

Device Prototype:

The smart pillbox device will recognize every time each pillbox lid is opened. The opening action triggers the sending of a standard text message to a chosen mobile number. The text message included the following information: Device battery level and the current status of each lid i.e. number of lids that have been opened and number of lids that are closed.

There were four key requirements that drove the design of the Smart Pillbox:

- i) multi-compartment pillbox for holding the medication;
- ii) portable device that the user can travel with if needed (small and easy to carry and the system needs to be both compact and run-on batteries);
- iii) the device should not require user interaction beyond opening the pill box to access the pill;
- iv) the device should be capable of being integrated with a sim card that can send a text message (SMS) to notify when the lid is opened in real-time. It sends through a normal sim card given the fact that in remote areas, the 3G or 4G signal is very limited.

Study aims:

The study conducted by PSI Vietnam aims to test the prototype in field environment and to see if it encourages patient to follow treatment adherence by taking their medicine correctly. The study will illustrate and analyze the use of Smart Pillbox at the field base on:

Device reliability: it is measured by the successful transfer rate of smart pillbox (how many times patient open lid / how many times device send SMS to chosen number)

Support Adherence to the treatment: measured by how many times PSI case manager need to provide support to patient who forget to open the lid/ or open the wrong lid to take medication

Feasibility: measured by interviewing providers, case managers and patients on ease of use and implementation.

Evaluation Indicators:

To evaluate the effectiveness, convenience and innovative idea will be based on following indicator:

Outcome	Indicator	Source
Effectiveness of device	% of patient who receive smart pill box, complete their treatment	Recording each patient's SMS whenever opening a "daily box".
	% of patient who receive reminder call from case management if they forget to take medicine this day	Case management report
Convenience and innovation	% rate "satisfied/happy" with device	Exit Interview
	Exploring interview on using experiences	