

Leveraging Swiperx to scale tuberculosis education for pharmacy professionals

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Challenge

Cost & time required to educate thousands of retail pharmacies

Indonesia has the second highest tuberculosis (TB) burden in the world with 969,000 new cases and 150,000 deaths reported in 2021. Less than half (45%) of all TB cases were diagnosed and treated in 2021.^{1,2} Indonesia's highly decentralized health system combined with private sector health seeking practices among individuals at risk of TB present both opportunities and challenges. Over half of individuals with TB symptoms initially seek care from a private pharmacy or drug store before visiting a health facility in Indonesia.^{3,4,5} Despite the critical role pharmacies play in serving communities at risk of TB, the fragmented nature of this channel has limited the scale of previous pharmacy engagement efforts to promote adherence with national TB screening, referral and notification guidelines.⁶ Reaching the estimated 149,000 pharmacy professionals working in Indonesia⁷ with offline professional education is both cost and time prohibitive. To date, coverage of retail pharmacists by national TB program trainings and other activities has been limited as a result of the fragmented nature of the pharmacy channel as well as the large number of pharmacy professionals working in the country. According to a 2019 survey, 7 out of 10 pharmacy professionals sampled had received less than 2 hours of TB training previously, highlighting the need for professional education in this area.⁸

Solution

Digital professional education for pharmacy professionals

USAID Tuberculosis Private Sector (USAID TBPS) engaged SwipeRx to scale digital professional TB education for pharmacists and pharmacy technicians between 2020-2022. Consistent with the National TB Program's district-level public private mix (DPPM) strategy and in collaboration with pharmacy professional associations, USAID TBPS developed the first digital professional education

modules designed to improve TB knowledge and practices among pharmacy professionals.^{9,10} Through SwipeRx, more than 130,000 pharmacy professional and students in Indonesia can access reliable, pharmacy-relevant information, accredited continuing professional development (CPD) courses, e-procurement and connection with thousands of peers and experts. Between 2019 and 2022, USAID TBPS engaged SwipeRx to scale accredited, digital professional TB education for pharmacists and pharmacy technicians. Using baseline survey data regarding baseline knowledge, attitudes and practices related to TB, USAID TBPS collaborated with the Indonesian Pharmacists' Association (IAI) and the Indonesian Pharmacy Technicians' Association (PAFI) to create and offer six accredited digital education modules related to TB: 2 tailored for pharmacists, 2 tailored for pharmacy technicians, and 2 tailored for both pharmacists and pharmacy technicians (Figure 1).

SwipeRx TB CPD 1:	TB Transmission, Prevention & Recommended Pharmacy Practices Introduction to TB epidemiology using NTP data, common symptoms, transmission; infection prevention & control; diagnosis and treatment regimens and the role of pharmacy professionals.
SwipeRx TB CPD 2:	First-line TB Treatment Regimens for Non-complicated Cases FDC combination therapies, indications, dosages and current regimens; ADRs and contraindications; FDC dispensing; patient communication, Tx initiation, counseling, and education.
SwipeRx TB CPD 3:	TB Treatment Adherence Factors affecting adherence/non-adherence; patient Rx history taking; methods and tools for Tx monitoring; prevention of drug resistance; pharmacy-community linkages for Tx adherence support; engagement with patient care providers; pharmacies as trusted information sources via effective patient interviewing, engaging with families, and counselling support.
SwipeRx TB CPD 4:	Drugs used for Drug-Resistant TB for Pharmacy Professionals in Indonesia Introduction to drug resistant TB, treatment for drug resistant TB, client counselling tips for pharmacy professionals, how pharmacy professionals can prevent the development and spread of drug resistant TB

Figure 1 Digital professional education for pharmacy professionals.

Modules were deployed through the app using a narrative format with high-quality graphic design as well as post-education assessment questionnaires to optimize e-learning. All six of the accredited TB CPDs were accessible free of charge to pharmacists and pharmacy technicians through the SwipeRx education tab. Consistent with Indonesian accreditation guidelines, each module was accessible for 6-months. SwipeRx app newfeed and social media channels, as well as collaboration with key opinion leaders (KOLs), were used to promote uptake of the accredited TB CPDs. Each pharmacist and pharmacy technician who answered at least 80% and 70% respectively of the post-CPD questions correctly, following completion of a SwipeRx TB

⁹MOHRI. Penanggulangan Tuberculosis National Strategy for Indonesia 2020-2024. 2019b.

¹⁰MOHRI. The Republic of Indonesia Joint External Monitoring Mission for Tuberculosis Health Compendium. 2020.

¹WHO. TB country, regional and global profiles. World Health Organization. 2022b.

²WHO. Global tuberculosis report 2022. 2022a.

³Ibid

⁴Adepoju VA, Olanrewaju O, Horsburgh CR. Rethinking Public Private Mix (PPM) Performance in the Tuberculosis Program: How Is Care Seeking Impacting This Model in High TB Burden Countries? *Healthcare*. 2022;10(7):1285.

⁵Bigio J, Aquilera Vasquez N, Huria L, et al. Engaging pharmacies in tuberculosis control: operational lessons from 19 case detection interventions in high-burden countries. *BMJ Global Health*. 2022;7(4):e008661.

⁶Miller R, Goodman C. Quality of tuberculosis care by pharmacies in low- and middle-income countries: Gaps and opportunities. *J Clin Tuberc Other Mycobact Dis*. 2020;18:100135.

⁷MOH. Indonesia Health Profile. 2021.

⁸USAID TBPS. Knowledge, Attitudes, and Current Practices and the Role of Pharmacy Professionals in Tuberculosis Treatment in Indonesia. 2019.

CPD, received 2 CPD units from IAI or PAFI. In this way, USAID TBPS both facilitated improved professional education about TB and enabled pharmacy professionals to meet their relicensing requirements to secure at least 150 (pharmacists) and 25 (pharmacy technicians) total CPD units every five years.

Results

During a 12-month deployment period, 13,840 pharmacy professionals were educated about 1 or more TB topics through SwipeRx as a result of USAID TBPS. Among those educated about TB through SwipeRx, 79% were women; 43% were pharmacists and 57% were pharmacy technicians; and 90% were located outside of Jakarta (Figures 2&3).

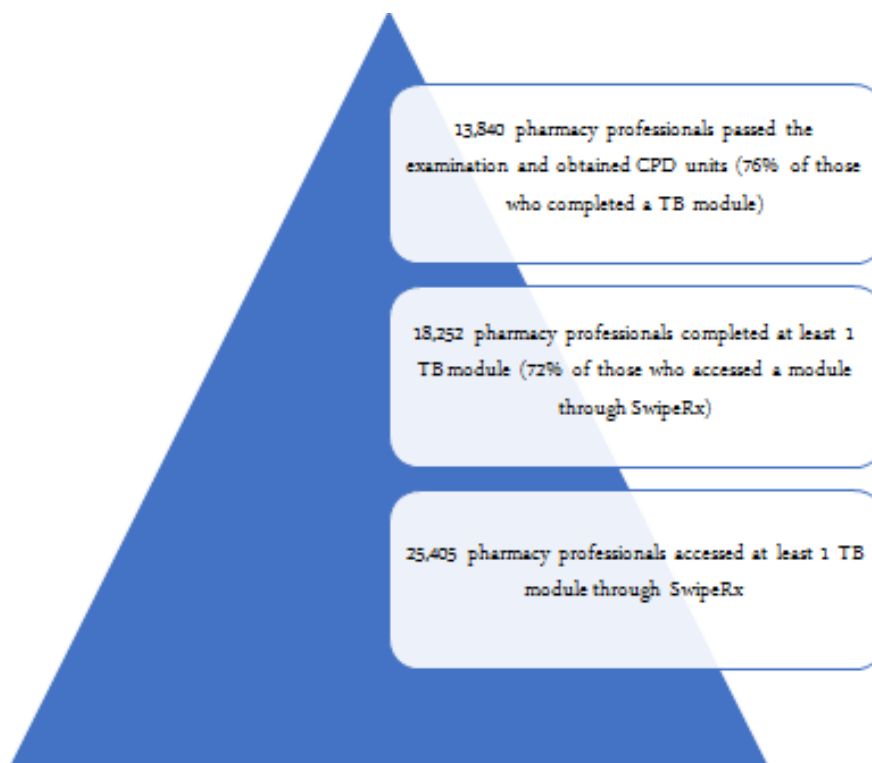


Figure 2 Swiperx tb education results: pharmacists & pharmacy technicians in Indonesia.



Figure 3 Pharmacist from Medan.

Conclusion

Through SwipeRx, USAID TBPS was able to scale professional education of pharmacists and pharmacy technicians in Indonesia. With substantially less time and money compared to what would be required to train more than 13,000 pharmacy professionals using offline techniques, the project leveraged a digital network and support from professional associations to achieve cost-efficient professional education results.¹¹ With support from both IAI and PAFI, USAID TBPS deployed 6 accredited modules designed to address basic knowledge and training gaps related to early TB detection and treatment adherence as well as prevention, benefitting more than 13,000 pharmacy professionals in 12-months of digital access to the

¹¹Kaboré SS, Ngangue P, Soubeiga D, et al. Barriers and facilitators for the sustainability of digital health interventions in low and middle-income countries: A systematic review. *Frontiers in Digital Health*. 2022;4.

modules.¹² This innovative approach to professional education for pharmacy professionals represents one of the first successfully-scaled pharmacy education initiatives in support of NTP goals in Indonesia.

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None.

Conflict of interest

Author declared there is no conflict of interest.

¹²Snyder T, Kaneda T. Seven Lessons in Sustainability and Scalability for Digital Health Solutions. *Digital Health Compendium*. 2022.