



The ASCENT project helps patients adhere to their medicines by using digital technologies such as smart pill boxes or special sleeves with TB medication.

# ASCENT: EMPOWERING PATIENTS THROUGH DIGITAL ADHERENCE TECHNOLOGY

The Unitaid-funded ASCENT project aims to help patients succeed in TB treatment using digital adherence technology.

Tuberculosis (TB) is still the deadliest infectious disease worldwide, killing over 4.000 people every day. This is unnecessary as TB can be cured with appropriate treatment. A number of barriers however, prevent patients from recovering from this disease, including long and complicated treatment regimens that involve the daily intake of medicines over the course of 6-24 months. Missing even a few daily doses or

interrupting treatment can lead to resistance to the TB medicines and/or return of the disease later in life. Therefore, patients normally need to be observed when taking their daily medication either by visiting the health center or by a health care worker at their home. Obviously, these supportive measures put a burden on both the patient and the health system. By leveraging today's smart information and (mobile)

communication technologies the ASCENT project (Adherence Support Coalition to End TB) aims to support TB patients with their treatment in a modern and more effective way. By generating evidence, establishing a global market and engaging stakeholders, ASCENT aims to make future scale up possible so that these digital innovations can be available to all TB patients worldwide.

## Rethinking optimal care for TB

The ASCENT project helps patients successfully complete their course of treatment through the use of digital adherence technologies and data-driven support interventions, utilizing tools such as smart pill boxes and other innovations.

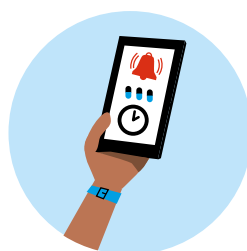
These digital adherence technologies empower patients to take their daily medication at a time and place that suits them best. Additionally they provide real-time information to the TB doctor or nurse, helping to determine the most appropriate treatment approach for each individual patient and by enabling focused efforts on those patients that require extra support.

At this moment, these technologies are only used on a small scale in the international fight against TB. The ASCENT project aims to make them accessible to all TB patients worldwide.

### Examples of patient benefits:



A patient can decide where to take their medication (e.g. at home).



Patient can be prompted by text message (SMS) to take a certain action (e.g. take their medication/ doctor appointment).



Patient receives individualized information about their treatment via text messages (SMS) or voice recordings on their mobile phones.

### Examples of provider benefits:



With the app, healthcare workers have access to real-time adherence information per patient.



The adherence platform can send healthcare workers automated alerts and reports about their patients, prompting action.



Machine algorithms on the adherence platform help to automatically identify which patients need more attention/support.

## Digital adherence technologies

The ASCENT project will implement and evaluate three different types of digital adherence technologies that will be available in participating health care facilities at no additional cost to the patient. How to use the specific technology will be explained by the health care worker as part of the standard patient treatment initiation process.

### 1: Medication Sleeve

The patient receives their TB medication in customized packaging. On a daily basis, patients make a toll-free call or text a code to automatically log their daily dose.

### 2: Smart Pill Box

The patient is provided with a specially-designed box to store their TB medication. Every time the patient opens the box, the embedded device sends a signal and automatically notifies the health care worker of the logged daily dose.

### 3: Video Supported Treatment

During medication intake, the patient records a video message using a customized app on their mobile phone. After completion, the video is sent to the health care worker for review.



## Consortium partners

With its strong consortium of partners (KNCV Tuberculosis Foundation, The Aurum Institute, London School of Hygiene & Tropical Medicine and PATH) and partnership with the governments of the implementing countries, the ASCENT project will contribute to the adoption and uptake of digital adherence technologies. The ASCENT project is made possible thanks to Unitaids funding and support.



The ASCENT project that will be implemented from July 2019 until December 2022 aims to reach nearly 70.000 patients in Ukraine (1), Ethiopia (2), Tanzania (3), South Africa (4) and the Philippines (5)

#### It focuses on:

- Facilitating country adoption and uptake of digital adherence technologies
- Generating crucial evidence for optimal use and scale
- Creating a global market and implementation plan for digital adherence technologies

## Stay in touch:

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