



World Health
Organization



BE HE@LTHY BE MOBILE

ANNUAL REPORT 2017



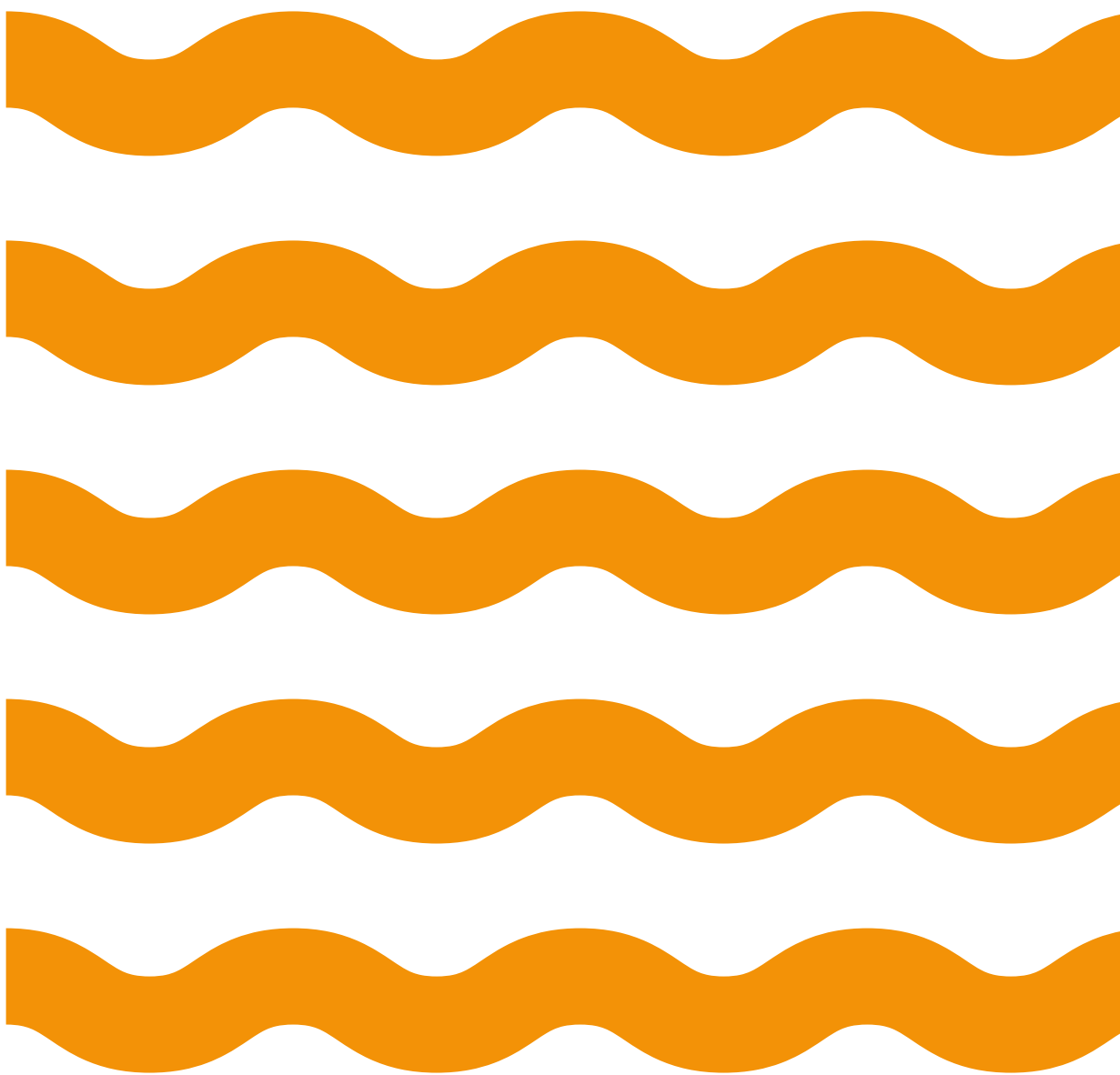
“The BHBM global initiative is the best example of supporting countries to effectively implement mHealth on a large scale that I have seen.

The team brings the evidence, expertise and the experience to Ministries of Health and stakeholders who are serious about implementation.

This has made the difference in moving mHealth from small-scale siloed pilots and projects, as were previously seen, to large-scale, integrated, government supported programmes.

Countries that follow this formula are also better placed to add further mHealth initiatives once the first is implemented.”

Dr Robyn Whittaker,
University of Auckland



Contents

Foreword	5
Overview	6
The year 2017 in review	8
■ Handbooks	10
■ Countries	14
■ Innovations & Hubs	20
■ Partnerships	26
■ Expert opinions	31
Annex 1	35
Annex 2	40

Foreword

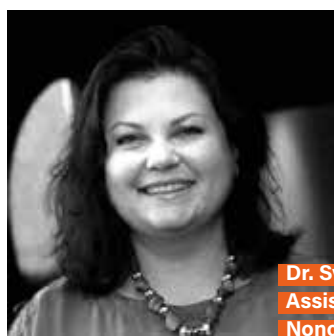
Six years ago, the 2011 Political Declaration on Non-communicable diseases (NCDs) placed NCDs on a par with the HIV crisis. The world began to realize the consequences of this shift in the global health landscape. However, NCDs continue to be the biggest cause of death globally and health systems are still struggling to adapt to this change.

There is a substantial amount of evidence on how mobile technology can be used to help prevent and manage NCDs. However, very few examples have successfully transitioned from small-scale studies to large-scale programmes. Since its founding in 2012, the Be He@lthy, Be Mobile (BHBM) initiative, which is a joint initiative of the International Telecommunication Union (ITU) and the World Health Organization (WHO), has made significant progress in developing national scale mHealth services for NCDs and their risk factors. BHBM works with governments to introduce evidence-based mHealth services into their national health systems, evaluate their impact and share best practices between countries. It is the first initiative of its kind, and collaborates on some of the largest government-run mHealth programmes in the world.

There are now five published global mHealth handbooks – mTobaccoCessation, mDiabetes, mCervicalCancer, mBreatheFreely and mAgeing – and a number of other titles under preparation. Programmes have been implemented in 10 countries and the results are promising. Over 2 million people are registered in India's mHealth services, 117,000 people living with diabetes were helped in Senegal, and 180,000 people have been supported in Egypt. Fifteen more countries are already planning programme implementation and over 90 countries have expressed an interest in joining the initiative.

BHBM is starting to understand what it really takes to scale digital. Programmes are affected by many factors, which can be internal, related to the content, technology, legal, infrastructure, integration and management, but also external, such as existing services, partnerships, financing models, sociocultural preferences, or political events. Adaptability is also fundamental – a programme that starts as a Short Messaging Service (SMS) may one day become a smartphone app or an artificial intelligence avatar. Along with working on programme implementation, the initiative is also beginning to look at standards and norms around mHealth, as well as how other kinds of digital technology can promote health.

Global interest in the digital health continues to grow in both the health and technology spaces. We look forward to seeing how the lessons from our joint programme continue to benefit not only BHBM programmes, but also scaling up of other digital health solutions around the world.



Dr. Svetlana Akselrod,
Assistant Director-General for
Noncommunicable Diseases
and Mental Health, WHO



Brahima Sanou,
Director of the
Telecommunication
Development Bureau, ITU

Overview

01

Handbooks



Handbooks are the starting points for planning large-scale mHealth programmes.

These are comprehensive and evidence based documents that provide guidance for country governments and policymakers to develop, implement, and evaluate an mHealth programme.

The programmes primarily address prevention and control of different NCDs and their risk factors.

02

Countries



Countries develop mHealth programmes.

The countries which develop BHBM programmes come from a range of regions and income levels. BHBM supports each country in implementing a different intervention or a combination of interventions, depending on the need and political will behind each disease or risk factor, tackling issues as diverse as raising awareness on cervical cancer to helping people quit tobacco use.

03

Innovations & Hubs



Innovations prepare for the future.

Digital innovations that can support healthcare include a broader range of technologies than SMS, such as smartphone applications, wearables, artificial intelligence and machine learning. Together with partners and collaborators, BHBM works towards understanding how to best deploy these new digital health solutions at scale.

04

Partnerships



Partners add value and reach.

The initiative is unique in that it adopts a multi-sector partnership structure at global and national levels, which engages in-country partners and governments to maximize success. BHBM understands the value of collaboration and holds a number of partnerships with organizations who share their vision and believe that digital can help protect people from NCDs.

The year 2017 in review



*mBreatheFreely
workshop in Tromsø*

April

mAgeing workshop in Geneva

May

- Burkina Faso launched mTobaccoCessation!
- World Health Assembly

March

- EU mHealth Hub project kick off
- ITU and the Digital Impact Alliance announce a partnership



August

- Philippines launched mTobaccoCessation!
- ITU issued a Request For Proposals to identify the host of the *EU mHealth Hub*
- Preliminary evaluation of mTobaccoCessation in India shows quit rate of 7%
- Global conference on NCDs in Uruguay

September

- digital health discussed at the UN Assembly in New York
- 2030 Vision (technology partnership initiative) set up with BHBM as one of the co-founding partners

June

- mRamadan in Senegal reached 117,000 users
- mRamadan in Egypt reached 180,000 users

July

- The World Summit on the Information Society (WSIS)
- Hack for Health hackathon
- Meeting with the diplomatic missions from 9 BHBM countries, hosted by the French embassy



October

Preliminary evaluation of mCervicalCancer in Zambia shows a 6% increase in screening attributable to the programme

December

- Report of the UN Secretary-General on NCDs
- Tunisia launched national mTobaccoCessation!

01 Handbooks

The handbooks cover five main areas:



Handbooks			
COMPLETE	▪ mTobaccoCessation ▪ mDiabetes	▪ mCervicalCancer ▪ mAgeing	▪ mBreatheFreely
UNDER DEVELOPMENT	▪ mSalt ▪ mTB-Tobacco	▪ mActive ▪ mHypertension	

BHBM handbooks contain content and operational processes needed to create a national mHealth programme. This includes how to set up and run programs, how to deliver a desired health impact at scale, and how to integrate mHealth with non-digital health services.

The programs are primarily focused on NCD prevention and provide content which helps to:

- Raise awareness of the risk of developing a condition
- Encourage and support behaviour change to protect people from risk factors such as poor diet and smoking tobacco
- Inform people about the availability of a local service, such as screening

Inform people about the availability of a local service, such as screening The initial content of the handbook comes from clinical trials and global guidelines, collected and reviewed by an Informal Expert Group. During a content workshop, this is then reviewed by international experts using a series of personas based on the different target audiences for the program. Finally, each handbook

is adapted for local use by any country which chooses to implement it. The adaptation includes message rephrasing to account for cultural references and the appropriateness of all messages for each target audience.

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Handbook development is a continuous feedback cycle. Content and experiences from each country are shared back with WHO and ITU, and included in new versions of the handbooks. The iterative approach allows lessons from the field to be included, as well as the addition of new content as the evidence base for each area grows.

Group 1



MARGARET

ABOUT ME

Hi, I am Margaret. I am 61 and live in a village in Tanzania. I was married for 21 years until my husband died. I have 4 children live in a city and 3 grandchildren live with me. I have worked as a law enforcement officer for 28 years. After I retired, I have a lot of financial worries.

INCOME	☒ ☐ ☐
LITERACY	☒ ☒ ☐
TECHNOLOGY LITERACY	☒ ☒ ☐

MY SUPPORTS

Who are the people I refer to and trust the most?


4 children


3 grandchildren

I don't have any friends and visitors after I retired

MY COMORBIDITIES	CHALLENGES
 High blood pressure	I was on meds, but I stopped going to a doctor, because I'm saving money for my grandchildren.

MY INTRINSIC CAPACITY



When I was a police officer, I used to be on the netball team. I stopped exercising because I find life very difficult at the moment.



Sometimes, I skip my meals so my grandchildren can go to school. I don't want to eat as much as I used to.



I don't have any issues hearing. My vision is a little low but I've never had my vision checked.



I started to forget things and my grandchildren are making fun of me.



I feel depressed, angry, and lonely. I don't have friends talk to, and my kids live far away and don't visit me often.



I have never fallen.

ME & THE HEALTHCARE SYSTEM

Where do I go for medical treatment? Who do I interact with, and at what frequency?



CHW



PRIMARY HEALTH CARE CENTER



HOSPITAL

MY FUNCTIONAL ABILITY



Finances: I have very little savings. I am worried about money for electricity and food. **Personal security:** I am safe getting around



I went to school until 2nd grade. I don't think I have the time or money to get involved in the community.



I use glasses to read and see better. I can get around without canes or other support, but it's hard since I stopped exercising.



I don't see my friends very often, I am too busy caring for my grandchildren.



I take care of my grandchildren, but it is very tiring, let alone contributing to the bigger community.

MY DEVICES



My own basic mobile phone

	MAIN USE
☒	SMS
☒	For personal life

DAY IN MY LIFE

What my usual day looks like, places where I go, how I commute, activities I do (interaction with healthcare system, leisure, etc.), people I meet.

MORNING

AFTERNOON

EVENING

A critical part of the handbook development process is ensuring that new services are appropriate for the target groups they are intended to support. As part of the workshop, sessions focus on a human-centred design approach to mHealth services and SMS content, using personas from different settings to encourage participants to consider the impact of socioeconomic, cultural and geographic settings. The personas might range from a parent caring for a child with asthma, to a middle-aged man trying to do more exercise, to an elderly woman in a rural setting ten hours from the nearest medical clinic. By looking at the service from the end user's perspective, including sociocultural, economic, environmental and geographic factors, it is more likely that a service will meet that user's needs, increasing the program's use, value and health impact.

mBreatheFreely

mBreatheFreely is a new addition to the portfolio of the Be He@lthy, Be Mobile handbooks. The programme was designed as a population-based programme that uses mHealth to provide health information and support to people living with asthma and COPD. The main target populations are persons with asthma or COPD (diagnosed and undiagnosed), persons with risk factors for asthma or COPD (e.g., smoking, biomass smoke exposure), health care workers, and caregivers (e.g., parents of children) of persons with asthma or COPD.

The mBreatheFreely workshop took place in March 2017 at the Norwegian Centre for eHealth Research (NSE) in Tromsø, Norway.



The mAgeing workshop took place in April 2017
at the University of Geneva, Switzerland.



mAgeing

mAgeing is another handbook produced by Be He@lthy, Be Mobile in 2017. It helps countries develop, run, monitor, and evaluate the mAgeing programme within their own contexts, using basic technology common to most mobile phones. Messages within the handbook are based on the latest WHO guidelines on community-level interventions to manage declines in intrinsic capacity (ICOPE guidelines), and built on behavioural change theory.

02 Countries

Senegal

mDiabetes

- An annual campaign, first launched in 2014
- Over 120,000 registered users in 2017, including 5,000 health care workers
- Senegal is expanding the outreach and scale of the programme by introducing a comprehensive mDiabetes programme
- The results of a biometric evaluation of the programme will be published in 2018

Zambia

mCervicalCancer

- Launched in October 2016
- More than 1,000,000 messages sent
- The Ministry of Health is aiming to integrate the programme as part of a continuum of care. This means looking at additional features that will make it easier for women to access screening and treatment, such as appointment reminders and follow-up after screening. The programme receives funding support from the African Development Bank.

Data Source: Data and Admin. Boundaries: World Health
Map Date: 9 November 2018

Tunisia

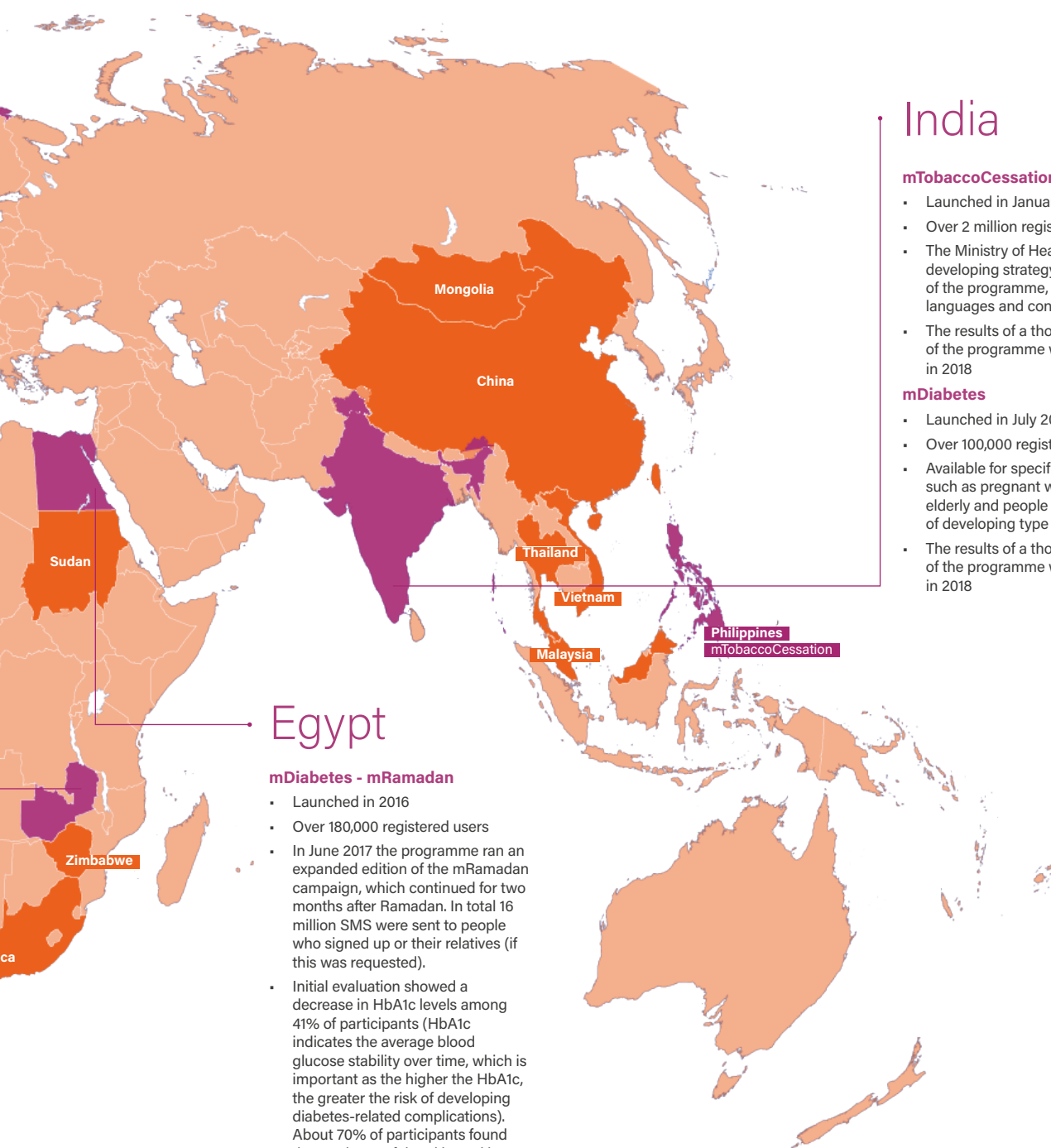
mTobaccoCessation

- Launched in December 2017
- Over 50,000 registered users
- A soft launch and user testing took place throughout 2016 and 2017. In 2017, the Innovation and eHealth focal point conducted three field reviews with the national team to assess the programme progress and coordinate the scale up across Tunisia. Following this, work focused on upgrading the IT platform and building local capacity. In December 2017 the programme was launched with a new name: "Yakfi" ('Enough!' in traditional Arabic). An extension of the programme to cover diabetes is under development, with support from the World Diabetes Foundation.

Countries

Over 90 countries in total have expressed interest in joining BHBM

-  Countries that are implementing BHBM programmes
-  Countries which are planning implementation of BHBM programmes



India

mTobaccoCessation

- Launched in January 2016
- Over 2 million registered users
- The Ministry of Health is developing strategy for expansion of the programme, to include new languages and content
- The results of a thorough evaluation of the programme will be published in 2018

mDiabetes

- Launched in July 2016
- Over 100,000 registered users
- Available for specific target groups such as pregnant women, the elderly and people with a high risk of developing type 2 diabetes
- The results of a thorough evaluation of the programme will be published in 2018

Egypt

mDiabetes - mRamadan

- Launched in 2016
- Over 180,000 registered users
- In June 2017 the programme ran an expanded edition of the mRamadan campaign, which continued for two months after Ramadan. In total 16 million SMS were sent to people who signed up or their relatives (if this was requested).
- Initial evaluation showed a decrease in HbA1c levels among 41% of participants (HbA1c indicates the average blood glucose stability over time, which is important as the higher the HbA1c, the greater the risk of developing diabetes-related complications). About 70% of participants found the service useful and hoped it would continue.

National mTobaccoCessation launch in Tunisia, December 2017. The programme was launched in a press conference led by the Minister of Health. The messages have reached 50,000 tobacco users within the first week.





My father followed all your SMS. Before his blood glucose level was out of control, now it is kept under control.

User, Maharashtra, India

These messages really helped me manage my condition. Every day I would ask my son to check if there was a new message. He would help me understand what I needed to do and we would then talk about it together.

User, Senegal

The programme has opened people's minds! When patients with diabetes who I've known for a long time come to see me, they now ask me lots of questions. They're no longer scared about their treatments.

Health worker, Senegal

The SMS remind me to think about my diabetes no matter where I am – so I make fewer mistakes.

User, Senegal

I can't read and write but don't worry, I'll give the message to someone and ask them to read it for me...

User, Egypt

Case study

mCervicalCancer in Zambia

Cervical cancer is the most common cancer in Zambia, and is a serious issue for public health, gender equity and economic development. The country has the fourth highest cervical cancer rate in the world, with incidence and mortality rates of 52.8 and 38.6 per 100,000 women respectively. One of the simplest solutions isn't an expensive treatment – it is knowledge about the importance of early screening.

BHBM is supporting the Ministry of Health (MoH) and local telecom authorities in Zambia to run a national mCervicalCancer programme. Launched in October 2016, the programme uses SMS messages to inform people about the risks of cervical cancer and the importance of early screening. Since inception, the programme has sent out over 1.1 million SMS. It has reached over half a million people, empowering women to make informed decisions about their health and men to support those decisions. The First Lady of Zambia, Mrs Esther Lungu, has become a champion of the program.

In the first phase, the expected outcome is better knowledge of cervical cancer among women in the target screening age (25-59 years), and more women accessing screening services. A full scale evaluation is ongoing, but initial results from Lusaka province indicate a 6% increase in first-time screening attributable to the program. BHBM is supporting the MoH to expand the program beyond early screening and towards a comprehensive component of care support and treatment using mobile phones. This will include appointment reminders, proactive follow-ups by the health facility and other functions which leverage the connectivity provided by mobiles. One of the key lessons learnt from the initiative is the positive role of multi-sectoral partnerships. The strong stakeholder relationships have supported service delivery in the short term.

As organic, nationally owned relationships, they are also more likely to help sustain the program as a permanent long-term service. The program has also emphasized that any mHealth component must be integrated with other health services, in order to ensure a continuum of care for the patient.



"Women should not die from highly preventable diseases such as cervical cancer due to lack of access to information. We are excited that Zambia is launching the mCervicalCancer programme, the first in the world... It will enable women in hard to reach areas of Zambia to have access to life-saving information."



**Her Excellency Mrs Esther Lungu,
First Lady of the Republic of Zambia.**

03

Innovations & Hubs

BHBM has remained committed to creating health messaging content that is technology agnostic. This positions BHBM as a vehicle for sustainable innovation that is not pegged to a single technology, but that develops the digital health ecosystem as a whole. The most common medium for information dissemination thus far has been SMS.

However, a number of other messaging tools for different contexts are being actively explored, such as interactive voice response systems (IVRS), web-based messaging platforms, audio systems, and rugged tablet devices.

These solutions are intended to accommodate users who prefer the Internet to text messaging, or those who are illiterate and unable to read or respond to a text message.

Digital innovations that are potentially relevant to NCDs go beyond knowledge dissemination tools. They include a broad range of technologies, such as smartphone applications, wearables, low-cost devices, artificial intelligence, machine learning and big data.



The scale-up models for these solutions and technologies are expected to be different from traditional SMS models in a number of ways. Firstly, the evidence base for their use is less advanced than SMS. Secondly, national scale implementation costs will vary more broadly based on the type of devices, service costs, (including broadband connectivity), and longer-term device maintenance and updates.

There are also a number of unresolved regulatory issues such as interoperability, security and data protection. All in all, whilst they may provide a much broader range of opportunities for preventing and controlling NCDs, their use is significantly more complex.



European Union mHealth Knowledge and Innovations Hub

Knowledge and Innovations Hubs are entities which help countries learn from the practical experiences of their peers. They look at what practices to adopt, pitfalls to avoid and which common frameworks can best support new programmes. They also serve as a base for researchers, project coordinators, experts and technical support teams to develop knowledge, capability and technical expertise in a particular field.

In 2017 WHO and ITU began work to establish an mHealth Hub for the European region. This is a four-year project funded through the Horizon 2020 mechanism, with a dual focus on knowledge management and practical implementation. An official host for the EU mHealth Hub will be announced in 2018.

The EU mHealth Hub will:

- support research into the design and scale-up of mHealth services;
- provide training and education around mHealth use and effectiveness;
- identify standards, regulatory and policy goals relevant to mHealth;
- provide implementation and consulting support to countries and other institutions.

2018-2021

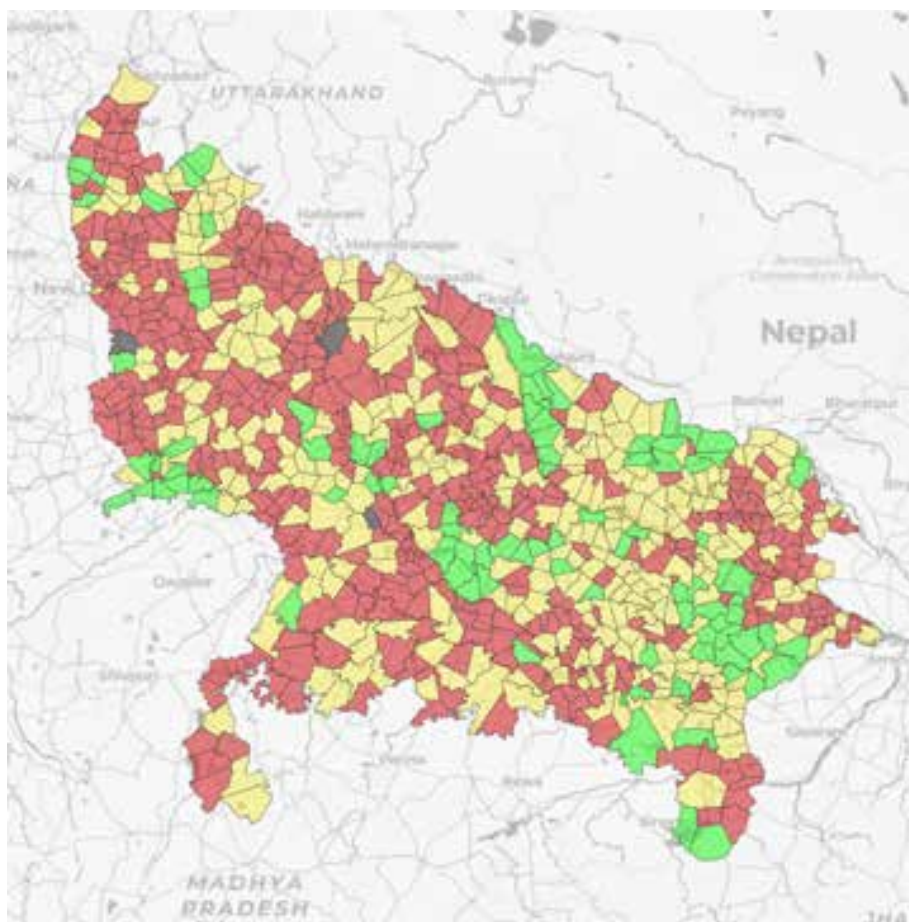
Short-term goals

The EU mHealth Hub will focus on building resources and on supporting WHO and ITU in country implementation in selected European countries.

2021 onwards

Long-term goals

The Hub will function as a supportive resource for Europe to take the next step in scaling their own national mHealth services.



**Spatial map of TB incidence rates in Uttar Pradesh.
Red represents high TB rate; yellow represents medium
TB rate; green represents low TB rate.
Image courtesy of GSMA.**

Big data for Tuberculosis prediction

BHBM has been working with GSMA to identify what kind of mobile phone use data might be useful for public health projects. In 2017, GSMA in collaboration with the mobile operator Airtel, combined anonymised mobility data from phones with publically available datasets on population health and Tuberculosis (TB) case registrations in the Indian states of Uttar Pradesh and Gujarat. This analysis helped to identify geographical locations with an increased risk of TB incidence. In the future the aim is to use these results to provide targeted support in related topics, such as tobacco cessation.

Hack for Health

The Hack for Health Hackathon at the World Summit on the Information Society (WSIS) Forum took place on 12-16 June 2017. It was hosted by the ITU and organized in collaboration with the Institute of Electrical and Electronics Engineers (IEEE) and BHBM.

Four challenges were addressed to develop innovative digital solutions to reduce exposure to common NCD risk factors in middle and lower-income cities. Forty-two hackers representing 16 countries worked over four days to develop actionable, technology-enabled solutions.





**Sameer Pujari at the WSIS Forum 2017
Hack for Health in Geneva, Switzerland.**



04 Partnerships

BHBM holds a small number of partnerships with organizations who share their vision and believe that digital can help protect people from NCDs. The partnerships are highly multisectoral and include governments, other UN bodies, non-governmental organizations, academic institutions, and certain companies from the private sector. They join to learn alongside like-minded partners and to experience what it takes to develop some of the largest mHealth programmes in the world.

The partnerships are selective and actively collaborative, meaning that each partner must bring a unique expertise to the table. Private sector partners will have experience in a field relevant to the initiative's work, such as technology, wellness or telecommunications. The processor and software design company Arm, for example, is working to catalyze low-cost innovations for NCDs using their experience in technology development. The GSMA, a trade body for mobile operators, is exploring how mobile operators can support country programmes. The pharmaceutical company Sanofi has shared their expertise on hypertension and diabetes, whilst GlaxoSmithKline has shared their experience during the development of tools for COPD. Private companies and foundations have also provided funding to the initiative.

In the public sector, the Government of Norway has not only shared the experiences from using digital health technology in their national programmes, but also provided the initiative with a secondment and funding to support low- and middle-income countries. In March 2017 they also hosted the mBreatheFreely workshop on mHealth for COPD and asthma. Finally, the NCD Alliance and its partners are key advocates for the power of digital to combat NCDs.

There are regular events where partners are invited to participate and share their experiences of working with either the initiative or mHealth more generally. This ensures cross-sectoral learning and opportunities for them to collaborate bilaterally where interests align.

What do our partners bring to the initiative?



What do our partners get out of the initiative?

- Contribution to **social impact** and SDGs by improving global health
- **Brand** association with the UN agencies for health (WHO) and ICTs (ITU)
- mHealth **handbook content** which can be delivered to customers and/or staff
- **Networking** with our partners and other stakeholders through participation in workshops, side events and partner initiatives
- Opportunities to **learn** about digital health, NCDs, human-centered design, behavior change, emerging markets and on scaling up programmes
- **Exposure** through our website, newsletter, social media, annual report
- Strategic **guidance** for corporate social responsibility (CSR) and exploration of new business opportunities

“

Working with the Be He@lthy, Be Mobile team has been very helpful to our understanding of how Arm digital technology, and the Arm ecosystem, can help improve global health.

BHBM has been a key founding partner of 2030Vision, exploring how technology can be applied to the Sustainable Development Goals. We have developed some great ideas together during our first few years of partnership; ideas that we look forward to see come to fruition in the near future.

**Dominic Vergine, Head of Sustainability
and Corporate Responsibility, Arm**

“

The innovative pharmaceutical industry is determined to live up to its name by bringing forward and sharing viable ideas to tackle NCDs. IFPMA is proud to have been partnering with Be He@lthy, Be Mobile early on.

We look forward to continuing to offer our technical expertise, experience and resources, and deliver digital health programmes that are impactful and sustainable. We hope to continue to be bridge-builders and connect ideas and people. mHealth has changed our lives, and we need to do all we can to unleash its potential to promote healthier lifestyles, empower patients and strengthen health systems.

**Thomas Cueni, Director-General,
International Federation of Pharmaceutical
Manufacturers & Associations (IFPMA)**

“

Our active pursuit of mHealth technology stems from our commitment to find meaningful ways to engage with patients.

The partnership with Be He@lthy, Be Mobile has provided insight into the way technology can support respiratory diseases, including COPD and asthma. In a world where the future of health care is digital, this kind of learning is extremely important.

**Priya Madina, Director Government Affairs,
Global Issues, GlaxoSmithKline**

“

We are pleased to be supporting the mDiabetes project in Tunisia.

Diabetes is a severe health challenge for the country, but by using mobile phones we hope to increase access to care and raise awareness about how to change this for the better. In the long run we look forward to seeing the programme benefit both Tunisia and many other countries around the world.

**Jakob Sloth Madsen, Programme Manager,
World Diabetes Federation**

Expert opinions: the future of mHealth

How is mobile technology going to change global health? We asked members of our Informal Expert Groups for their views.

“

It will expand access
to health services.

There is no other technology or health service that has the reach into all populations that mobile phones have.

mHealth programmes, particularly those that use ubiquitous technology like text messaging, are our greatest means of getting health information and services to large numbers of people regardless of location. Health programmes can only be effective if they are reaching those who need them most, so if we are not using mobile phones we are not trying!

**Dr Robyn Whittaker, Associate Professor,
National Institute for Health Innovation,
University of Auckland.**

Our current system for the treatment of smoking and other chronic conditions is flawed, as health systems reach only a small fraction of smokers and even among those reached, providing only modest success rates.

Text messaging on mobile phones may represent a promising option for improvement: text messaging may impact smoking cessation not only by helping smokers quit (efficacy), but by substantially increasing the number of smokers reached over standard treatments like counselling or the use of medications which require doctor visits (reach). Much of the appeal of text messaging is related to its reach, given that virtually all smokers have mobile phones. It represents a way to proactively meet smokers where they are with treatment.

Dr Lorien Abrams, Associate Professor of Prevention and Community Health at the Milken Institute School of Public Health, George Washington University, Washington D.C

“

It's not just about the young: It can also help the elderly.

“Bridging the Gap” is a feature of the Be He@lthy, Be Mobile initiative in the new programme undertaken for Ageing.

Various actions are presented to prevent or reverse declines in intrinsic capacity and functional ability. In this way, the practical application of mHealth will contribute to bridge the gap between policy-makers, implementers of national mHealth programmes, and older persons to maintain function ability and live as independently and healthy as possible.

Mikel Izquierdo, Director of Health Sciences, Universidad Publica de Navarra, Pamplona



It could help
the world reach
its health and
development goals.

Most countries are unfortunately not on track towards achieving the health-related targets of the Sustainable Development Goals so it's all hands on deck.

NCDs remain a largely neglected, under-funded health and development priority. The potential for mHealth approaches to educate and inform the public about important topics in health is tremendous. Mobile phone strategies can go far beyond one-way “push” such as via SMS, and can include not only bi-directional communications but also real-time data gathering, individualized and tailored messaging, and even navigation to health services for otherwise sensitive issues such as screening for cervical cancer. mHealth interventions can be cost-effective and catalytic, and could help countries get to their SDG target of a one-third reduction in premature mortality from NCDs.

**Dr Ophira Ginsburg, Director,
High Risk Program, NYU
Langone Medical Centre**



But we still need to
scale up to see the
benefits.

mHealth has an untapped potential for use in combatting non-communicable diseases in so many contexts, and, particularly in low- and middle-income countries (LMICs) as it can be accessible to so many people through their ownership of a mobile phone.

Further research is needed to generate better evidence on the most effective ways to use mHealth to educate patients and, to tap into its ability to support health providers to provide care through evidence-based best practices. We need to move from pilot studies to full scale implementation research in multiple LMIC contexts if we are to truly realize the power of mHealth and move the field forward to reach its full impact for a wide variety of populations in these settings.

**Dr Karen Yeates, Department
of Medicine, School of
Medicine, Queens University, Ontario**

Annex 1

Steering Committee

The Be He@lthy, Be Mobile Steering Committee is composed of the following members:

WHO

- Nicholas Banatvala, Senior Adviser to the Assistant Director General, Non-communicable Diseases and Mental Health, WHO
- Douglas Bettcher, Director, Prevention of Noncommunicable Diseases, WHO
- Edward Kelley, Director, Service Delivery and Safety, WHO

ITU

- Kemal Huseinovic, Chief of the Infrastructure, Enabling Environment and E-Applications, ITU
 - Eun-Ju Kim, Regional Director for Asia and the Pacific, ITU
 - Yushi Torigoe, Deputy to the Director and Chief of Administration & Operations Coordination, ITU
-

Informal Expert Groups

Five Informal Expert Groups (IEGs) have been established to date:

1. mTobaccoCessation

- Lorien Abrams, Associate Professor and Director of Public Health Communication and Marketing, George Washington University, Washington DC, USA
- Erik Auguston, Program Director in Tobacco Control Research, National Cancer Institute, Bethesda, MD, USA
- Caroline Free, Senior Lecturer in Epidemiology, London School of Hygiene and Tropical Medicine, London, UK
- Pratima Murthy, Chief of De-addiction Services, National Institute of Mental Health and Neurosciences, Bangalore, India
- Robyn Whittaker, Public Health Physician, Waitemata District Health Board, New Zealand

2. mDiabetes

- Line Kleinebreil, Primary Care Physician, Paris, France
- Ambady Ramachandran, Researcher, Indian Diabetes Research Foundation, Chennai, India
- Nalini Saligram, CEO, Arogya World, Napierville, IL, USA
- Nikhil Tandon, Professor, All India Institute of Medical Sciences, New Delhi, India
- Nigel Unwin, Professor of Public Health and Epidemiology, University of the West Indies, Cave Hill, Barbados
- Josefien Van Olmen, Institute of Tropical Medicine, Antwerp, Belgium
- Robyn Whittaker, Public Health Physician, Waitemata District Health Board, New Zealand

3. mCervicalCancer

- Raveena Chowdhury, Deputy Director, Cervical Cancer Prevention, Marie Stopes International
- Ophira Ginsburg, Director, High Risk Program, Laura and Isaac Perlmutter Cancer Centre at NYU Langone Medical Center, and Associate Professor in the Department of

Population Health, NYU School of Medicine

- Mauricio Maza, Medical Director, Basic Health International
- Dan Murokora, MD, Clinical Director of the Uganda Women's Health Initiative and former Director of Obstetrics, Masaka Regional Hospital, Uganda
- Groesbeck Parham, Director of the CIDRZ Cervical Cancer Prevention in Zambia, and Professor of Gynecologic Oncology, Department of Obstetrics and Gynecology, University of North Carolina
- Patrick Petignat, Head of Surgical Gynecologic Oncology Unit, University Hospitals of Geneva
- Rengaswamy Sankaranarayanan, Special Advisor and Group Head of Screening at the International Agency for Research on Cancer
- Achim Schneider MD, MPH, Professor and Chairman, Department of Gynecology and Gynecologic Oncology, Charité University Medicine, Berlin
- Surendra S. Shastri, Professor and head of the Department of Preventive Oncology, Tata Memorial Centre in Mumbai, India, and head of the World Health Organization's (WHO's) Collaborating Centre for Cancer Prevention, Screening and Early Detection
- Karen Yeates, Associate Professor, Department of Medicine, Queen's University, and Co-Director, Office of Global Health, Queen's University School of Medicine, and Director, Pamoja Tunaweza Research Centre, Tanzania

4. mBreatheFreely

- Innes Asher, Chair in Paediatrics, Department of Paediatrics: Child and Youth Health, University of Auckland
- Jean Bousquet, Professor of Pulmonary Medicine at the University of Montpellier in France
- Valentin Prieto Centurion, General pulmonary physician in the Department of Medicine at University of Illinois Health
- Niels Chavannes, Full Professor of Primary Care Medicine, Chair of eHealth Applications in Disease Management at Leiden University
- Asma El Sony, Director, Epidemiology Laboratory for Research and Public Health, Khartoum
- Gregory Erhabor, Head, Chest Unit, Consultant Chest Physician, Department of Medicine, Obafemi Awolowo University
- Jim Kiley, Director of the Division of Lung Diseases, National Institutes of Health
- Jorgen Vestbo, Professor of Respiratory Medicine, The University of Manchester

5. mAgeing

- Olivier Bruyere, Head of the Research Unit and Professor in Department of Public Health, Epidemiology & Health Economics, University of Liège

- Joconiah Chirenda, Lecturer on Communicable and Non-communicable Diseases, Department of Community Medicine, College of Health Sciences, University of Zimbabwe
- Leila Dale, Postdoctoral Research Fellow, University of British Columbia
- AB Dey, Professor and Head, Department of Geriatric Medicine, All India Institute Of Medical Sciences
- Amit Dias, Epidemiologist and Geriatrician, Assistant Professor, Goa Medical College
- Dorothy Anne Forbes, Professor, Faculty of Nursing, University of Alberta, Edmonton Clinic Health Academy (ECHA)
- Magne Hustavenes, Special Adviser , Oslo Municipality
- Mikel Izquierdo, Full Professor and Head of the Department of Health Sciences. Universidad Pública de Navarra
- Jill Keeffe, Professor, L V Prasad Eye Institute, WHO Collaborating Centre for Prevention of Blindness, Hyderabad, India
- Qurat ul Ain Khan, Assistant Professor, Department of Psychiatry, Aga Khan University Hospital
- René Rizzoli, Emeritus professor of medicine, Former Director of the Department of Geriatrics, Former Head of the Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine
- Suzanne Suggs, Professor of social marketing, Università della Svizzera italiana (USI)
- Jean Woo, Department of Medicine & Therapeutics, and Institute of Aging, The Chinese University of Hong Kong

Regional focal points

From WHO Regional Offices:

Prebo Barango, Jean Marie Dangou, Heba Fouad, Clayton Hamilton, Mina Kashiwabara, Jagdish Kaur, Kelvin Khow, Ahmed Mohamed, Amin Mandil, Hani Farouk Abdel Hai Mohamed, Mohamed Nour, David Novillo Ortiz and Benoit Varenne.

From ITU Regional Offices:

Karim Abdelghani, Cleveland Thomas and Sameer Sharma

Annex 2

Financial overview: Income and Expenses

Fundraising for Be He@lthy, Be Mobile is carried out across a number of industry groups, including pharmaceuticals, insurance, technology, bilaterals, foundations and development agencies. Partners give donations to ITU directly, and the Steering Committee allocates funds to countries and for technical work. By December 2017, partners had committed over 8 mln USD for the initiative.

Funds raised by sector for 2013-2017 (in US dollars)

CONTRIBUTIONS (USD)						
	PHASE 1				PHASE 2	TOTAL
	2013	2014	2015	2016	2017+	
Pharmaceutical	104,865	150,000	648,006	241,278	440,000	1,584,179
Health insurance/ wellness	150,000	350,000	500,000	250,000	-	1,250,000
Telecoms/ technology	71,429	-	71,429	-	347,069	489,927
Bilaterals/ foundations/ governments	-	140,959	545,354	685,529	332,241	1,704,083
Multilateral	-	-	-	-	3,300,000	3,300,000
TOTAL	326,324	640,959	1,764,789	1,176,807	4,419,310	8,328,189

In-kind contributions

Non-financial support from partners, countries and academic institutions include:

Donor	In-kind support
WHO	Additional Staff to Secretariat & Steering Committee
ITU	Additional Staff to Secretariat & Steering Committee; support for Telecoms 2012
IFPMA	Publication "Health at your fingertips"
The NCD Alliance	Advocacy support
University of Cambridge	Financial modelling seminar and Monitoring & Evaluation Framework, 2013
University of California	Workshop on mSmartLife, 2014
University of Oxford	Workshop on mHypertension, 2015
AIIMS, University College of Medical Sciences	Workshop on mAgeing, 2015
Norwegian Directorate of eHealth	Additional Staff to Secretariat
American University of Cairo	Workshop on mTB-Tobacco, 2016
Université de Genève	
Norwegian Directorate of eHealth	Workshop on mBreatheFreely, 2017
Arm	2030Vision platform
GlaxoSmithKline	Support for mBreatheFreely
Sanofi	Technical support for the mDiabetes programme in Senegal
World Diabetes Foundation	Technical support for the mDiabetes programme in Tunisia

Secretariat Operating Income & Expenses, 1 January 2016 – 30 December 2017, in US dollars

INCOME	2013 - 2016	2017	2013 - 2017
Total Income	4,073,825	760,170	4,833,996
Voluntary contributions	3,719,263	759,755	4,479,018
Cash contributions	344,313	-	344,313
Interest earned	10,250	415	10,665

EXPENSES	2013 - 2016	2017	2013 - 2017
Total Expenses	3,312,944	945,679	4,258,623
Global Activities subtotal	2,047,215	329,307	2,376,522
Program Coordination and Management (staff to support global and country activity)	1,479,410	241,989	1,721,399
Toolkit Development	438,629	61,947	500,576
Promotion & Partnership	129,177	25,370	154,547
Country Activities subtotal Program Planning and Implementation Support	942,408	484,549	1,426,957
Burkina Faso	-	17,027	17,027
Costa Rica	176,664		
Egypt	\$2,200	27,509	29,729
Norway	80,731	39,180	119,911
Philippines	90,631	43,045	133,677
Senegal	210,416	49,177	259,593

Tunisia	52,702	85,654	138,356
UK	25,747	-	25,747
Zambia	151,869	181,079	332,948
India	115,301	40,583	155,884
Others	36,126	-	36,126
Operation subtotal	323,320	131,824	455,144
Administrative and Operations Services (AOS) 10% (ITU), 13% (WHO)	263,207	111,516	374,723
ITU Administrative Agent's Cost (1%)	23,717	7,678	31,395
Bank Charges and other	36,396	12,630	49,026
Remaining funds	760,882	-	575,373

All of this was done with a little help from our friends

Be He@lthy, Be Mobile would like to express sincere appreciation and thanks to all its partners :





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