



KNCV's Digital Health initiative empowers decision-making by patients, healthcare workers and national TB programs.

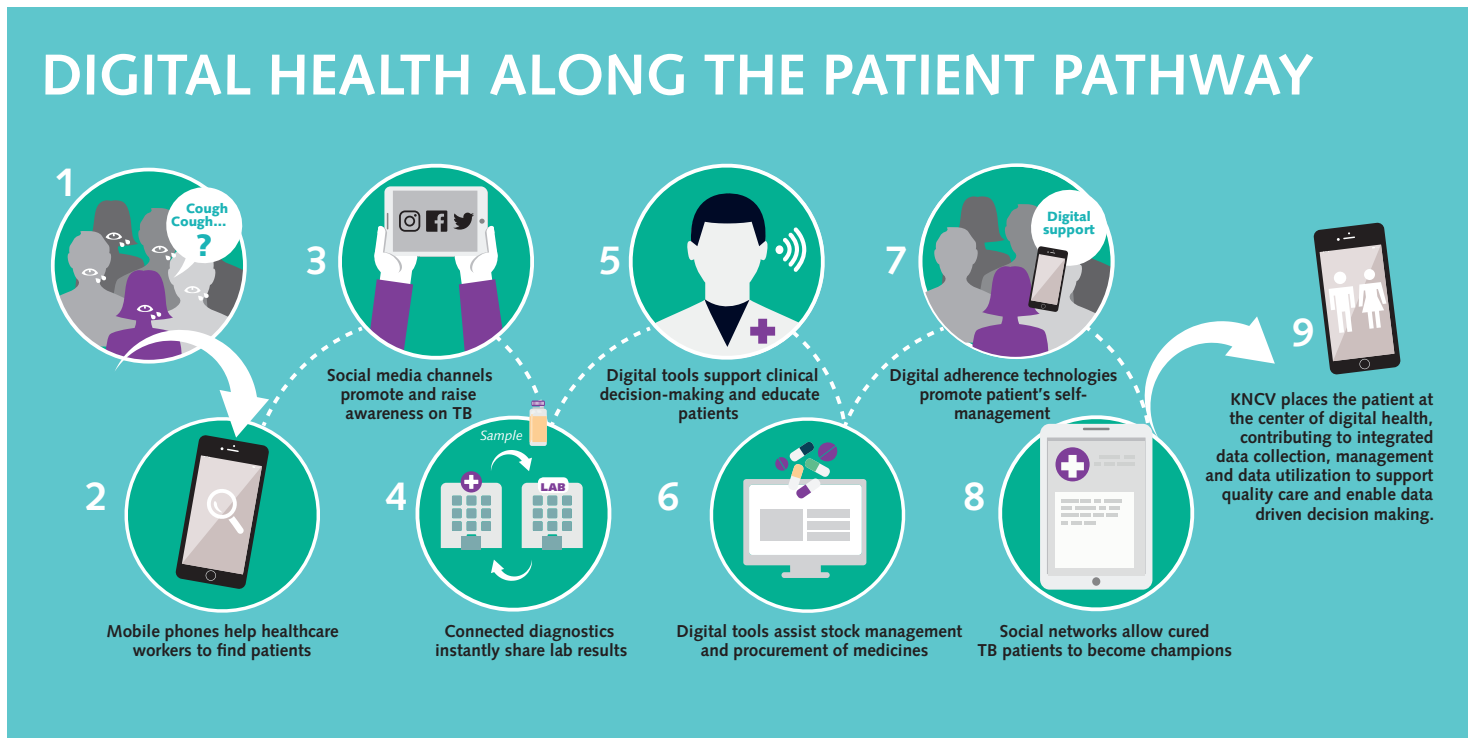
DIGITAL HEALTH

Significant advances in mobile technologies, network coverage and internet access have opened up great possibilities to improve patient-centered care and public health. KNCV's Digital Health initiative turns data into information and makes it available for utilization. In doing so we empower decision-making by patients, healthcare workers and national TB programs.

KNCV's Digital Health Assessment Tool

An effective and sustainable Digital Health approach needs to evaluate potential solutions, their purposes, and where within the health system they should operate both at the national and subnational levels. To this end, KNCV developed a Digital Health Assessment Toolkit utilizes the patient pathway framework.

Its purpose is to assess existing information systems with associated applications and identify any opportunities and gaps along the patient pathway: care seeking, diagnosis and treatment. This allows mapping of needs along the pathway and matching them with existing and potential digital health solutions.



KNCV applies Digital Health in three main areas of work:

- DIAGNOSIS
- CARE AND TREATMENT SUPPORT
- SURVEILLANCE AND MONITORING

DIAGNOSIS



Diagnostic connectivity

Rapid and accurate diagnosis of TB is essential to start treatment on time, and ultimately, control of the TB epidemic by limiting transmission. Faster laboratory feedback (to clinician, TB program and patient) can be achieved by connecting

diagnostic devices to online platforms, which also supports building better linkages between diagnosis and treatment initiation. KNCV supports the implementation of diagnostic connectivity tools such as GxAlert to

build a national network of connected GeneXpert MTB/RIF devices in several countries and supports National TB programs (NTP's) to build capacity to use the available information for informed decision making.

CARE AND TREATMENT SUPPORT



A strong focus on innovation & adherence

Interruption of TB treatment leads to poor treatment outcomes, resistant forms of TB and continuous transmission in the community. It is one of the major challenges facing TB eradication today. Traditionally, countries strictly employed health facility based Directly Observed Treatment (DOT), but this resource-straining approach has become outdated. New digital tools can

enhance existing processes and employ a more patient-centered, data-driven approach. Scalable and affordable "digital adherence technologies" like Medication Event Monitor Systems (MEMS), the 99DOTS solution, and Video Supported Therapy (VOT) are acceptable to patients and providers, can inform approaches to differentiate care and guide overall case

management, leading to improvement in treatment outcomes. To support the appropriate design and implementation of these adherence technologies, KNCV is working with partners to demonstrate these technologies in-country and develop an implementation package to guide global scale-up of these innovative digital solutions.

99DOTS: Low-cost innovation to empower patients

Pairing innovations in medication packaging with mobile phone technology, 99DOTS is an mHealth system that empowers patients to accurately report their daily treatment log their daily treatment adherence from the comfort of their own home. TB medication blister packs are repackaged in a low-cost, custom cardstock sleeve with a series of unpredictable hidden toll-free phone numbers that are revealed each time a patient takes

their daily pill dose. The patient calls or texts (SMS) this number and their daily adherence is automatically logged on a secure dashboard accessible to their health care provider. This enables health care workers to target resources to patients most in need of support and also provides accurate, real-time adherence data to national programs for analysis and creation of improved patient approaches.

SURVEILLANCE AND MONITORING



The use of collecting up-to-date patient information

The collection of up-to-date patient information, including socio-economic and health data, helps in the management of TB outbreaks, the evaluation and improvement of National TB programs and facilitates the execution of regular epidemiological

studies. KNCV supports National TB programs to utilize and link information systems like DHIS2 to collect information about patients and TB outbreaks in order to guide policy and programmatic activities.