Quality of HIV services for people who inject drugs in Pwani and Tanga regions of Tanzania

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Abstract

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People who inject drugs (PWID), face a 35 times higher risk of acquiring HIV than those who do not. Across the world, 1 in every 8 people who inject drugs, is living with HIV. Societal stigma, discriminatory laws and inadequately skilled healthcare providers for PWID services exacerbate the gap in the HIV care cascade. PWID living with HIV face substantial barriers to managing HIV and drug-use related illnesses. We examined routine hospital data, anonymous facility surveys and observational provider-client interactions to determine the quality of HIV care for PWID in two regions in Tanzania. Surveys were conducted with 3 facility site managers, 102 observational interactions, supplemented with indicators from routine data between October 2021-March 2024. A mean score percent and standard deviation (SD) percent was generated for each observational interaction to summarize scores across the dataset, including technical and interpersonal skills. Most observations of medication assisted treatment (MAT) clients were male (88%), PWID (67%), and age 25+ (72%). Overall quality scores for MAT provider-client encounters which followed interpersonal and technical guidelines was 91.7% (SD 12.0%), Routine PEPFAR MER indicators show a quarterly increase in overall cumulative enrollment at the hospital facility and also in MAT enrollment but defaulting on direct observed treatment (DOT) averages at 29% for all three facilities. Although observed quality of care between provider-client was high, routine data indicated high rates of

attrition. To address defaulting from care, interpersonal and technical skills by providers should be continually reinforced through mentoring or supportive supervision; rigorous continuous quality improvement initiatives and research is needed into understanding the drivers behind defaulting and retention of care of MAT clients.

INTRODUCTION

Globally, the number of intravenous (IV) drug users has increased 18% from 2020 to 2021, largely due to updated estimates and population growth, and in East Africa an estimated 280,000 people self-identified as using IV drugs (1,2). People who inject drugs (PWID) are exposed to various harms which put them at greater risk for poor health outcomes, including: arrest or incarceration, mental illness, unstable housing or homelessness, liver disease attributed to Hepatitis C, HIV, and fatal overdose (3).

Since the late 1990s, IV drug use, primarily heroin, has increased to all regions in Tanzania, notably along the coastal corridor regions, major transit routes, and regions with large urban areas (4–7). The most recent estimates from 2019 show there are about 36,000 people who inject drugs (PWID) in the country, and the risk of acquiring HIV is 35 times higher for those who inject drugs than for the general population (1,2). As of 2023, Tanzania is close to meeting the UNAIDS 95-95-95 targets, with 83% of people living with HIV know their status, 98% people with HIV are on antiretroviral therapy (ART), and 94% of people on ART are virally suppressed (2,8,9). While the HIV prevalence has declined from 7% in 2003 to 3.8% in 2023 among adults aged 15-49 years, most recent HIV prevalence among PWID in Tanzania is 36% (10).

Key and vulnerable populations (KVP), which includes PWID, are important populations to prioritize in HIV prevention and treatment because they have a documented higher HIV prevalence, are a 'bridging population' of HIV transmission between other KVP and the general population, and face social marginalization (11). However, gaps in quality and retention remain in HIV care and treatment among KVP, specifically PWID (7,12,13). Reasons for continued disparities in HIV prevalence among Tanzanian PWID compared to the general population, include high levels of discrimination and stigma, exposure to violence, lack of mental health services, and high-risk injection practices (14,15). The Tanzanian Drug Control and Enforcement Act, aimed at preventing and combating trafficking and abuse of narcotic drugs, may reinforce social barriers to care including provider judgment and social stigma surrounding drug use

(16), and exacerbate individual barriers including internalized-stigma, low legal literacy, lack of interpersonal support, limited mental health care and low economic opportunities (17–19).

To better support PWID with more accessible and higher quality care, the Tanzanian Government in partnership with Pangaea Global AIDS Foundation and with funding from US Centers for Disease Control (PEPFAR), launched a medication assisted treatment (MAT) program in 2011 (4,20). In Tanzania, MAT services include the medication management of opioid use disorders and combines comprehensive services from community-based organizations and harm reduction approaches, such as injecting supplies exchange, training of safe injection practices and overdose management (20). MAT has been shown to reduce opioid addiction, lower morbidity, mortality and therefore improve health and quality of life in drug users, and is an essential component in addressing barriers faced by PWID with HIV or at risk of acquiring infection (1,4,20). However, access to MAT services is limited and demand far exceeds available care (18). The 5,900 people currently utilizing MAT services represents about 16% of the PWID population in Tanzania (20). UNAIDS targets for 2025 included that 50% of opioid users will have access to MAT, yet the most recent estimates for Tanzania (2020) is 26% (21).

Both MAT and HIV services should be of high quality and person centered (22). Quality of care - defined as competent, equitable, efficient and respectful person-focused care - is associated with improved clinical outcomes, and global attention has shifted from focusing primarily on access to HIV services to the quality of services (23). Repeated instances of discrimination, confidentiality concerns, and rigid clinic environments have generated a mistrust in the PWID community toward medical institutions creating a need for measuring quality of care received by PWID by providers (16). Clinical observations of client-provider encounters using a standardized checklist are a robust and objective measure of service quality (17).

While MAT programs in Tanzania have been operational since 2011, more information on coverage, quality and retention of clients within these programs outside the capital of Dar es Salaam is needed. This project

was a secondary analysis of the quality of care delivered and characteristics of MAT services utilizing routine care outcomes and non-routine facility data and clinic observations. The results offer insights into the facility service context and variations in quality scores by client characteristics and provide next steps for optimizing quality care and service improvements for PWID in two coastal regions in Tanzania.

METHODS

Study Design

This project used a cross-sectional design from a multi-year program evaluation conducted in four regions of Tanzania. We used quantitative data from multiple sources: facility surveys; observational checklists; and, quarterly routine data from three facilities offering MAT services.

Study population

This project utilized a secondary analysis of data collected for an ongoing program evaluation of the Afya Hatua ("Health Step") (AH) Project, a comprehensive HIV prevention, care, and treatment program operated by Tanzania Health Promotion Support (THPS). Inclusion criteria for the program evaluation was restricted to three facilities that offered MAT services. The facilities are in two regions in Eastern Tanzania: Pwani and Tanga. Pwani borders Tanga to the north and surrounds Dar es Salaam to the east. Clients were linked to these facilities by community-based organizations (CBOs) or by internal or external facility referrals (20). Tanga region has four CBOs supporting the MAT clinic, and Pwani has three CBOs that support the two corresponding facilities through education, community awareness campaigns, and referrals to MAT clinics. All facilities are district and regional hospitals that support at least 1,000 clients on antiretroviral therapy (ART).

Participants in the evaluation included facility site managers (medical doctors and assistant medical officers), clinic observations of providers and recipients of care (PWID, Adults from KVP besides PWID), and MAT enrollment and completion data from facility registers between October 2021-March 2024.

Eligible facility managers and providers were 18 or older, employed at the facility, and provided verbal informed consent for interviews or observations. Clients eligible for clinical observations were 18 years or older, received MAT care at the facility that day, and provided verbal consent. Tanzanian data collectors screened all participants for eligibility which were included in each checklist/survey, and stored in electronic tablets. For recruitment of facility surveys, designated clinic staff would say a few words about the evaluation then referred all available providers to data collectors for eligibility screening and surveys. Similarly, for observational checklists designated facility staff referred all clients to data collectors for eligibility screening and exit surveys. All consent forms and surveys for clinic staff and clients were available in Kiswahili and English.

Data Collection

Quantitative data was collected from multiple sources: facility surveys, observational checklists and routine data. All facility surveys and observational checklist data were collected in-person by Ministry of Health (MoH) staff on electronic tablets using REDCap software (24). MoH staff were trained in data collection and were familiar with populations served and clinic environments. Facility surveys took place between July and December 2023 and MAT observational checklists data collection in Pwani occurred in July-August of 2023, and in December of 2023 for Tanga.

Facility surveys, administered to facility managers included questions on staff training and mentoring, HIV prevention and care services offered and competence, AH innovations to support linkage and continuity in care, implementation challenges and data quality procedures.

Observational checklists included information about the quality of interpersonal and technical skills of providers to PWID clients. The checklists had five sections: clients sociodemographic information (age, gender, population); interpersonal communication; clinical skills; client support; and a post-session review. Sections for clinical technical skills, and post-session review included tasks and documentation that are

expected as part of standard of care according to national HIV guidelines (20). Interpersonal skills criteria and client support sections were guided by elements of Makoul's Essential Elements Checklist and adapted for similar assessments in Sub-Saharan Africa (25–29). Data collectors rated each activity as 'done/not done/needs improvement/not applicable'. Of the 39 question MAT observational checklist, 10 were interpersonal and 29 were technical. Nine questions (23.1%) could have included 'non-applicable' as an answer which would have been dependent on the client's HIV status, medication prescribed, service provided or referral method.

Quarterly routine data were de-identified, individual-level records provided and maintained by the project implementation partner, THPS. Outcomes were PEPFAR Monitoring and Evaluation Reporting (MER) indicators (30), including summaries of total cumulative clients enrolled at that facility, current clients on MAT treatment, number of clients who have defaulted or tracing on progress(30 days of missed MAT care within a quarter reporting period or unable to locate), total clients who graduated from MAT, deaths, and clients on ART. Default percent was computed as the number of clients who had defaulted from MAT divided by the number of clients currently on MAT treatment across the data collection period. Both hospitals in Pwani had 2 full years (8 quarters) of routine data which were analyzed. Because one facility in Tanga began data collection in October of 2023, only 2 quarters of data were available and analyzed.

Statistical Analysis

Surveys and checklist data were downloaded from REDCap server for cleaning and analysis. Descriptive statistics included counts and percentages or mean percents and standard deviation percentages. A quality score was generated for each MAT observation as the total for each item, then converted into a percent. A mean score percent and standard deviation (SD) percent was generated for each checklist to summarize scores across the dataset, including technical and interpersonal skills. Generalized linear regression modeling with a gaussian link, robust standard errors and clustering by facility was used to estimate association between age group and mean score percent with 95% confidence intervals. Analysis of routine

data included descriptive time trend analysis showing quarterly patterns of clients who enrolled and completed MAT from 2021-2024 in the 3 facilities. All analyses were conducted in Stata 18.

Ethical Consideration

The Afya Hatua evaluation was approved by the Tanzanian Ministry of Health National Institute of Medical Research and received a non-research determination from the University of Washington Human Institutional Review Board. All participants provided verbal informed consent prior to data collection for surveys and clinical observations.

RESULTS

Facility and MAT RoC characteristics

Among the 342 facilities included in the overall AH evaluation, 3 (<1%) facilities provided MAT care and treatment, the facilities featured in this analysis. These MAT facilities had an average of 22 health service staff (IQR 21-22). All (100%) health-care providers (HCP) received mentoring in HIV services in their jobs. All three facilities included multiple services to support client retention in care including: client reminders (e.g. text messages), defaulter tracing, peer supporters/peer support groups.

Within the 3 facilities, 102 HCPs and their clients were eligible and provided verbal consent for clinic observations. 102 eligible clients and HCPs at routine visits gave consent for clinic observations. Of the 102 observed clients, 29 (28.4%) were young adults (20-24 years), and 73 adults (71.6%) were adults aged 25 and older (Table 1). Of 80 clients with non-missing data for gender, 70 were males (88%) and 10 were females (12%). Overall, 67% of clients were reported to be PWID, 29% were reported to be adults from a key and vulnerable population group besides PWID (i.e. sex workers, men who have sex with men, prisoners), and 6% were none of the listed groups.

MAT Quality Scores

Among clinical observations of 102 provider interactions with clients, the overall quality score percent was 91.7% with a standard deviation (SD) of 12.0%. The interpersonal score was also 91.7% (13.9%); and, the technical score was 91.8% (13.7%). Providers had higher overall quality scores when caring for young adults (aged 20-24), with a mean score percentage of 94.0% (11.5%), when compared to adults aged 25+, 90.9% (12.2%). Overall quality scores were similar for male clients (90.5% [11.9%]) and female clients (90.5% [14.1%]) (Table 3). In regression analysis, younger client age (20-24) was associated with a 3.1 unit change in quality score that was not statistically significant (β=3.1, -5.54 – 11.75, p=0.48).

Individual MAT observations used counts and percentages to describe quality of providers skills to PWID clients. The interpersonal MAT observations with the highest number and percentages 'done' included: 102 (100%) providers informed their clients of the next scheduled visit or when to return; 96 (94.1%) listened without interrupting; 100 (98.0%) used words that are easy to understand; and 97 (95.1%) established rapport. Overall, MAT observations with the lowest number and percent 'done' in the interpersonal section included: 80 (78.4%) provider encounters who ensured privacy with their clients; and 85 (85%) encouraged their clients to return to the clinic if they have concerns. The technical MAT observations with the highest number and percentages 'done' included: 102 (100.0%) had adequate space and confidentiality for MAT services; 97 (98%) confirmed client eligibility for MAT; 98 (96.1%) assessed client interest in taking MAT; and 99 (97.1%) discussed how to adhere to treatment plan. The technical MAT observations with the lowest number and percent 'done' included: 80 (79.2%) providers performed a complete physical assessment including vital signs; 81 (81.0%) determined whether the client is psychiatrically stable or actively suicidal/homicidal; and 64 (79%) offered follow-up services or referral (e.g. STI testing, TB/HIV).

Routine MAT Enrollment and Retention Data

The three facilities which provided MAT care and treatment collected quarterly data on various client enrollment and attrition indicators. Within two years, a cumulative 476 clients enrolled in one facility in

Pwani with an average of 33 new enrollments each quarter. The average number of clients enrolled in MAT services per quarter was 283, regardless of HIV status. The average number of clients on ART per quarter was 12. Additionally, the total number of clients who had defaulted or were tracing on MAT progress, defined as 30 days of missed care within a quarter or unable to locate the client for treatment, was 606 (Figure 1). Within this facility, the proportion of clients who had defaulted from MAT services was 26.8% (606/2,261) across the two reporting years.

The second facility in Pwani had similar trends but higher overall enrollment. By the end of year two, a cumulative 700 clients were enrolled with an average of 46 new enrollments each quarter. The average number of clients enrolled in MAT services per quarter was 416. The average number of clients on ART was 23 across the two data collection years (Figure 2). Additionally, the total number of clients who had defaulted was 864, and the default proportion was 25.9% (864/3,331) across the two reporting years.

In the two quarters of data collection in Tanga, the cumulative number of clients enrolled was 1,094 and an average MAT enrollment of 690 clients. The average number of clients on ART was 41, and the total clients who had defaulted on care was 221 in the first quarter and 258 in the second quarter (Figure 3). The default proportion of clients who had defaulted on care to the current number of clients on MAT treatment was 34.7% (479/1,379).

DISCUSSION

This evaluation used routine and non-routine data to determine the quality of HIV care for PWID seeking MAT treatment in two regions in Tanzania. In our sample clinical observations within the Afya Hatua program, we found that providers' interpersonal and technical skills were high overall, indicating high quality care; however routine data indicated high rates of attrition. These findings contribute to the

understanding and practice of HIV care for PWID within MAT care and treatment centers in Tanzania, exploring factors such as the quality of healthcare delivery and routine hospital data.

Although overall quality scores were consistently high, some standard tasks were performed less frequently by health providers: ensuring privacy, completing a full physical exam and offering follow-up testing or referral services. Interventions to increase privacy have been explored in prior studies, including structural changes in the healthcare setting (27). Another study found lack of privacy mentioned as a barrier to young adult participation in the intervention (31). Conversely, providers completed a majority of tasks with high percentages of tasks 'done' including: establishing rapport, listening without interrupting, how to adhere to treatment plan, and confirming eligibility for MAT. Interpersonal physician-client connections, such as understanding the patient's perspective and providing closure on the interaction, improve efficiency and effectiveness in communication, enhance satisfaction, and improve overall health outcomes (25).

The 24-month average quarterly default proportion was 29%, meaning the 3 facilities retained 71% of its clients in MAT care during that period (100-29). This default proportion refers to 3 facilities only and cannot be generalized to all 12 MAT clinics in the country. This retention was higher than other studies analyzing 12-month and 24-month retention in care within one MAT clinic in Tanzania, where the reported proportion of clients retained in care was 57%, and 48%, respectively (32). One systematic review of MAT services in low- and middle-income countries (LMICs) reported an average retention in care after 12 months was 54.3% (33), whereas a different rapid analysis focused on U.S. retention found 30% to 50% retention in most settings (34). Differences in retention and default definitions, data sources, and PWID populations may explain some of the reasons for the differences across studies. A rapid analysis for MAT retention in the U.S. found that there was a need to develop a consensus definition of retention for future research, highlighting the challenges in comparing retention and default rates of different populations and settings (34).

Reasons for poor retention (high defaulting) in MAT programs include, programmatic barriers to access; logistical and financial challenges to access and maintain treatment; lack of trust towards medical institutions due to pervasive stigma and discrimination towards drug use; misinformation about treatment or outcomes, and lack of social support (13,16,35–37). For example, a study in Tanzania with people in MAT found that mistrust towards medical institutions due to perceptual discrimination was a limiting factor to care, and another study based in Kenya found barriers due to travel and time constraints, lack of outreach support and stigma were the main reasons for unsuccessful engagement in MAT care (38,39). This analysis identifies key provider-related factors that might contribute to losses to care (i.e. lack of privacy, inconsistent referrals). Additionally, young adults have lower retention rates in both short and long term MAT treatment than adults 25 years and older; one study in Norway reported that MAT treatment dropout (less than 12 months) is associated with a 7-fold increase in risk of overdose, and that longer retention on MAT was associated with lower mortality of drug users (40,41). Given the high overall quality of services, it is also likely that factors outside of the health system contribute to PWID accessing or defaulting from care, such as lack of interpersonal support or logistical challenges (37). The consistent quality of care shown to clients across facilities may be due in part to specialized provider training and mentoring in MAT services that THPS offers. Because providers were aware they were being observed, some may have adjusted their behaviors with MAT clients and offered better quality services at that visit than they normally do (42).

This analysis contributes to the overall Afya Hatua project coordinated by Tanzanian lead implementation partners, THPS, and the continuous quality improvement and evaluation of the program conducted by International Training and Education Center for Health (I-TECH). This evaluation is one of few studies to explore health services for PWID within Tanzania outside of Dar es Salaam and Zanzibar (7). While the sample of facilities, 3 of 12 (25%) MAT clinics in the country, is too small to make statistical comparisons, previous studies have focused only on the largest MAT clinics in Dar es Salaam, leaving gaps in understanding and explaining the MAT treatment cascade in other regions (4,16,35,36). Further, the use of a standardized quality checklist is novel; as much of the literature on quality of care for PWID are qualitative

studies, using either structured focus groups or IDIs with current or former drug users (12,16), while others examine changes in physical or mental composite scores (13). Limitations of this thesis project include, cross-sectional design that prevented causal inference, and the results may not generalize the quality of MAT services in other countries in SSA. Clinic observations were conducted over 1-2 days per facility, which may not have captured the full variability in quality of care, which could be affected by seasonality, population movement, treatment supplies, and staffing turnover.

In conclusion, this project highlights the importance of routine and non-routine data collection in MAT clinics to understand the quality of providers' care, and ways to improve services and optimize the quality of HIV care for PWID receiving MAT treatment in Tanzania. While there are areas for improvement, most of the provider interactions resulted in high quality scores, both interpersonal and technical, regardless of client characteristics. To address defaulting from care, interpersonal and technical skills by providers should be continually reinforced through mentoring or supportive supervision; rigorous continuous quality improvement initiatives and research is needed into understanding the drivers behind defaulting and retention of care of MAT clients (43). These priorities may help increase access to the 74% of opioid users not enrolled in MAT care in Tanzania (44). Additionally, prioritizing hypothesis generating research to determine if the higher quality HIV care for young adults is consistent across different regions in Tanzania, or ways to improve variations in quality between age groups.

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TABLES/FIGURES

Table 1. Demographics of MAT Recipients of Care (n=102)

Characteristic	n (%)
Client age range	
<20	
20-24	29 (28.4%)
25 and older	73 (71.6%)
Client gender (n=80)	
Male	70 (88%)
Female	10 (12%)
Population	
PWID	68 (66.7%)
Adult from a Key and Vulnerable Population besides PWID (sex workers, men who have sex with men, prisoners)	28 (27.5%)
None of the listed group	6 (5.9%)

Table 2A. Interpersonal Factors from MAT checklist (n=102)

Factor	n (%)
Establishes rapport	
Needs improvement	5 (4.9%)
Done	97 (95.1%)
Uses words that are easy to understand	
Needs improvement	2 (2.0%)
Done	100 (98.0%)
Assures privacy	
Not done	13 (12.7%)
Needs improvement	9 (8.8%)
Done	80 (78.4%)
Invites client to ask questions	
Not done	12 (11.8%)
Needs improvement	5 (4.9%)
Done	85 (83.3%)
Listens without interrupting	
Needs improvement	6 (5.9%)
Done	96 (94.1%)
Client receives adequate information about treatment and medications	
Needs improvement	8 (7.8%)
Done	94 (92.2%)
Involves the client in deciding about their care plan	
Not done	12 (11.9%)
Needs improvement	1 (1.0%)
Done	88 (87.1%)
Refers to psychosocial or other support services (youth clubs and/or peer educator)	
Not done	9 (11%)
Done	70 (89%)
Encourages return to clinic if client has concerns	
Not done	14 (14.0%)
Needs improvement	1 (1.0%)
Done	85 (85.0%)
Informs of next scheduled visit or when to return	
Done	102 (100.0%)

Table 2B. Technical Factors from MAT checklist

Factor	n (%)
MAT guidelines or protocols and SOPs are available and in use	
Yes	102 (100.0%)
Adequate space and confidentiality for MAT services	
Yes	102 (100.0%)

Facility conducts recruitment of MAT clients from the community using Peer Educators	
No	22 (21.6%)
Yes	80 (78.4%)
MAT clinic provides integrated ART services	
No	3 (2.9%)
Yes	99 (97.1%)
Health education provided on importance of MAT for HIV prevention	
No	3 (2.9%)
Yes	99 (97.1%)
Offers Methadone	
Yes	102 (100.0%)
Offers Naltrexone	
No	6 (5.9%)
Yes	96 (94.1%)
Offers Buprenorphine	
No	99 (97.1%)
Yes	3 (2.9%)
Offers other drug(i.e. Morphine)	
No	101 (99.0%)
Yes	1 (1.0%)
Client medical and social history recorded accurately in chart (CTC2)	
Not done	5 (4.9%)
Needs improvement	5 (4.9%)
Done	63 (61.8%)
Not applicable	29 (28.4%)
Provisional drug-related diagnosis recorded, if applicable	
Not done	7 (6.9%)
Needs improvement	2 (2.0%)
Done	78 (76.5%)
Not applicable	15 (14.7%)
Appropriate investigations ordered and documented for differential diagnosis	
Not done	10 (9.8%)
Needs improvement	1 (1.0%)
Done	69 (67.6%)
Not applicable	22 (21.6%)
Sample collection/investigation recorded, if done	
Not done	8 (7.8%)
Done	64 (62.7%)
Not applicable	30 (29.4%)
Results of the ordered investigation recorded, if this is a follow-up visit	
Not done	8 (7.8%)
Done	73 (71.6%)
Not applicable	21 (20.6%)
Follow-up plan documented	
Not done	6 (5.9%)

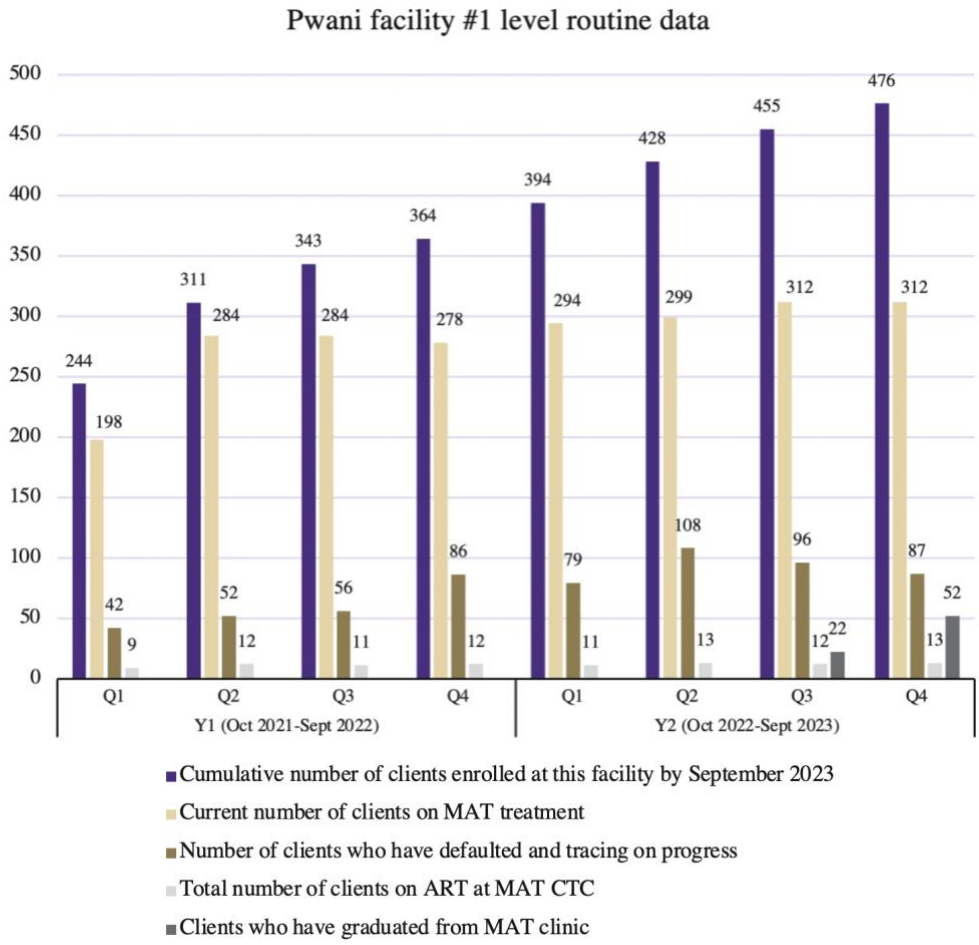
Done	94 (92.2%)
Not applicable	2 (2.0%)
Treatments conform to available national treatment protocol/hospital protocols	
Not done	6 (5.9%)
Done	92 (90.2%)
Not applicable	4 (3.9%)
Reason for medication changes documented and conform to guidelines (if applicable)	
Not done	6 (5.9%)
Done	57 (55.9%)
Not applicable	39 (38.2%)
MAT outcomes recorded (if applicable)	
Not done	6 (5.9%)
Needs improvement	1 (1.0%)
Done	71 (69.6%)
Not applicable	24 (23.5%)
Conducts appropriate and relevant history including drug history	
Not done	1 (1.0%)
Needs improvement	8 (7.9%)
Done	92 (91.1%)
Performs complete physical assessment including vital signs	
Not done	9 (8.9%)
Needs improvement	12 (11.9%)
Done	80 (79.2%)
Assesses current medications client is taking (that may interact with MAT)	
Not done	5 (5.0%)
Needs improvement	2 (2.0%)
Done	93 (93.0%)
Assesses current medical problems that may complicate MAT and/or adherence	
Not done	6 (6.0%)
Needs improvement	2 (2.0%)
Done	92 (92.0%)
Performs appropriate psychological assessment	
Not done	3 (3.0%)
Needs improvement	4 (4.0%)
Done	94 (93.1%)
Determines whether the client is psychiatrically stable or actively suicidal/homicidal	
Not done	16 (16.0%)
Needs improvement	3 (3.0%)
Done	81 (81.0%)
Assesses that client has written diagnosis of drug dependence	
Not done	1 (1.0%)
Needs improvement	2 (2.0%)
Done	97 (97.0%)

Assesses for current signs of withdrawal	
Not done	9 (8.8%)
Needs improvement	1 (1.0%)
Done	92 (90.2%)
Confirms client eligibility for MAT	
Not done	2 (2%)
Done	97 (98%)
Offers information about MAT per guidelines	
Not done	4 (3.9%)
Needs improvement	7 (6.9%)
Done	91 (89.2%)
Clearly explains the risks and benefits of MAT	
Not done	6 (5.9%)
Needs improvement	3 (2.9%)
Done	93 (91.2%)
Assesses client interest in taking MAT	
Not done	3 (2.9%)
Needs improvement	1 (1.0%)
Done	98 (96.1%)
Discusses how to adhere to treatment plan	
Not done	1 (1.0%)
Needs improvement	2 (2.0%)
Done	99 (97.1%)
Explains possible interactions with other medications (if applicable)	
Not done	7 (7%)
Needs improvement	5 (5%)
Done	82 (87%)
Completes MAT Treatment Agreement/Plan and client signs (if form is available)	
Not done	4 (5%)
Needs improvement	1 (1%)
Done	73 (94%)
Clearly explains follow-up plan	
Not done	1 (1.0%)
Needs improvement	5 (4.9%)
Done	96 (94.1%)
Offers linkage to psychosocial and occupational support, as needed	
Not done	7 (7%)
Done	88 (93%)
Offers follow-up services or referral (STI testing, TB/HIV)	
Not done	16 (20%)
Needs improvement	1 (1%)
Done	64 (79%)
Observes and records any reaction to MAT	
Not done	12 (12%)
Needs improvement	2 (2%)
Done	84 (86%)
Initiates on ART per guidelines for PWID	

Not done	5 (9%)
Done	53 (91%)

Table 3. MAT checklist Quality Scores

Factor	Mean score percentage, (SD)
Overall MAT client sample (N=102)	
Overall	91.7 (12.0)
Interpersonal	91.7 (13.9)
Technical	91.8 (13.7)
Young Adult 20-24 (N=29)	
Overall	94.0 (11.5)
Interpersonal	95.2 (11.3)
Technical	93.4 (14.7)
Adult 25+ (n=73)	
Overall	90.9 (12.2)
Interpersonal	90.3 (14.7)
Technical	91.1 (13.4)
Female (n=10)	
Overall	90.5 (14.1)
Interpersonal	90.6 (17.4)
Technical	90.4 (13.3)
Male (n=70)	
Overall	90.5 (11.9)
Interpersonal	89.4 (14.8)
Technical	91.0 (13.2)


Pwani facility #1 level routine data
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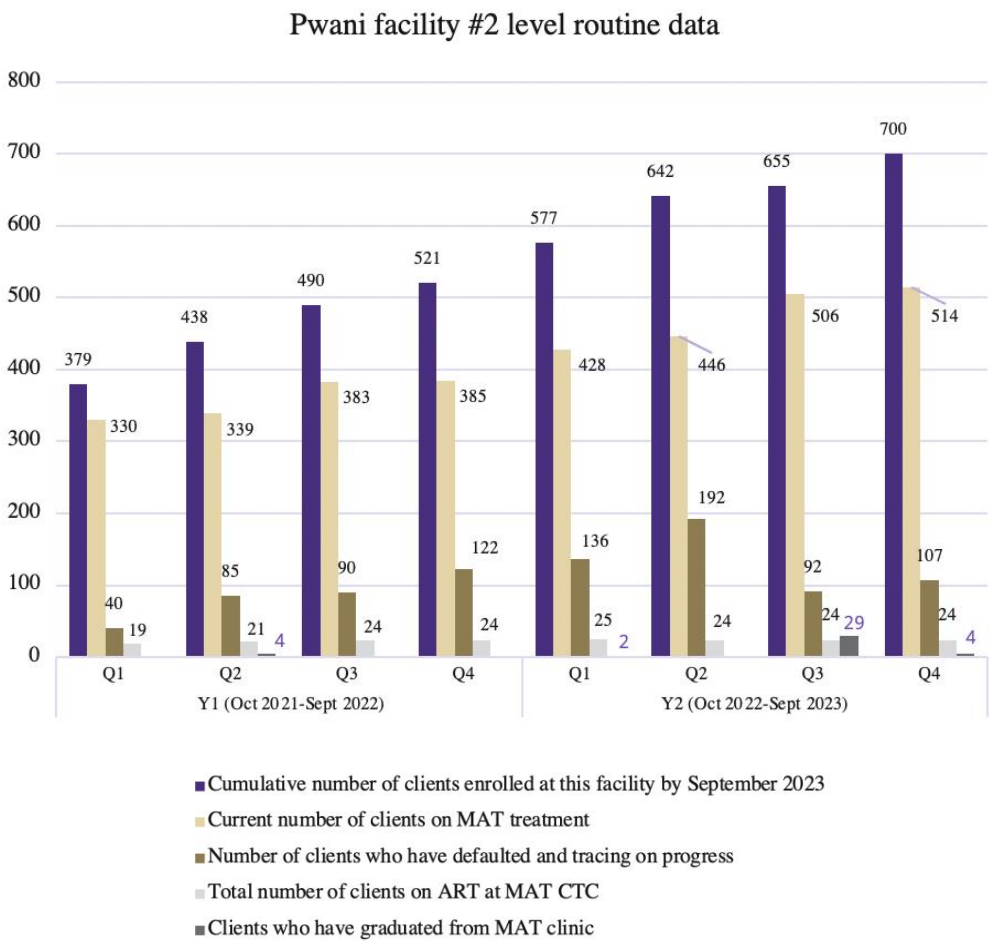
450
400
350
300
250
200
150
100
50
0
244
198
42
9
311
284
52
12
343
284
56
11
364
278
86
12
394
294
79
11
428
299
108
13
455
312
96
12
22
476
312
87
13
52
Q1
Q2
Q3
Q4
Y1 (Oct 2021-Sept 2022)
Q1
Q2
Q3
Q4
Y2 (Oct 2022-Sept 2023)
Cumulative number of clients enrolled at this facility by September 2023
Current number of clients on MAT treatment
Number of clients who have defaulted and tracing on progress
Total number of clients on ART at MAT CTC
Clients who have graduated from MAT clinic

Figure 1


Pwani facility #2 level routine data
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700
600
500
400
300
200
100
0
379
330
40
19
438
339
85
21
4
490
383
90
24
521
385
122
24
577
428
136
25
2
642
446
192
24
655
506
92
24
29
700
514
107
24
4
Q1
Q2
Q3
Q4
Q1
Q2
Q3
Q4
Y1 (Oct 2021-Sept 2022)
Y2 (Oct 2022-Sept 2023)
Cumulative number of clients enrolled at this facility by September 2023
Current number of clients on MAT treatment
Number of clients who have defaulted and tracing on progress
Total number of clients on ART at MAT CTC
Clients who have graduated from MAT clinic

Figure 2

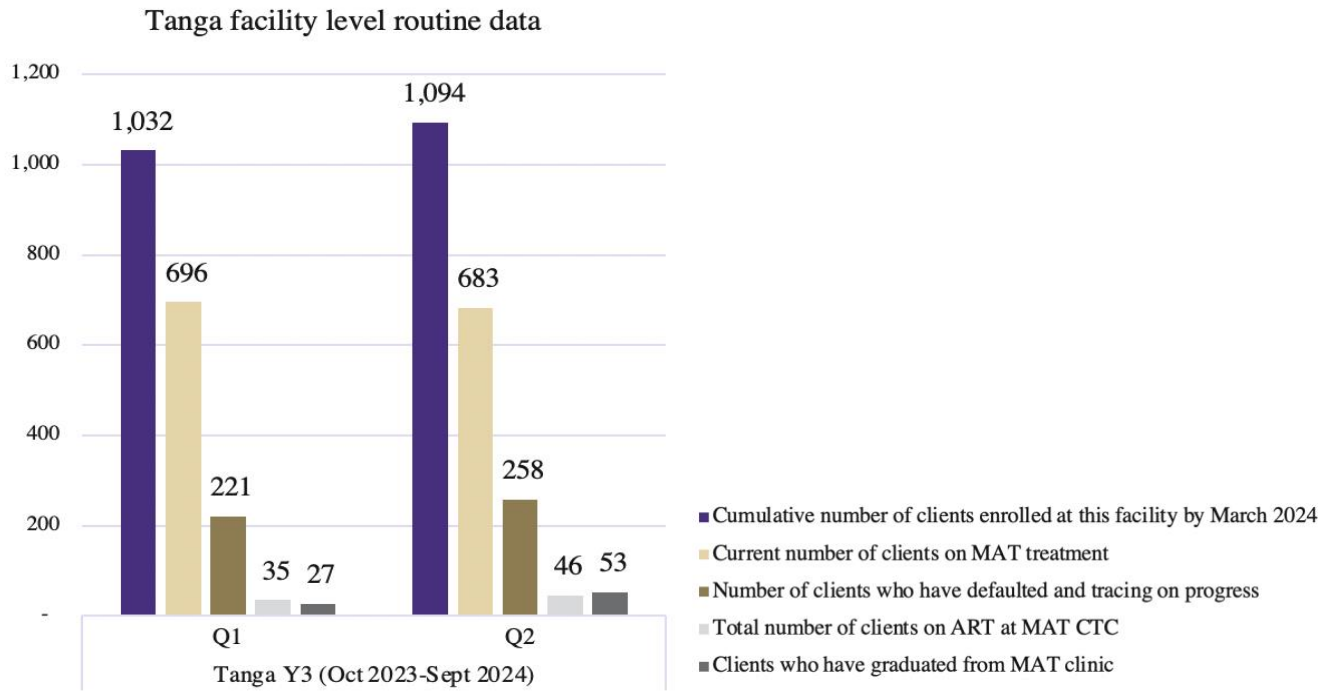
Tanga facility level routine data
1,200
1,000
800
600
400
200
-
1,032
696
221
35
27
1,094
683
258
46
53
Q1
Q2
Tanga Y3 (Oct 2023-Sept 2024)
Cumulative number of clients enrolled at this facility by March 2024
Current number of clients on MAT treatment
Number of clients who have defaulted and tracing on progress
Total number of clients on ART at MAT CTC
Clients who have graduated from MAT clinic

Figure 3