Speaker's **Profile**

Dr. Nandi U

Head of TB Program – PSI TB Program

Dr. Nandi U is a medical doctor with a Master's degree in Public Health from Mahidol University in Bangkok, Thailand. She has over 10 years experience in public health and 5 years in the TB program.

She is the Head of the TB Program at PSI Myanmar, where she oversees the program's management and strategic direction, as well as providing assistance to the program and PSI's SSRs.

She has been working in PSI Myanmar's Program Management Division for 5 years in the TB Program and 3 years in the Malaria Program. She has also worked for the Myanmar Medical Association (Malaria and Family Health) and the International Red Cross Association for almost three years.

Speaking Topic – Real-time TB medication with Digital Technology

HIV/TB Agency, Information and Services Activity

Journey so far

2020 — 50
- 2.4m patients/year added to the platform used by over 400,000 HCWs
- >70 million USD transferred in patient benefits (cumulative)
- 250,000 registered patients on DAT in 15 countries
- Deployed for HIV and mental health

2019 — 20
- I-DAT scaled deployments — ascent
- HIV, expansion of Nikshay

2018 — 12
- Launched the patient management system — nikshay

2017 — 8
- All TB patients in Mumbai – 75,000 patients
- Integration of evriMED device, SureAdhere VOT
- Research evaluations started

2016 — 5
- All public TB-HIV patients in India >30,000 patients
- First international pilot (Myanmar)

2015 — 3
Everwell founded; 30 high-burden clinics (2,000 patients on 99DOTS)

2014 — 2
Initial funding from Grand Challenges Explorations (BMGF) and Grand Challenges in TB Control (BMGF+USAID) for 99DOTS Digital Adherence solution

2013
Incubated in Microsoft | Research

Central Tuberculosis Division
BILL & MELINDA GATES foundation
World Health Organization
USAID FROM THE AMERICAN PEOPLE
Stop TB Partnership
CLINTON HEALTH ACCESS INITIATIVE
PATH
FIND because diagnosis matters
UKaid
FREUNDESKREIS FÜR INTERNATIONALE TUBERKULOSEHILFE
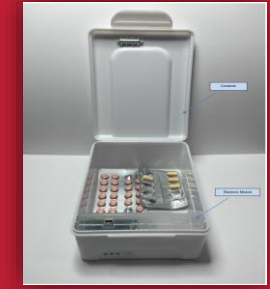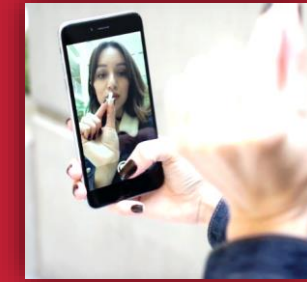psi
wisepill
KNCV TUBERCULOSE FONDS
sureAdhere

99DOTS

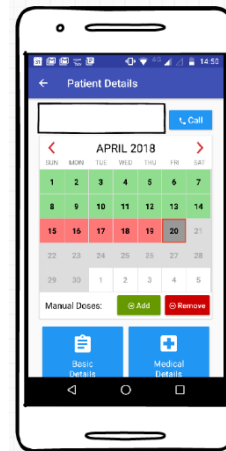Digital Pill Box (MERMs)

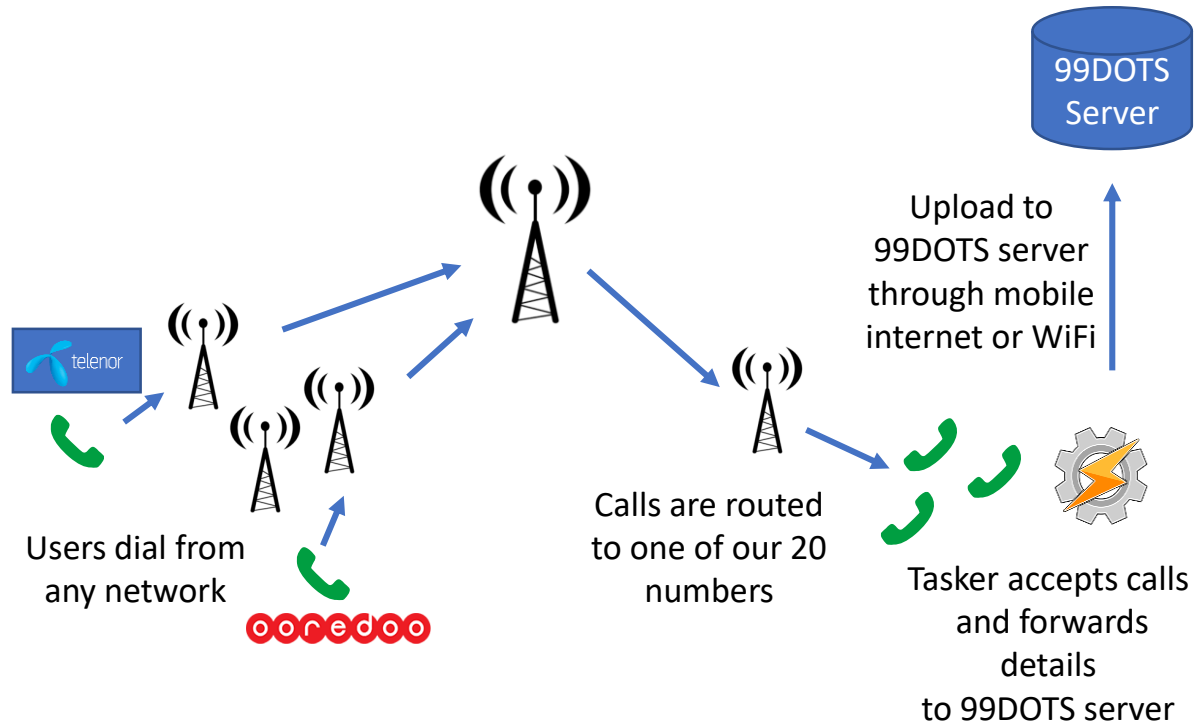Video Observed Therapy

Global Deployment

Everwell Hub supports over 2.4 million cases per year, is used by over 400,000 healthcare workers, is deployed in over 14 countries, and adapted for 4 different public health crises as the only open source fully integrated adherence platform available.
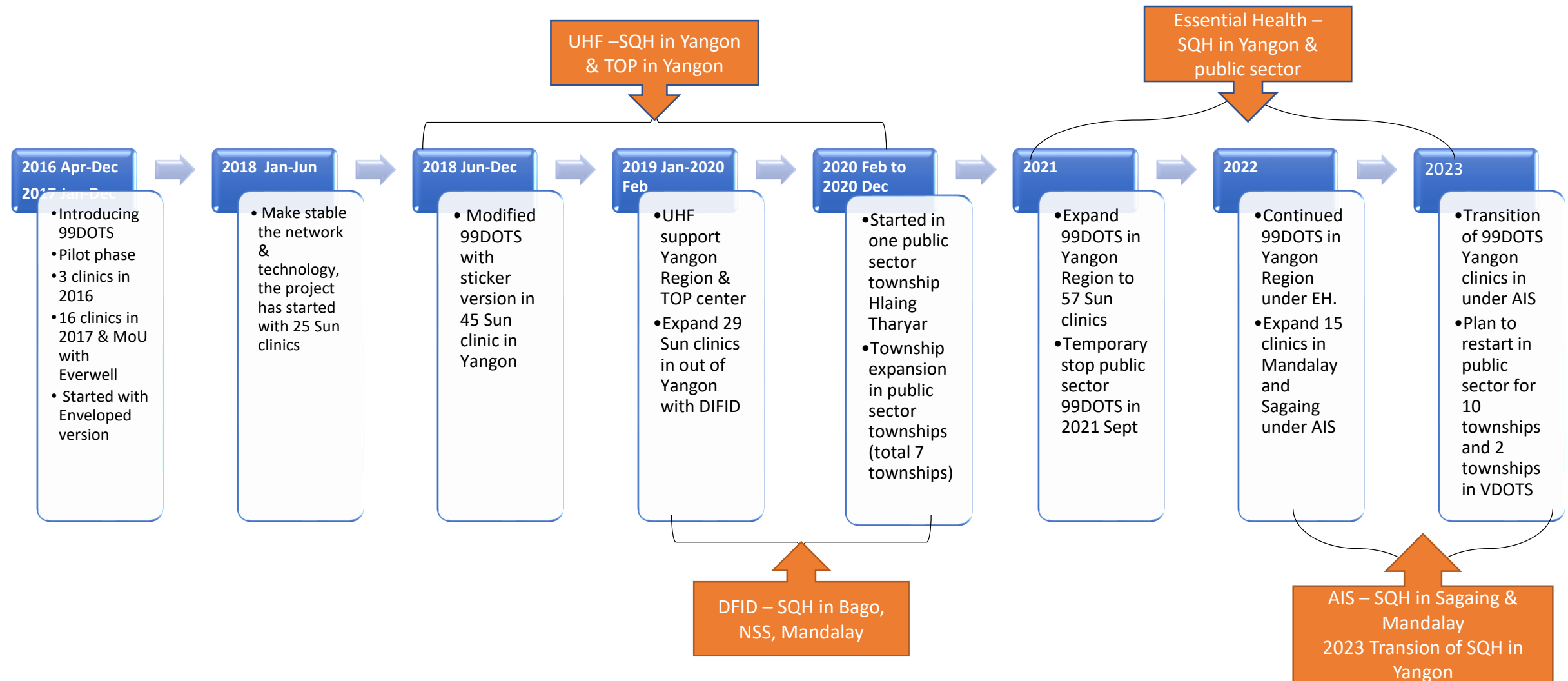
What is 99DOTS

- **99 DOTS** because it has **99**% chance of cure for the patients taking the medical course

- Low-cost real-time digital adherence tracking technology that uses a simple mobile phone with reminder stickers that enable patients to engage with their treatment daily.

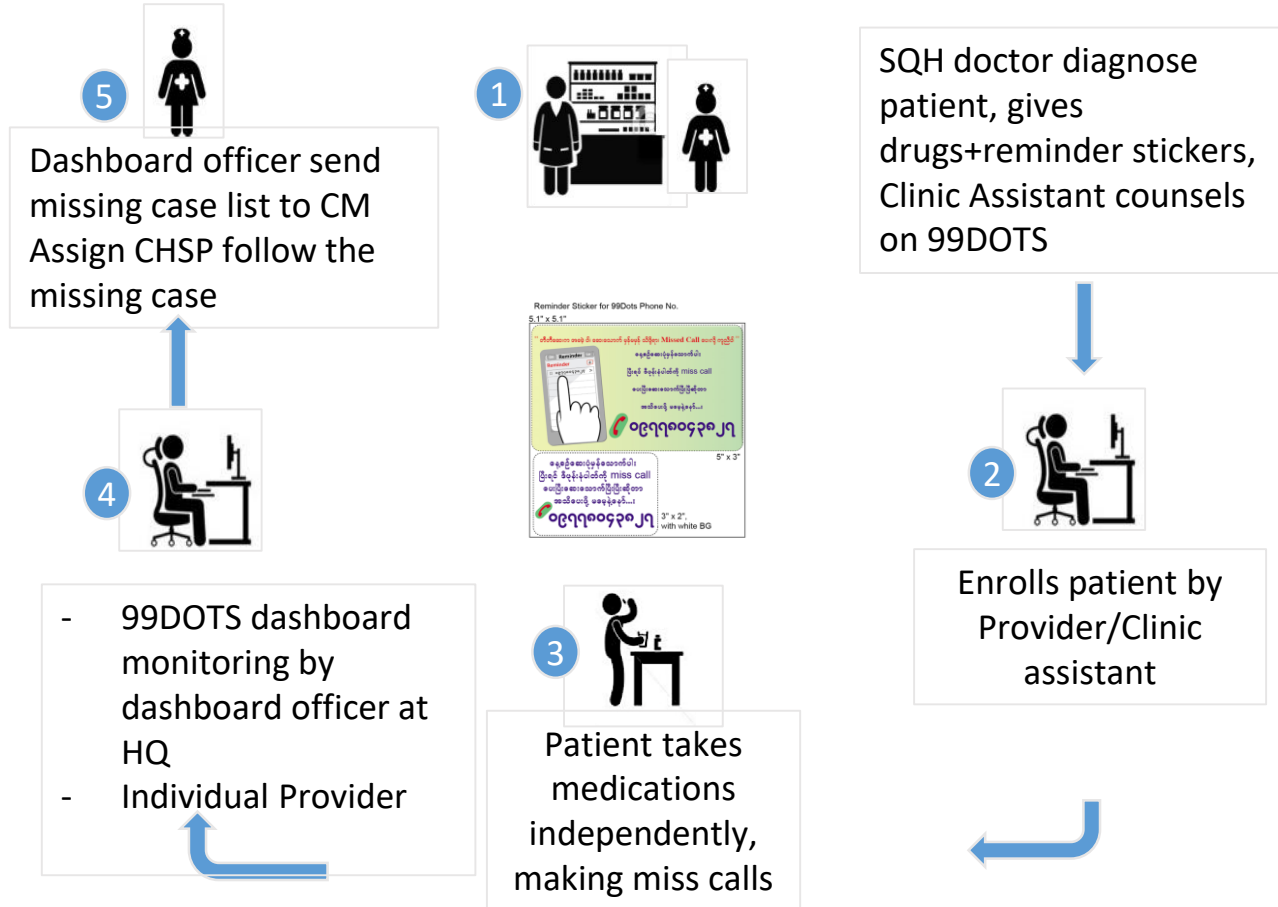# Telecom infrastructure of 99DOTS in Myanmar

99DOTS Server

Upload to 99DOTS server through mobile internet or WiFi

Users dial from any network

Calls are routed to one of our 20 numbers

Tasker accepts calls and forwards details to 99DOTS server

telenor

ooredoo

99DOTS journey in PSI Myanmar

UHF –SQH in Yangon & TOP in Yangon

Essential Health – SQH in Yangon & public sector

2016 Apr-Dec 2017 Jan-Dec
- Introducing 99DOTS
- Pilot phase
- 3 clinics in 2016
- 16 clinics in 2017 & MoU with Everwell
- Started with Enveloped version

2018 Jan-Jun
- Make stable the network & technology, the project has started with 25 Sun clinics

2018 Jun-Dec
- Modified 99DOTS with sticker version in 45 Sun clinic in Yangon

2019 Jan-2020 Feb
- UHF support Yangon Region & TOP center
- Expand 29 Sun clinics in out of Yangon with DIFID

2020 Feb to 2020 Dec
- Started in one public sector township Hlaing Tharyar
- Township expansion in public sector townships (total 7 townships)

2021
- Expand 99DOTS in Yangon Region to 57 Sun clinics
- Temporary stop public sector 99DOTS in 2021 Sept

2022
- Continued 99DOTS in Yangon Region under EH.
- Expand 15 clinics in Mandalay and Sagaing under AIS

2023
- Transition of 99DOTS Yangon clinics in under AIS
- Plan to restart in public sector for 10 townships and 2 townships in VDOTS

DFID – SQH in Bago, NSS, Mandalay

**AIS – SQH in Sagaing & Mandalay
2023 Transion of SQH in Yangon**

99DOTS in Sun clinics

99DOTS model in Sun clinic

5 Dashboard officer send missing case list to CM Assign CHSP follow the missing case

1 SQH doctor diagnose patient, gives drugs+reminder stickers, Clinic Assistant counsels on 99DOTS

4
- 99DOTS dashboard monitoring by dashboard officer at HQ
- Individual Provider

3 Patient takes medications independently, making miss calls

2 Enrolls patient by Provider/Clinic assistant

- >9000 adult patients enrolled in the 99DOTS system
- Average 50% of patients contribute 99DOTS in engaged Sun clinics
- Provider support – phone bill, patients' incentive
- Patient support – phone bill for a treatment course, mug, patient leaflet
- Criteria for enrollment – adult, owe at least one mobile phone in patient's household

patients enrollment in 99DOTS system

Jun-18	2019	2020	2021	2022	2023 as of March
902	2152	1157	2112	2912	713
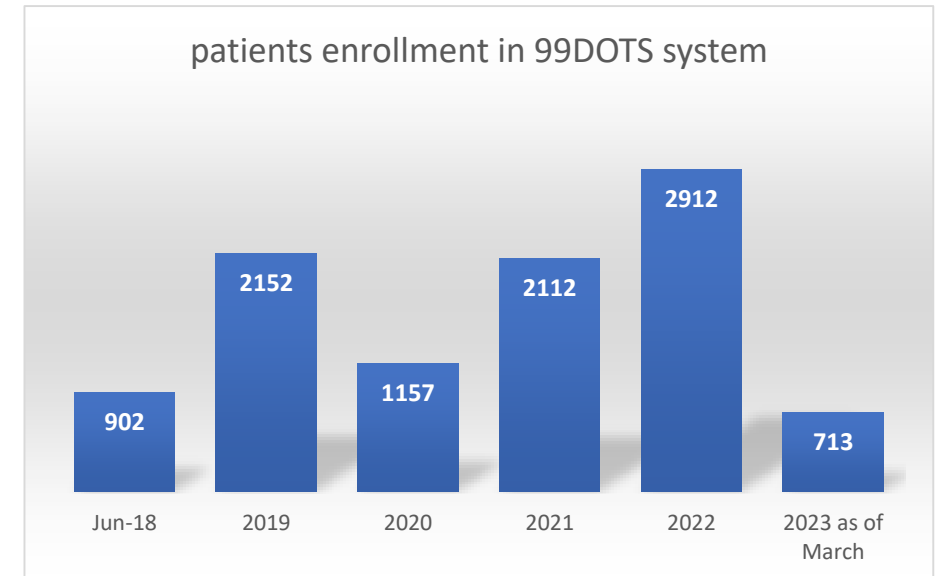
99DOTS in public sector

- >1,676 adult patients enrolled in the 99DOTS system
- Average 70% of patients contribute 99DOTS in engaged Sun clinics
- Provider & patients support –same with Sun
- Period – Dec 2020 – Mar 2021

99DOTS model in public sector

5 — Dashboard officer send missing case list to PHS2 at township TB center Assign PHS2 follow the missing case

1 — Patients diagnose with TB (referred from ACF/OPD) are given drugs+ reminder sticker by PHS2 Provide counseling for regular call

4 — - 99DOTS dashboard monitoring by dashboard officer

3 — Patient takes medications independently, making miss calls

2 — Enrolls patient by dashboard officer

	Dawbon	Hlaing tharyar	North Dagon	Sanchaung	Shwe pyithar	South Dagon	Thaka ta	Overall
Achievement	43	1,066	93	23	222	145	84	1,676
Target	50	1,700	100	100	350	350	150	2,800

99DOTS outcome analysis PSI 57 clinics data

99DOTS project clinics	TSR			LTFU		
	2019	2020	2021	2019	2020	2021
Patients in 99DOTS	89%	90%	87%	6%	5%	5%
Patients not in 99DOTS	83%	86%	81%	11%	8%	10%

99DOTS intervention

	2016	2017	2018	2019	2020	2021
NE /TO	10%	10%	9%	7%	3%	3%

Challenges

Operational challenges

- Providers side – digital literacy, forgot to close the case, work burden

- Patients side – low social economic status, poor adherence in the continuation phase, language barriers,

- Staff & dashboard officer – communication gap, information delay

- Envelop version→ procurement delay, dependable on dispenser structure

Technical challenges

- Server error, software error effect in exporting the report, and call log by patient

- Phone & Handset → battery error, sim card error

Lesson learned based on 99DOTS evaluation study

- 99DOTS system favors better treatment outcomes among patients who registered in the system

- 99DOTS system prevents patients from loss to follow-up during the whole study period and the continuation phase.

- The more adherence to the 99DOTS system (total/digital), the better treatment outcomes among patients who registered in the system

- Cost-effectiveness of 99DOTS system compared with a situation in which there is no 99DOTS system → yes

- Providers cannot explain detail about 99DOTS to patients because of time constraint

- Software data entry needs to be more simply

- Patients → forgot to call/ cannot call/ SMS did not receive.

Speaker's Profile
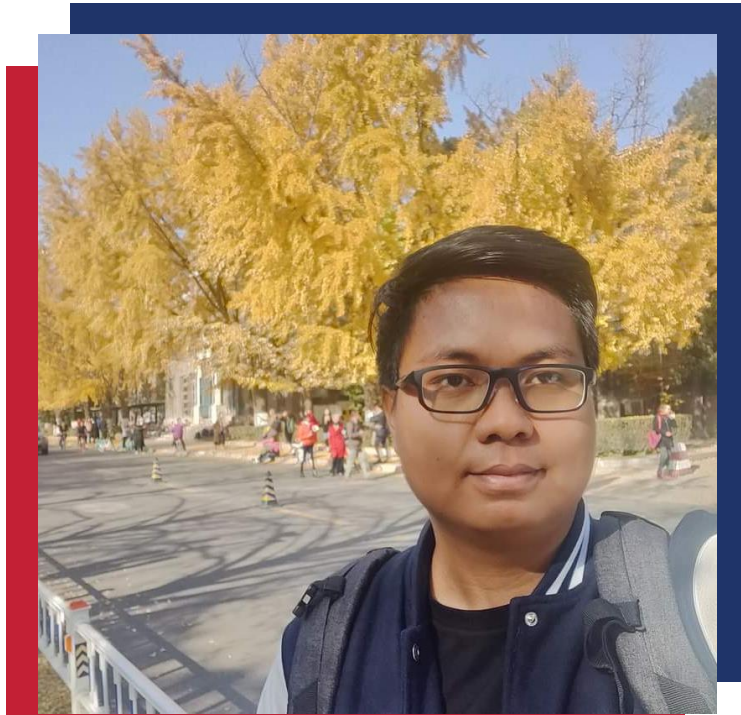
Dr. Phyo Aung Win

Digital Health Manager at PSI Myanmar

Dr. Phyo Aung Win is a medical doctor, who has been working in the public health sector for more than 8 years. He attained an MBBS degree from UM (2) Yangon and holds MPH and MPA degrees as well.

Currently, he works as a digital health manager at PSI Myanmar and leads the team to design, develop and maintain the new and ongoing digital health tools to assist the operation activities.

He has an extensive working experience in various health sectors and also possesses decent technical and operational knowledge in the area of SRH, HIV, TB, Malaria, and Digital Health.

Speaking Topic – Real-time TB medication with Digital Technology

EVERWELL HUB

- The Everwell Hub is a comprehensive, integrated adherence and patient management platform.

- Healthcare staff can log into a single portal to register and follow up on any of the integrated technologies that appear side-by-side including 99 DOTS and V-DOT.

- The Hub is deployed as a tool for adherence management in Myanmar as the fully integrated adherence platform available.

AVAILABLE ON BOTH WEB AND MOBILE
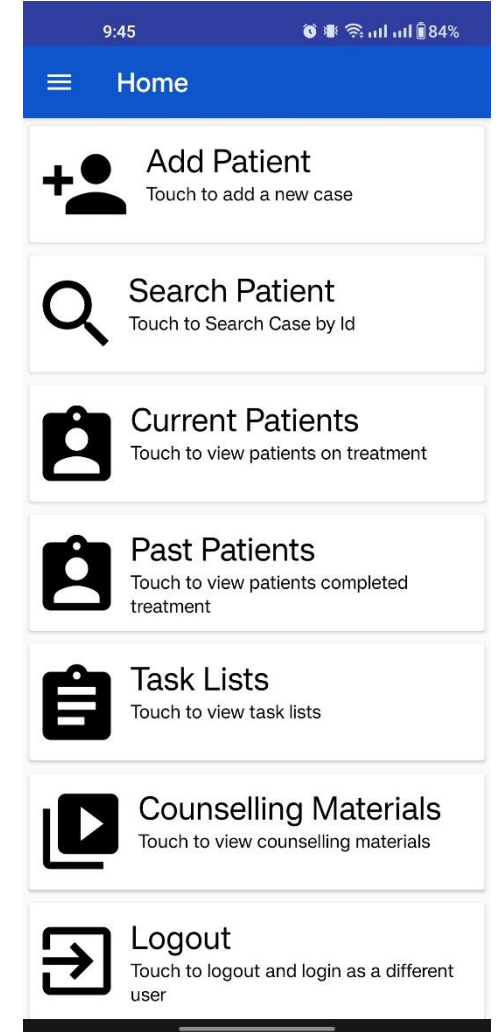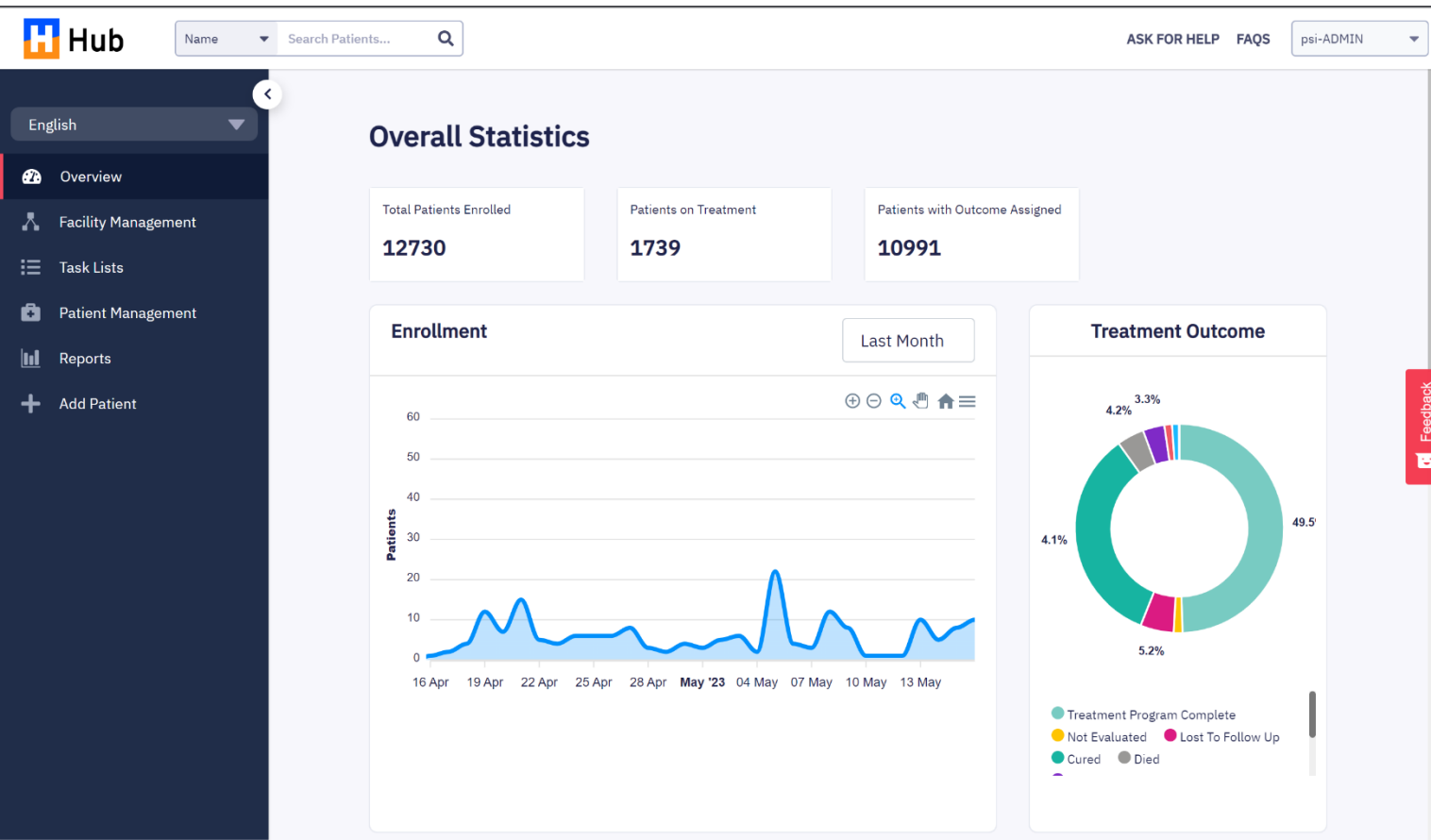
KEY FEATURES OF THE HUB

Digital Adherence Technologies (DATs)

- The integrated adherence module (IAM) integrates the two main digital adherence technologies: 99DOTS and V-DOT.

- The adherence module is a scalable system that allows providers to assign any DAT to a person, escalate reminders based on engagement, prioritize cases for follow-up, and view reported engagement in a unified visual calendar.
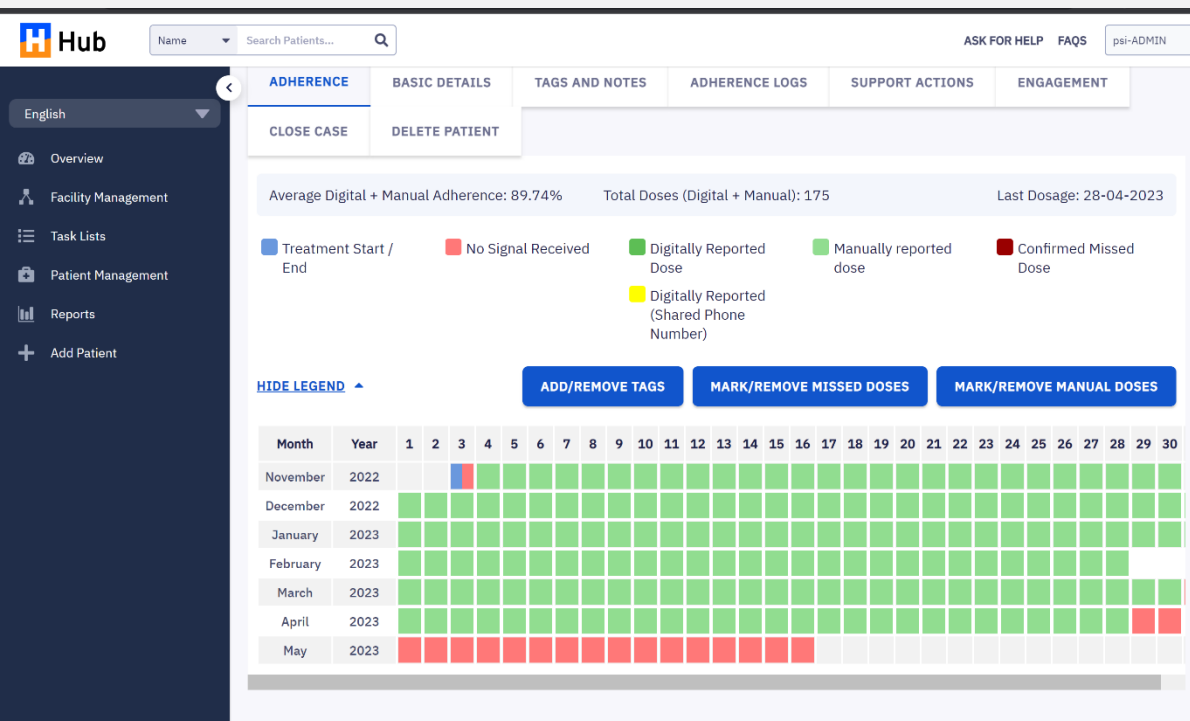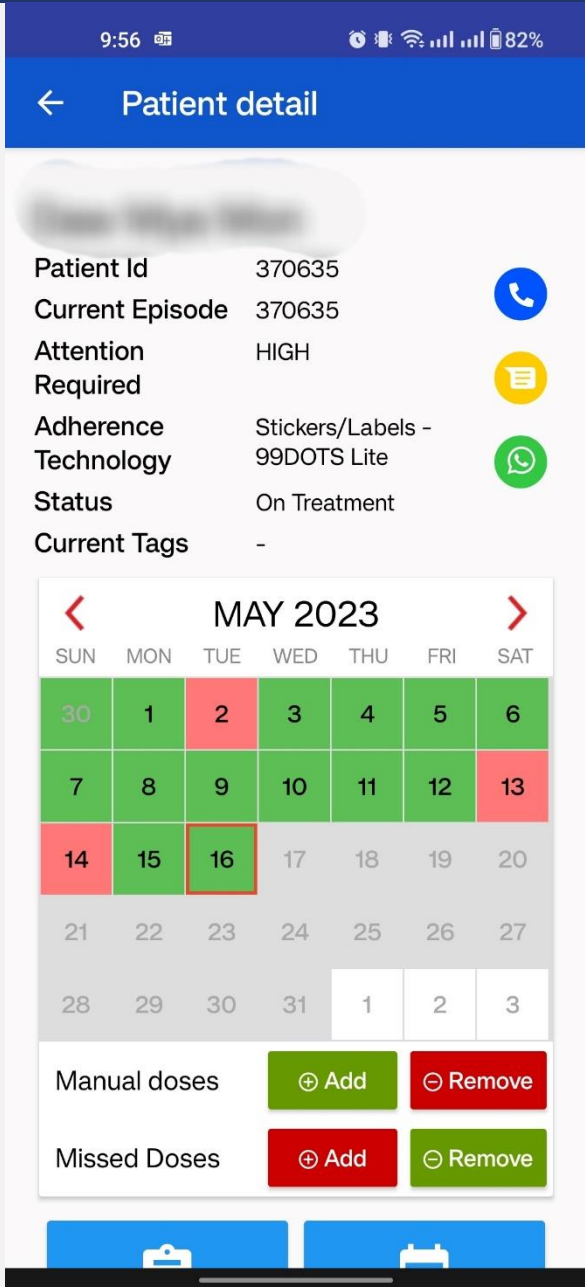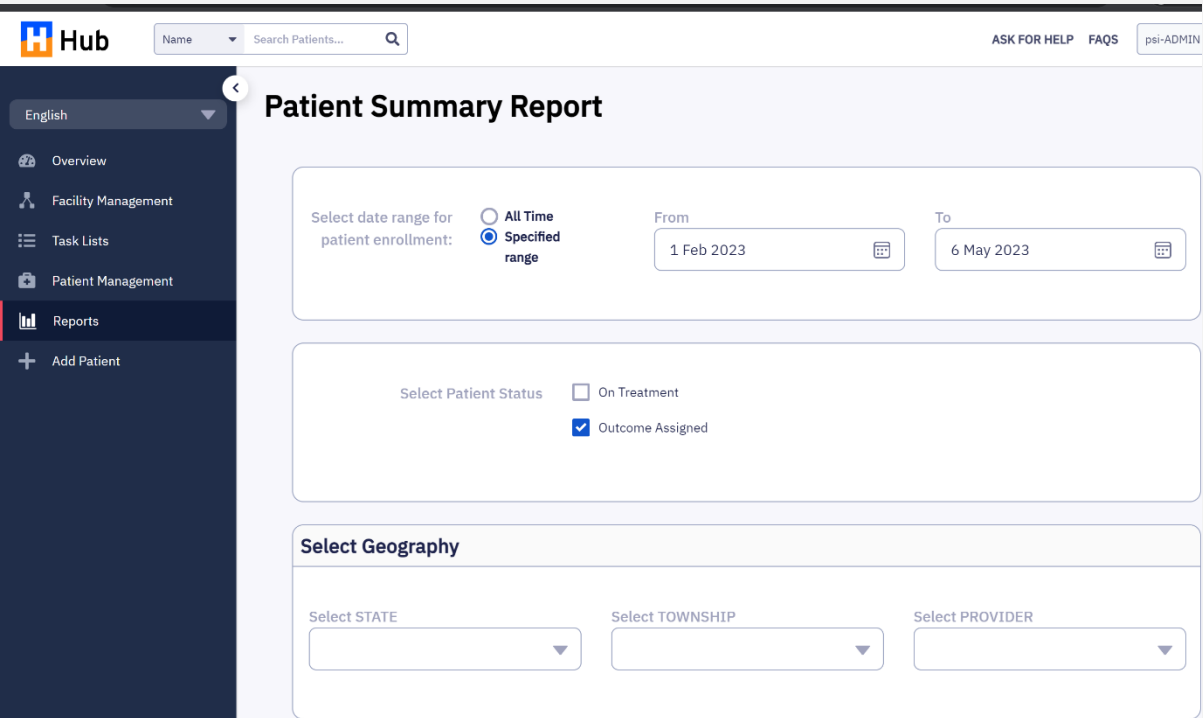
KEY FEATURES OF THE HUB

Virtual Care

- While no interaction can replace a face-to-face- consultation with a healthcare provider, a large percentage of people live far from clinics and would like otherwise struggle to meet a healthcare provider on a regular basis.

- To support people where they are, the Everwell Hub promotes features and opportunities for virtual care.

- Starting with DATs, the Hub supports integrations with various communication channels to cater to people's varying access to technology: SMS, toll-free phone lines, and a smartphone application that allows for text-based channels to communicate with healthcare providers remotely.

KEY FEATURES OF THE HUB

Report and Analytics

- The Hub is designed around simplifying data and synthesizing reports based on the intended audience.

- Data summaries, action prompts based on events, and prioritized task lists support health service providers' daily activities by highlighting priority follow-up actions.

- The Hub exposes detailed interactive reports that include data exports based on the time range, patient status, and provider geography.

99 DOTS

- The healthcare provider provides the 99 DOTS sticker includes a toll-free number, used to register daily adherence.

- The patient calls a number after taking anti-TB drugs on a daily basis. The Hub sends SMS to the caller number and updates the patient adherence calendar in the Hub.

- Healthcare providers can view daily reported adherence empowering them to provide differentiated care to those in need.

VIDEO OBSERVED THERAPY

- A mobile application for Android systems that utilizes video recordings and mobile communications to remotely monitor and support medication intake.

- It simplifies the entire program of DOT by eliminating in-person medication observation visits. This not only reduces DOT program administration cost but is also a well-accepted solution leading to greater engagement with the patient's treatment adherence.

- Two types of VOT – Asynchronous VOT (Hub Health Companion) and Synchronous VOT

ASYNCHRONOUS VOT

- The patient uses the Hub Health Companion mobile app to record the medication video and send it to Everwell Hub.

- The video is subsequently reviewed by the healthcare provider through Hub and updated the patient's adherence calendar after reviewing the video.
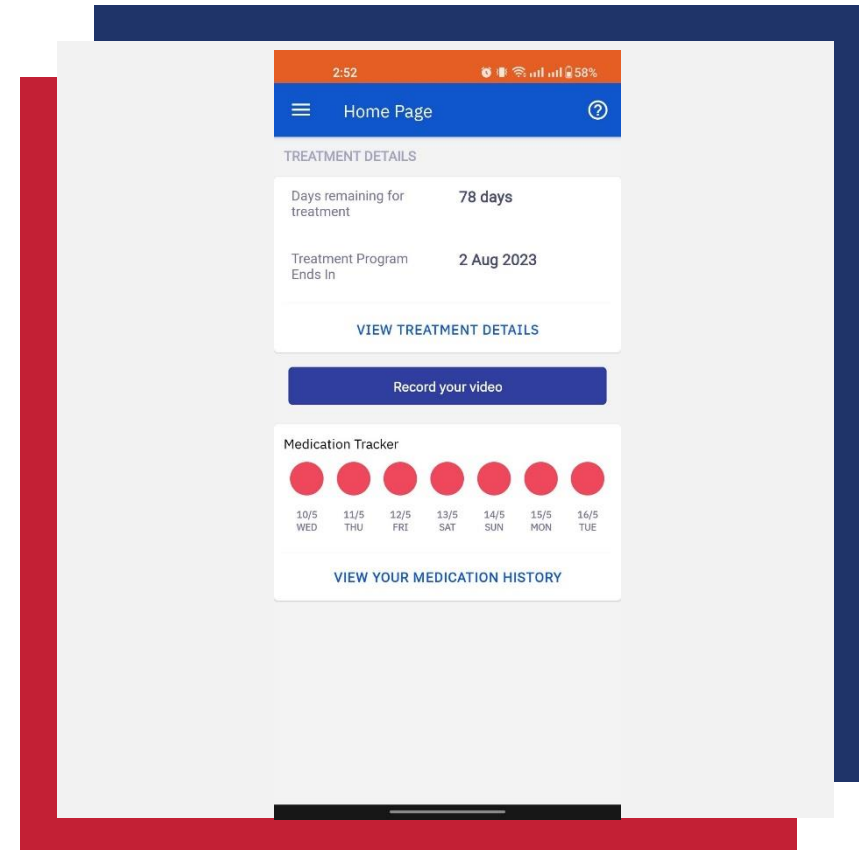
SYNCHRONOUS VOT

- A fully integrated video calling option is hosted within the platform for seamless connectivity between provider and patient.

- Video calls can be initiated by the provider – a video link will be shared with a person over SMS.

- Once the patient clicks on the link, he/she will be able to join the channel with the provider and the video consultation will begin.

HIV/TB Agency, Information and Services Activity

THANK YOU.