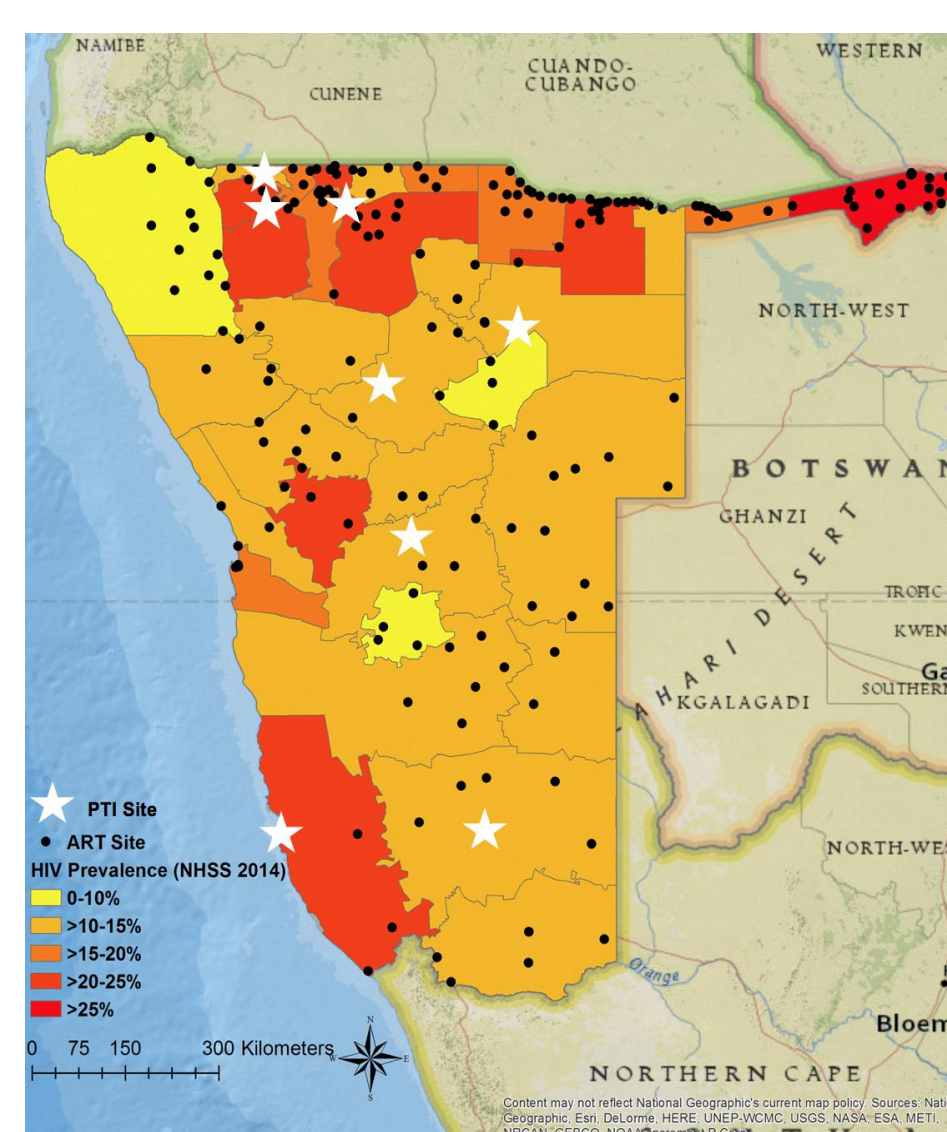
METHODS: The parent study was a 21-month cluster randomized control trial to assess the efficacy of intensified patient tracing to prevent 48-hour treatment interruptions. One full-time tracer per intervention site (8 sites) conducted phone and physical tracing of patients the day after missed pill pick-ups. We analyzed quantitative and qualitative codes recorded by tracers.

RESULTS: Patients who were traced after a missed pill pick-up (n=5,183) were older (42.7 vs. 39.0 years, p<0.001) and more likely to be male (37 vs. 34% male, p<0.001) compared to a cohort of ART starters at the same ART sites. Tracers were able to contact 88% of patients who missed pill pick-ups or their treatment supporters. Of reachable patients, 91% had missed their pill pick-ups, 6% had picked up at an alternative site, and 3% had in fact not missed their pill pick-ups. The top reasons for missing pill pick-ups included: 1. forgot (22%), 2. in-transit (15%), 3. transport and cost (14%), 4. work (13%), 5. family (8%), 6. too many administrative requirements (7%), and 7. patient was too sick to come or admitted as an in-patient (3%). Of the 15% of patients in-transit, 41% picked up pills at an alternative site.

CONCLUSIONS AND RECOMMENDATIONS: We were able to gain insight into the reasons for missed pill pick-ups at ART sites. Sites demonstrated common trends as well as important site-specific barriers. Targeted interventions should be designed and implemented towards the reasons why people missed pill pick-ups. Such interventions include Short Message Service pill pick-up reminders, a nationally-connected electronic patient record system, community adherence clubs, community-based ART outreach, extended clinic hours, and education on how to stay healthy in transit.

BACKGROUND

Figure 1. Map of Namibia with Intervention Sites Marked



- About 14.3% of the population in Namibia are HIV-positive.
- Antiretroviral therapy (ART) have been provided by the public sector free-of-charge to eligible patients since 2003, with current ART coverage at 70%.
- Increasing ART coverage improves health outcomes but may also increase drug resistance.
- Specifically, 48-hour interruptions in ART adherence are associated with the development or resistance.
- Tracers are standard of care in low- and middle-income countries to contact patients who missed pill pick-ups to reengage them in care. Frequency and tracing varies per country and clinic.

OBJECTIVES

- Identify patients' reasons for missing ART pill pick-ups by analyzing intensified patient tracing implementation data.
- Inform service implementation of intensified patient tracing in order to optimize on-time pill pick-ups.

METHODS: QUALITY IMPROVEMENT FRAMEWORK

PLAN

PHASE 1: LOSS TO FOLLOW-UP (LTFU) SURVEY

- Observational cohort study of 524 patients across 7 sites
- Validated patient LTFU outcomes
- Predictors of LTFU

DO

PHASE 2: PATIENT TRACING INTENSIFICATION (PTI) IMPLEMENTATION

- Cluster randomized control trial of ~3,000 patients across 16 sites
- Record implementation and outcome data

STUDY

MIXED METHODS EVALUATION OF PHASE 2 PTI IMPLEMENTATION

- Evaluate reasons for missed pill pick-ups via:
 - Quantitative data aggregated from worksheets filled out for every tracing event. Analysis conducted using Excel and STATA.
 - Qualitative data from semi-structured tracer interviews analyzed using grounded theory and NVivo.
- Evaluate efficacy of PTI implementation via clinical data on adherence, loss to follow-up, virologic response and mortality using Excel and STATA.

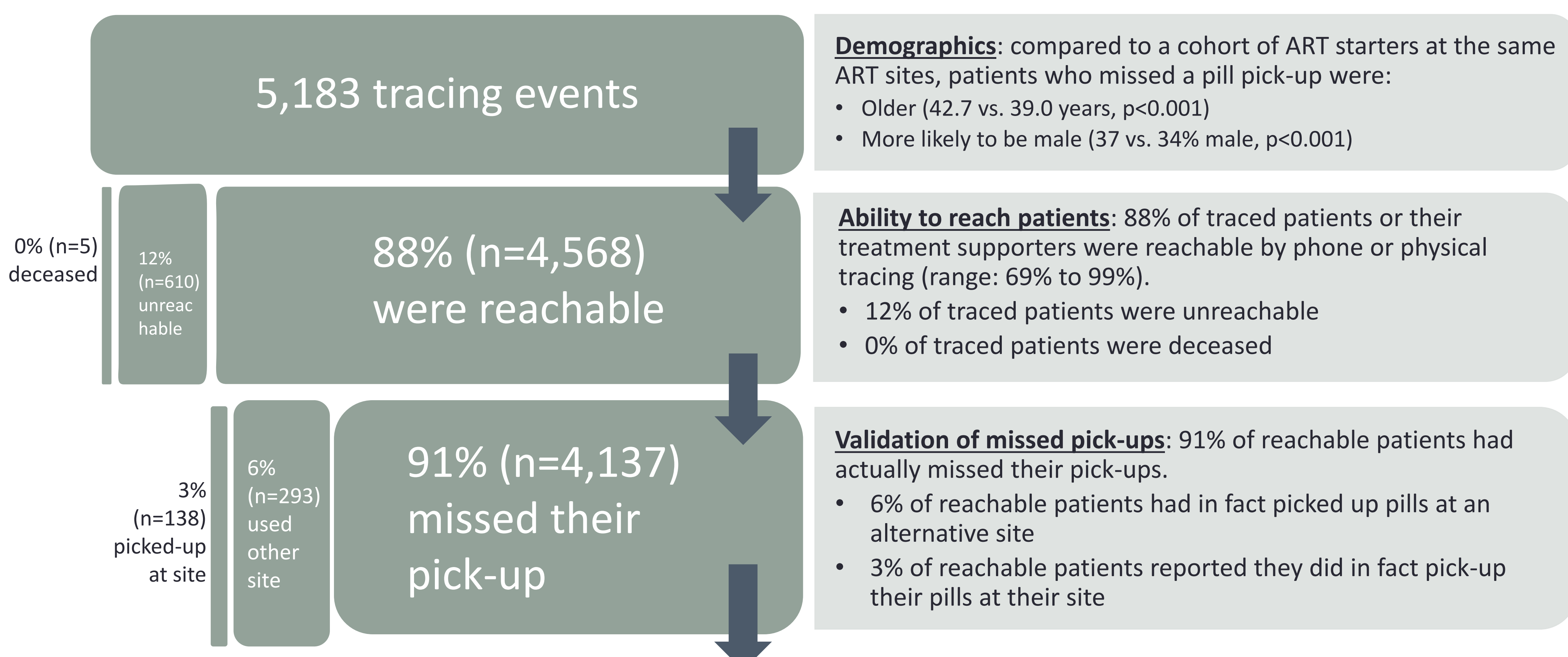
ACT

SCALE-UP OF PTI NATIONWIDE

- National scale-up of PTI including evaluation-based implementation recommendations

RESULTS

Figure 2. Flow Chart of Patient Tracing Intensification (PTI) Implementation Results



Top reasons for missing pill pick-ups included:

1. Forgot (22%)
2. In-transit in a region away from their site (15%)
3. Transport and cost (14%)
4. Work (13%)
5. Family (8%)

Figure 3. Percentage of Pill Pick-Up Barriers per Site

	Total	Groot fontein	Keetmans	Luderitz	Oka hoes	Quand-jokne	Otjivera	Outjo	Windhoek
TOTAL	100%	8%	5%	7%	13%	14%	2%	31%	21%
1. Personal Barriers	24%	4%	5%	29%	2%	21%	7%	40%	29%
Forgot appointment	22%	3%	5%	27%	1%	20%	7%	36%	28%
Other	2%	1%	0%	2%	1%	1%	0%	4%	1%
2. Work and Family	20%	20%	19%	31%	13%	20%	28%	15%	28%
Work	13%	15%	16%	21%	4%	12%	19%	7%	22%
Family	8%	6%	3%	10%	9%	8%	8%	8%	6%
3. In-transit	15%	18%	23%	41%	6%	16%	32%	2%	28%
Temporarily	15%	17%	22%	40%	5%	13%	29%	2%	28%
Permanently	1%	0%	1%	1%	1%	2%	4%	0%	0%
4. Access to Care	14%	23%	9%	1%	34%	11%	19%	15%	4%
Transport & cost	14%	23%	9%	1%	31%	11%	19%	15%	4%
Time spent at site	1%	0%	0%	1%	3%	0%	0%	0%	0%
Incarcerated	0%	0%	0%	0%	0%	0%	1%	1%	0%
5. Site Factors	9%	3%	2%	4%	3%	2%	4%	21%	3%
Too many admin. requirements	7%	0%	0%	0%	3%	0%	0%	21%	0%
Site closed when I came	1%	0%	0%	0%	0%	0%	1%	0%	3%
Clinic stock-out	0%	1%	0%	0%	0%	0%	2%	0%	0%
Staff-level factors	1%	2%	2%	4%	0%	2%	1%	0%	1%
7. Medical	3%	1%	5%	4%	2%	3%	1%	4%	3%
Health-related	3%	1%	4%	4%	2%	3%	1%	4%	2%
Medication-related	0%	0%	1%	0%	0%	0%	0%	0%	0%
8. Alternative treatment/advice	0%	0%	0%	0%	0%	0%	0%	0%	0%

CONCLUSIONS

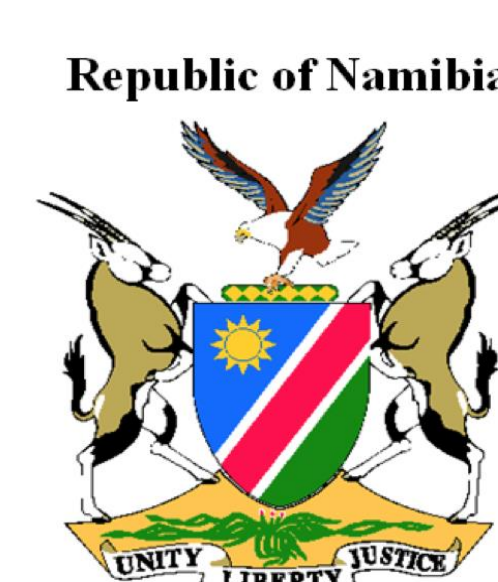
- PTI is feasible and a unique way to identify pill pick-up barriers in real-time
- Most patients are contactable, however, this varies per clinic.
- Top reasons for missing pill pick-ups included: (1) forgot, (2) in-transit, (3) transport and cost, (4) work, (5) family, (6) too many administrative requirements, (7) patient was too sick or admitted
 - Of the 15% in-transit; only 41% picked-up at an alternative site
- Clinics demonstrated some common trends with important clinic-specific variations

RECOMMENDATIONS

- Continued analysis of PTI efficacy data
- National scale-up of PTI incorporating recommendations from the evaluation-based quantitative and qualitative data.
- SMS reminder messages prior to pill pick-ups to reduced late pick-ups
- Nationally-connected electronic patient records to simplify pill pick-ups at alternative sites
- Community Adherence Clubs (CACs) and Community-Based ART (C-BART)
- Extended clinic hours to accommodate work and family obligation schedules

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