



A GUIDE FOR COUNTRIES JOINING THE mHEALTH PROGRAM

This note describes the function and operational processes of the new mHealth for NCDs Global Joint Program, run by the World Health Organization (WHO) and the International Telecommunication Union (ITU). It outlines the way that the initiative works with its national partners and what partners gain from joining the program.



WHAT IS mHEALTH AND WHAT DOES IT DO?

mHealth is the use of mobile technology to provide health care support to patients or technical support to health service providers in a direct, low-cost and engaging manner. The WHO/ITU program aims to assist governments to use mobile components to reinforce their existing national health activities to prevent, manage, and treat Non Communicable Diseases (NCDs) and their risk factors. The aim is not to create new and independent programs, but to collaborate with governments, and engage with partners including the private sector and to build on existing structures. This makes the mobile projects faster to adopt and more sustainable in the long term.

HOW DOES IT BENEFIT THE GOVERNMENT?

1

Reduction in health spending

All countries in the world regardless of GDP are faced with rising health care costs. The global economic recession has further squeezed global government spend on health care. Many health care costs are preventable if illnesses are detected and tackled early on through a focus on prevention and health promotion.

2

Healthy population

Mobile health offers a way to reduce health care costs by empowering citizens to intervene in their own health care early on and by using cost-effective and already existing technology.

3

Adoption of existing mHealth services

The WHO-ITU program allows existing solutions in the target countries to be refined and expanded, increasing their impact on improving population health and potentially being passed on to other countries in the initiative. It is designed to create mobile health programs based on scientifically verified knowledge, which is currently lacking in many mHealth tools or apps created independently, putting the user's health at risk. An example of an intervention which could benefit from this is the NHS's Smartphone app for checking disease symptoms.

4

Enforcement of policies

The program reinforces existing national policy on NCDs and promotes health and technology innovation.

5

IP & investment opportunities

There were more mobile devices by the end of 2012 than there are people in the world. More people have access to mobile devices than currently have access to clean water, electricity or toothbrushes. Most people are never further than three feet from their smartphone, 24 hours a day. This technology, coupled with the fact that the wellness and NCD mobile health market is projected to garner revenue of US\$23 billion in 2017 means that there are exciting business opportunities for the 8 focus countries during the initiative¹.

6

Opportunities for Research and Development

Implementing mHealth in the country will attract further studies and innovations around the health areas, as it will provide a strong base platform of data and experience.

7

Demonstrates commitment to achieving NCD reduction targets

All UN Member States are required to actively work towards reducing NCDs, following the UN High Level Meeting on NCDs in September 2011. mHealth is a rapid way to ensure that progress towards those targets is met.

8

Positions the country as a leader in NCD innovations

This raises a country's global profile and place them in a strong position for bidding for other mobile innovations in the health sector and beyond.

WHAT INTERVENTIONS ARE AVAILABLE AND HOW ARE THEY SELECTED?

A country will select its intervention by identifying its priorities from criteria such as:

1. Weight of disease burden for a specific NCD or risk factor on the population
2. Disease priority in the national health agenda
3. Existing technology that they would like to be refined through the initiative
4. Desire for a rapid implementation (SMS) or a longer project (building a tailored Smartphone app or a full mobile platform for example for screening and treatment)

After identifying its priorities, a country can then pick solutions from the WHO/ITU mHealth program's "juke-box" of possible approaches. These have been selected from evidence collected from all over the world.

¹ "Touching lives through mobile health - Assessment of the global market opportunity", Price Waterhouse Coopers/GSMA 2012

There are three broad areas of intervention: prevention, treatment and enforcement. These cover treating patients already suffering from an NCD such as diabetes or cancer, reducing population exposure to risk factors for later developing an NCD (e.g. poor diet and no exercise, which contribute to heart disease and cancers), and helping governments enforce national policy on NCDs. This last category can include not only helping lower national targets for NCDs, but also other areas such as reducing counterfeit cancer drugs using a mobile scanner and bar code to determine a drug packet's authenticity.

Interventions are often interlinked, meaning certain interventions can be chosen which address more than one disease or risk factor. The following table sets out the interventions currently available under this program, along with examples of the form these interventions will typically take.

	DESCRIPTION	STATUS OF GLOBAL EVIDENCE ASSESSED BY WHO	EXAMPLE
mWELLNESS	SMS tips and Smartphone apps for monitoring and increasing physical activity and diet.	Good and growing.	<p>a) Smartphone app which allows the user to scan health content of a food in a supermarket and using the traffic light system for foods find healthier replacements</p> <p>b) Messages to inform, encourage and track physical exercise or diet program.</p>
mDIABETES	Use of mobile phones to track a patient's blood sugar/insulin levels, remind them to take their insulin, and give advice on dietary changes to stabilize condition. Can also be used as a preventative measure by informing people about lifestyle choices which increase their risk of developing diabetes.	<p>Excellent – positive results in a number of clinical trials primarily in developed countries.</p> <p>Initial outcomes in mass prevention behavioural change projects at scale look very promising.</p>	<p>a) Diabetic has a Smartphone app which tracks their blood sugar in a graph, helping them control fluctuations and reduce damage.</p> <p>b) Pre-diabetic receives tips on healthy cooking, lowering their tendency towards developing diabetes. E.g. gestational diabetes could easily be prevented or better managed reducing IMR/MMR.</p>

mCESSATION	Mobile-based support for tobacco users who want to quit. Toll-free SMS and mobile quitline. Smokers receive encouragement, support and advice on coping with quitting.	Excellent – Cochrane reviews, large pilots indicate positive health outcomes from USA, UK, Norway, Hong Kong, New Zealand, Turkey.	The program provides an ongoing algorithm based messages to the user to help them quit based on a target date, with added interventions for eg. Smoker is craving a cigarette at 7am. They send an SMS with a key word, "CRAVE", to a toll-free number. Seconds later they receive a reply SMS telling them what is making them crave the cigarette and how to stop it. Result: smoker is less likely to have the cigarette, helping them avoid cigarettes for the rest of the day.
mTRAINING	Mobile based support for health workers and teachers to include training on prevention and control.	Excellent from maternal and child health areas and non-health development areas show better attendance and completion and retention of information. Highly cost-effective.	Mobile phones and internet used to train health workers, social workers, care providers, parents, teachers and also patients (for self care) in lieu of structured training.
mSURVEILLANCE	2-way SMS system for enforcing smoke-free zones.	Good and growing.	An individual enters a smoke-free zone and receives a text informing them that the zone is smoke-free. They are also able to report people seen breaking this ban within the zone.
mSMOKEFREE	Using a mobile-based device to track smoke levels in bars/restaurants/public spaces and register them, so that asthmatics, families with young children, etc. can avoid areas with high smoke levels.	Looks promising.	A device developed by CERN which attaches onto a Smartphone and measures the density of smoke particles in the air in a bar.

mILLICIT / mTRAC	Mobiles are used to register serial numbers for cancer and other NCD drugs (already used for HIV, TB, malaria), tracking deliveries and avoiding counterfeits.	Good and growing. During trialing this reduced the number of counterfeit ant malarial drugs by 70% in 3 months. Under mTrac there is real time drug stock monitoring.	Bar code is scanned or alphanumeric code is sent via SMS to a number which verifies the code's authenticity or looks at stock and supply.
mSCREENING	Online and mobile platform to screen entire populations for existing NCD conditions and to monitor their treatment.	Good and growing evidence at scale primarily from the Middle East.	Fully integrated technology into the primary health care system allows patients and doctors to track and manage their conditions and plug in relevant interventions including schedule appointments, consult online etc.
mSURVEILLANCE	Mobile house to house questionnaires/surveys to monitor NCD risk behaviours in individuals.	Excellent – already ¾ of the world surveying tobacco use and other NCD risk factors in this way.	A surveyor keys in responses to survey questions and these are aggregated and analyzed in real time.

WHAT IS THE PROJECT TIMESCALE FOR IMPLEMENTING mHEALTH IN A COUNTRY?

MONTHS 1-2

Initial engagement between country's government and WHO-ITU program's Secretariat. Agree on intervention area and project scope; in-country needs assessment and formative research if required.

MONTHS 3-4

Agreement on implementation plan, promotional plan, evaluation plan, with the help of an Informal Experts Group and in-country workshop.

MONTHS 4-6

Technical development and testing of the program. This will vary from country to country. For a program where a project model already exists, or where one can be rapidly formulated, this will last around 2 months. For a new or more complicated intervention, this will last for a maximum of 6 months. A recruitment / promotion channel and campaign will be devised during the same period.

MONTH 7

Official in-country launch of the program, and the signing of an official document (Letter of Understanding or similar) between WHO-ITU program senior representative and national Ministries.

MONTHS 7-9

National promotion of the mHealth program. Recruit citizens for the particular mHealth program using push and pull tactics (through doctors surgeries, health centres, leisure centres, universities, shops, workplaces, community groups, internet etc.) and prepare for the first round of implementation.

MONTHS 10-12

First stage of implementation

MONTH 13

First round of monitoring and evaluation (M&E) and impact assessment of initial results.

MONTHS 14-16

Second stage of implementation for mobile intervention

INTERVENTION 1 (E.G. SMOKING CESSATION)
with appropriate modifications if identified by the M&E.

Initiate development of a second mobile intervention

INTERVENTION 2 (E.G. DIABETES PREVENTION)
to follow the same timeline as the first, with Informal Experts Group and workshop etc.

MONTHS 17-18

INTERVENTION 1 (E.G. SMOKING CESSATION)

second round of M&E and impact assessment.

INTERVENTION 2 (E.G. DIABETES PREVENTION)

technical development of the second mobile intervention.

MONTH 19

INTERVENTION 2 (E.G. DIABETES PREVENTION)

Official in-country launch of the second intervention, etc.

A new project or intervention area can be introduced during each of the years when the WHO-ITU program is operating within a country. Costa Rica, for example, has begun with mobile cessation, and is considering broadening to mobile cancer screening and prevention in 2014. However, since the program will initially only run for four years, the number of new interventions a country is able to add on is limited by the year in which it joins the project. By joining in Year one, countries would have the option of expanding their mobile health services to include four different disease and risk areas. Countries which join in Year two will only be offered three programs, countries in Year three, two programs and so on.

Over the first four years the program will aim to introduce mHealth components for NCDs into the national health systems of eight target countries. The objective is that mHealth is “owned and led” by the government even after the external project support from WHO/ITU is complete. Countries will be selected representing different regions, income levels and demonstrating high disease burdens and political commitment.

The Joint programme is developing a robust metric for monitoring and evaluation so that it is fully, accountable and transparent to all stakeholders in terms of impact of the intervention. The focus will be solely on interventions for NCDs that are considered “best buys” on the basis of pilot or sentinel results proving effectiveness and cost-effectiveness. An impact assessment framework will be developed for participating country projects, involving outcome-based systems to monitor progress and measure impact. Individual country projects will be evaluated using mobile technology that will feed into national information systems and central monitoring across the eight countries. This will ensure that the initiative strengthens domestic monitoring systems whilst stimulating partner collaboration at all levels. In line with WHO guidelines there will also be third party evaluations of the global and country projects.

The program will ensure sustainability in three ways.

Firstly, countries will work with WHO and ITU to share their experiences across regional groupings, spreading lessons learnt to neighbouring countries. This is something that we term “PAY IT FORWARD” — the eight countries chosen will be expected to act as champions within regional political and economic groupings, diffusing mHealth models and approaches from their experience to other countries who may benefit from a similar structure or content.

Secondly, all recipient governments will co-fund country operations. Donor governments (and their taxpayers) plus other donors to the Joint Programme will receive transparent reporting on impact. Taxpayers from donor countries will be able to track, near real time, the impact of their funds on end-users in participating countries. We believe that this model will help strengthen impact measurement in health systems and particularly philanthropy.

Thirdly, the fact that the interventions are large-scale avoids post-pilot paralysis. This is when trials for mobile health solutions are successful, but fail to be further developed, leaving numerous small, stand-alone projects. By absorbing small but successful pilot projects into a bigger health system, the solutions are able to scale up their work and collect clear evidence on the beneficial impact of their intervention. This concentrates efforts to a few key good ideas, which can be properly developed and adjusted to maximize their usefulness for an entire population.

At the end of the four years WHO/ITU will go through their normative processes and ensure that the mHealth interventions scaled through this project are standardized for the world (ITU study group process/WHO guidelines process).

WHAT COMMITMENT IS REQUIRED FROM THE EIGHT GOVERNMENTS?

We are looking to ensure is government ownership of the mHealth initiatives. This ensures their success and sustainability for improving population risk from NCDs.

The first commitment is financial. This is required to sustain the program, but also as a guarantee of ownership and commitment from the government. If the mHealth projects are financed by the country as opposed to an outside agent, there is a much greater likelihood of them being a success.

The government will also be required to designate a project manager and/or government team, who will be responsible for coordination the project with WHO and ITU. This individual or group will then become the main point of contact between the WHO and ITU, and the government. They will work with the program to design each intervention in accordance with national needs.

Finally, the government will be responsible for engaging users, via program promotion in national health clinics for example, as well as helping to ensure that the program is integrated into national health systems and is thus a sustainable investment.

WHAT WILL THE GOVERNMENT RECEIVE FROM WHO/ITU?

Joining the program will bring:

- An assigned contact at WHO and ITU for program coordination;
- A project template for each mHealth intervention, which has been developed by WHO/ITU and global experts and which can then be tailored to national specifics;
- Technical assistance from the WHO-ITU team and associated experts for implementing the project.
- Access to the strategic private sector, academic and NGO partners as well as the other seven countries participating via roundtables, workshops etc.
- A regional and global leadership role mandated by WHO and ITU.
- Monthly updates on the project's development and progress;
- Invitations to program workshops on mobile health;
- A full project report on each intervention after its first year of implementation;
- Detailed monitoring and evaluation of national mHealth projects by WHO and ITU staff, including costs;
- A mobile health product and structure which at the end of the program is left in the government's hands. They will be able to continue to use the structure as long as they wish.

This is an opportunity for governments to partner with WHO and ITU and develop a strong working relationship with the organizations. It is the first UN program to use mobile health for combatting diseases like diabetes and cancer, meaning that association with the program will galvanize a country's reputation as a leader in this field of health and technology.

HOW DOES JOINING THE PROGRAM WORK?

For mHealth solutions to be sustainable they need to be embedded in a country's national health services. This is why the WHO-ITU joint program aims to work with government partners from national ministries for Health and ICT.

The process for engagement typically begins by the program focusing on countries where support for the program has already been expressed by a government minister.



Once there is confirmed interest from the country, they are requested to show their support by contributing to the program. In developed nations this is usually project financing. In developing countries where self-financing is impossible, countries are expected to offer political support and in-kind contributions, via partnership with local telecoms for example. This display of commitment is designed to ensure that the mHealth interventions have sufficient resources to make them sustainable after the WHO-ITU program ceases its involvement in country activities.



A Letter of Intent will be signed outlining the agreement between the country and the WHO-ITU Joint Program. This should also include other national or UN partners involved. In the case of Costa Rica, for example, an agreement was signed between the Vice-President of Costa Rica, name, the ADG, MoH, PAHO regional rep, etc. in an official launch ceremony in Costa Rica. The Program will then continue to work closely with the relevant government departments in order to ensure that the intervention development and implementation is done with their full working knowledge and understanding of the process.

