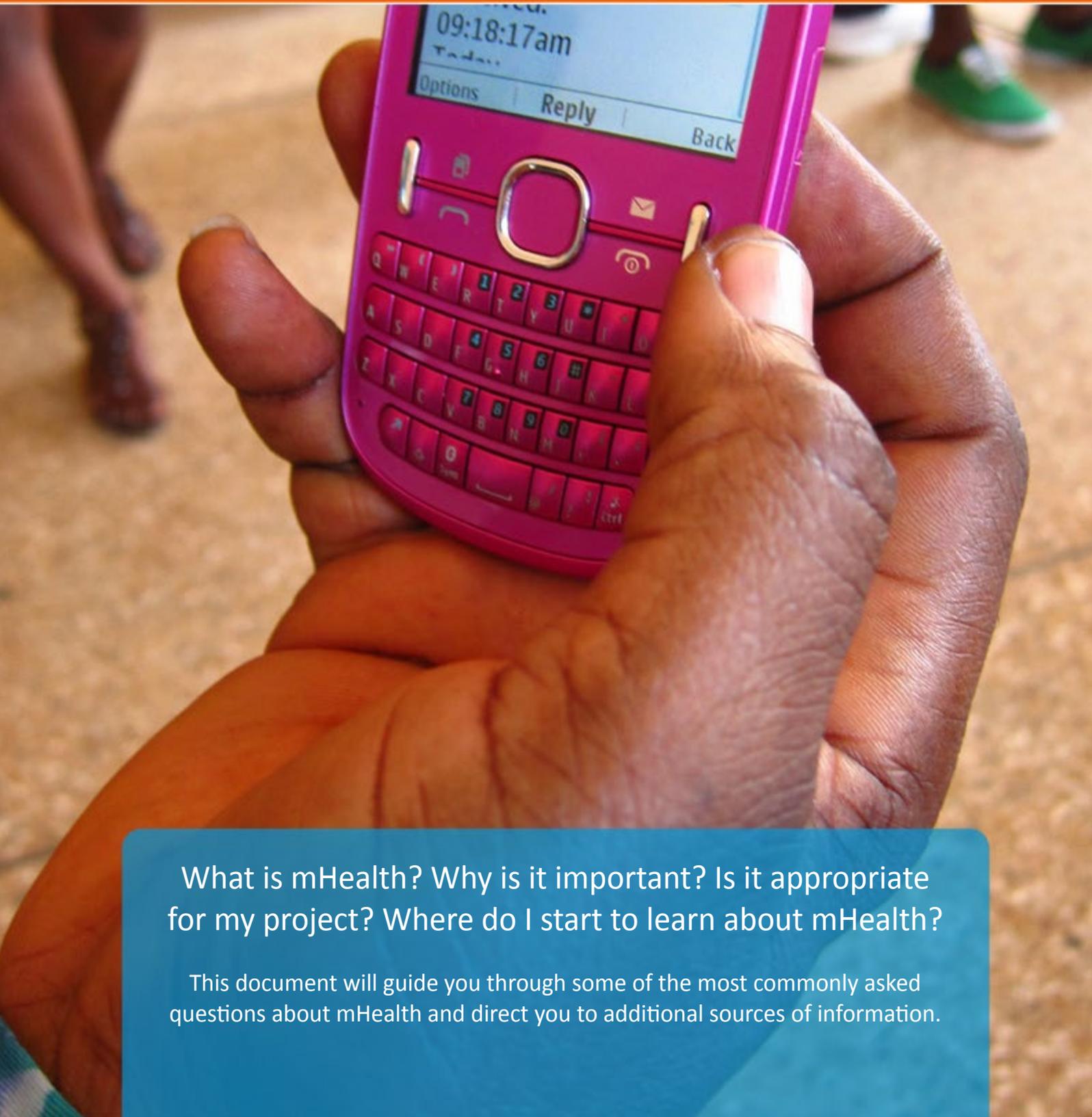


COMMON MHEALTH QUESTIONS

Prepared by Laura Raney



What is mHealth? Why is it important? Is it appropriate for my project? Where do I start to learn about mHealth?

This document will guide you through some of the most commonly asked questions about mHealth and direct you to additional sources of information.

Prepared by

Laura Raney

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mHealth holds the potential to change the way healthcare is delivered, especially in low and middle-income countries.

1. What is mHealth and why is it so important?

mHealth is the use of mobile and wireless technologies to support the achievement of health objectives. The widespread use of mobile phones and relative low cost of mHealth services are some reasons why this practice is rapidly progressing. mHealth holds the potential to change the way healthcare is delivered, especially in low and middle-income countries. mHealth solutions are being used to support a range of health programs, including family planning, maternal and child health, HIV/AIDS, malaria and tuberculosis. mHealth solutions also support cross-cutting health system functions, for example, by helping to reduce stock-outs of medicines and commodities, and by improving health workers' adherence to treatment guidelines.

2. How do I know if an mHealth solution is right for my project?

It is important to note that mHealth is a tool. The problem to be addressed should drive development of the proposed mHealth approach. The “[mHealth Planning Guide: Key Considerations for Integrating Mobile Technology into Health Programs](#)”¹ is a great place to start. This guide walks you through the steps that you need to take and provides you with questions to consider, such as

- What is the goal of your effort?
- What is the health issue or challenge to be addressed?
- What are the root causes or drivers of the challenge?
- What benefits or results are you seeking to achieve?

The guide also provides you with insights from mHealth implementers who have learned lessons along the way. These mHealth experts strongly emphasize that the health problem or challenge must determine the solution. In other words, implementers should not pre-select a technology and then search for a health issue to solve.

3. How can mHealth be used in health projects? What are the types of mHealth applications?

There are many ways to classify mHealth applications, and, as is common in an emerging field, there is as yet no universal consensus on which way is best. Two classification schemes are presented here.

A recent framework, “[mHealth innovations as health system strengthening tools: 12 common applications and a visual framework](#)”² developed by WHO, the Johns Hopkins University Global mHealth Initiative, the United Nations Children’s Fund (UNICEF), and frog Design, lays out 12 common mHealth applications used as health systems strengthening innovations across the reproductive health continuum:

- Client education and behavior change communication (BCC)
- Sensors and point-of-care diagnostics
- Registries and vital events tracking
- Data collection and reporting

1 www.k4health.org/toolkits/mhealth-planning-guide/explore-possible-solutions

2 www.ghspjournal.org/content/early/2013/08/06/GHSP-D-13-00031.full.pdf

- Electronic health records
- Electronic decision support (information, protocols, algorithms, checklists)
- Provider-to-provider communication (user groups, consultation)
- Provider work planning and scheduling
- Provider training and education
- Human resource management
- Supply chain management
- Financial transactions and incentives

The paper points out that mHealth solutions often integrate two or more types of applications to address a health need or health system constraint.

The more traditional categorization is based on the work of the World Health Organization’s mHealth Technical Evidence Review Group (mTERG), and categorizes mHealth applications by the functions that they fulfill or support. These six types of applications serve as building blocks for mHealth solutions.

 Financial Transactions and incentives	 Information systems	 Service delivery and support	 Social and behavior change communication	 Supply Management	 Workforce development and performance support
Conditional cash transfers Insurance Payment for services Performance based incentives Savings accounts	Data collection and reporting Service delivery statistics Household surveys Surveillances Electronic health records Registries / vital events tracking	Electronic decision support Disease diagnosis / Point-of-care diagnostics Disease management Disease prevention Provider to provider communication Referrals Remote client to provider consultations (telemedicine)	Appointment reminders Health education or promotion Hotlines and information services Mass messaging campaigns Treatment adherence	Cold chain management Comodity tracking or replenishment Counterfeit prevention Maintenance of equipment Stock out prevention	Consultant feedback on service quality Human resource management Provider training and education Provider work planning and scheduling Supportive supervision

4. Where do I start to learn about mHealth? What if I don't know anything?

A great place to start is the U.S. Agency for International Development’s Global Health eLearning Center’s course, “[mHealth Basics: Introduction to Mobile Technology for Health](http://www.globalhealthlearning.org/course/mhealth-basics-introduction-mobile-technology-health)”³. This online eLearning course explains the potential uses, benefits and limitations of mHealth. It outlines six types of mHealth applications, describes preliminary conclusions from the evidence on mHealth, shares recommended best practices for mHealth program planning, design, monitoring and evaluation, scale-up and sustainability, and provides resources for additional information about mHealth.

3 www.globalhealthlearning.org/course/mhealth-basics-introduction-mobile-technology-health



5. How are the fields of mHealth, eHealth & information & communication technology related?

Information and communication technologies (ICTs) are tools that facilitate communication and the collection, storage, processing and transmission of data and the sharing of information by electronic means. ICT includes the Internet, computers, servers, teleconference systems, radios, televisions, landline telephones, telemedicine devices, mobile telephones and other wireless devices.

Both mHealth and eHealth involve the application of ICTs to support health and health-related activities. eHealth is defined as the cost-effective and secure use or application of ICTs in support of health, including laptop and desktop computers and servers, television and radio, teleconferencing systems, and all of the devices used in mHealth. mHealth is the use of mobile and wireless ICTs for health, including mobile phones, tablets and other mobile devices, but not laptops or servers. In other words, mHealth is a subset of the field of eHealth.

6. Where can I find evidence on what works?

While the field of mHealth is relatively young, and evidence on “what works” is still emerging, it can be difficult to find the evidence that exists. The [mHealth Evidence Database](#)⁴ is designed to bring together the world’s literature on mHealth effectiveness, cost-effectiveness and program efficiency. This collection of resources makes it easier for researchers, program managers, funders and other key decision-makers to quickly get up to speed on the current state-of-the-art. It includes peer-reviewed and grey literature from high-, middle-, and low-resource settings. Material is classified using a new mHealth Evidence Taxonomy, developed in coordination with the World Health Organization, and is easily filtered and searched to facilitate the identification of evidence-based, high-impact mHealth practices.

7. Where can I go to see examples of projects that have an mHealth component?

The African Strategies for Health Project has published three mHealth Compendiums (Edition One, Edition Two, and Edition Three) that collectively feature more than 85 case studies documenting a range of mHealth applications implemented worldwide, with a focus on Africa. Each two-page case study includes an introduction to the health area or problem, description of the mHealth intervention, results or evaluation findings, and lessons learned. In addition, the second page includes a summary of the geographic coverage, implementation partners, and donors, as well as contact information for the implementing partner and donor. The case studies have been organized into five programmatic areas: 1) Behavior Change Communication; 2) Data Collection; 3) Finance/Mobile Money; 4) Logistics; and 5) Service Delivery. See Compendium volumes [One](#)⁵, [Two](#)⁶ and [Three](#)⁷.

You can also search through existing mHealth project repositories to learn about how other programs have utilized mHealth. See “[mHealth Project Repositories](#).”⁸

4 www.mhealthevidence.org

5 www.mhealthworkinggroup.org/resources/mhealth-compedium-edition-one

6 www.mhealthworkinggroup.org/resources/mhealth-compedium-edition-two

7 www.mhealthworkinggroup.org/resources/mhealth-compedium-edition-three

8 www.k4health.org/toolkits/mhealth-planning-guide/project-repositories

The African Strategies for Health Project has published more than 85 case studies documenting a range of mHealth applications implemented worldwide, with a focus on Africa.



8. I know a little bit, but how do I go about actually planning to use mHealth in my project?

Have a look at the “mHealth Planning Guide: Key Considerations for Integrating Mobile Technology into Health Programs”⁹. This online guide is designed for global health practitioners working to implement mHealth solutions in health programs in low resource settings. The Guide is an interactive, electronic resource that outlines key considerations and resources for planning an mHealth intervention, from concept development and technology design to implementation. Each section provides an overview of key concepts, a summary checklist of considerations, relevant examples, and recommended tools and resources.

The K4Health “mHealth Planning Guide” outlines key considerations and resources for planning an mHealth intervention, including content and various mobile technologies

9. Where can I see examples of mHealth content?

See the Content section of the “mHealth Planning Guide: Key Considerations for Integrating Mobile Technology into Health Programs”¹⁰. It provides links to various sources of mobile content for clients, including: the Mobile Alliance for Maternal Action (MAMA), Hesperian, HealthPhone, and others for SMS messages, animations, and videos.

10. Where can I learn about mobile technologies?

The Technology section of the “mHealth Planning Guide: Key Considerations for Integrating Mobile Technology into Health Programs”¹¹ shows sites that provide listings of technology applications, software, and case studies, including:

- Applications and Platforms, Health Unbound (HUB) from the mHealth Alliance
- Mobile Health & Bioinformatics Software Applications, from Fogarty International Center
- Products, Services, and Tools, from NetHope Cloud Services Portal

You can also find resources on the [Health Ingenuity Exchange](http://HealthIngenuityExchange.org) (HINGX.org).

11. Where can I learn about mobile data collection?

Pact’s “Mobile Technology Handbook”¹² is a comprehensive resource for getting started with mobile data collection. It provides guidance on basic steps and considerations that need to be taken when deciding to use mobile technology in program implementation monitoring and evaluation. The handbook begins by providing an outline of mobile technology and describing the advantages and disadvantages of using it. It also explores the need for mobile technology, the platforms that can be used and when and how to start using it. The handbook also highlights the importance of understanding the local context including infrastructure (power, network availability) and other issues that may affect a decision to use some or all types of mobile technology. The handbook also outlines a process for creating an organizational strategy around mobile technology.

Pact’s “Mobile Technology Handbook” is a comprehensive resource for getting started with mobile data collection.

9 www.k4health.org/toolkits/mHealth-planning-implementation-guide

10 www.k4health.org/toolkits/mhealth-planning-guide/project-repositories

11 www.k4health.org/toolkits/mhealth-planning-guide/project-repositories

12 pactworld.org/sites/default/files/Mobile%20Technology%20Handbook%202014.pdf



The [Humanitarian Operations Mobile Acquisition of Data \(NOMAD\)](#)¹³ project has developed an Online Selection Assistant which includes 31 tried and tested mobile data collection tools with various advantages and technical specs. The Selection Assistant custom fits to users’ needs by asking a series of questions, e.g. Are you conducting a one-off or reoccurring assessment? How technically inclined are the staff using these tools? How do you want to visualize the data? At the end of the survey, the best options are indicated along with a summary report that explains how and why the options provided to you are best.

12. How should my organization develop content for our new Maternal, Newborn and Child Health (MNCH) mobile messaging project?

If you are an organization who works on maternal, neonatal and/or child health, you can access the [Mobile Alliance for Maternal Action \(MAMA\)](#)¹⁴ open source messages at no cost to you. Any organization can apply to use the messages. You must complete the brief questionnaire about your organization and your program (even if only a concept at this point).

BabyCenter – one of MAMA’s founding partners – developed the MAMA messages and has drawn on its extensive experience creating culturally relevant health content to make messages that can be localized at the country level. MAMA’s adaptable messages are based on WHO and UNICEF guidelines and have been developed in close collaboration with a group of global health experts who make up MAMA’s Health Content Advisory Council (HCAC). MAMA’s HCAC members lend their knowledge and expertise to ensure that MAMA’s messages reflect the most up-to-date, evidence-based global standards.

MAMA encourages each organization to adapt the content according to the cultural norms and traditions in its country or region. The organization can then deliver the content to local mothers and mothers-to-be. Content Learning Modules on the [resources page of the MAMA website](#)¹⁵ contain five short learning modules designed to assist organizations as they work on their own projects to localize the messages. The modules cover the principles of behavior change, localization, how to write messages that deal with socio-cultural beliefs and sensitive topics, and more.

13. What is mobile behavior change communication (mBCC) and where can I go to learn more about it?

Mobile behavior change communication (mBCC) is defined as the use of mobile phones to promote behavior change. This definition encompasses health and clinical behaviors for clients and health providers (e.g., reminders to take a pill or quizzes to improve health workers’ counseling skills) rather than operational behaviors (e.g., shifting from a paper-based survey to a mobile survey). The [“mBCC Field Guide: A Resource for Developing Mobile Behavior Change Communication Programs”](#)¹⁶ is a new tool that helps users guide the design of mobile applications for health and provides insights about what works in mobile behavior change communication is now available. Compiled by Abt Associates, the field guide examines what is known about the power of mobile communication tools to influence health behaviors for consumers and health care providers.

The “mBCC Field Guide” provides insights into what works in mobile behavior change communication.

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13 www.humanitarian-nomad.org
 14 www.mobilemamaalliance.org/apply-now
 15 www.mobilemamaalliance.org/tools-and-resources
 16 mbccfieldguide.com



The primary audience for the mBCC Field Guide is practitioners experienced in developing BCC strategies who are considering employing mobile solutions but need guidance on key issues and on questions to consider in the design process. Evidence-based examples and tools are highlighted wherever possible, although we recognize that few programs have published impact or outcome data.

14. Is there information specific to mHealth applications for maternal, newborn and child health?

A recent article by Labrique, et al., “mHealth innovations as health system strengthening tools: 12 common applications and a visual framework”¹⁷, presents 12 common mHealth applications used as health systems strengthening innovations across the reproductive health continuum. The framework is an attempt to create a shared language and approach to describe mHealth interventions in reproductive, maternal, newborn, and child health (RMNCH).

The mHealth Alliance published “mHealth and MNCH: State of the evidence - Trends, Gaps, Stakeholder Needs, and Opportunities For Future Research on the Use of Mobile Technology to Improve Maternal, Newborn, and Child Health”¹⁸. This document identifies gaps in the evidence base and makes recommendations towards enhancing the mHealth for MNCH evidence base.

In addition, the recently published “mHealth Field Guide for Newborn Health”¹⁹ provides a review of mHealth applications for newborn health. These include referral and tracking of mothers and infants, decision support for community health workers (CHW), CHW supervision, scheduling and tracking postpartum and postnatal visits, and teaching and counseling for mothers and families, among other uses. This publication also provides case studies from Afghanistan, India, Malawi and Indonesia. These case studies are framed by a review of implementation issues and external resources for guidance.

The “mHealth Field Guide for Newborn Health” provides a review of mHealth applications for newborn health

15. How much does mHealth cost?

The answer is: we don’t really know. Documenting the cost of the development and implementation of an mHealth project is important for scale-up. Unfortunately, most projects do not plan for this and end up trying to capture costs retrospectively which makes it difficult to capture all of the costs. The total cost of ownership (TCO) calculation includes not only the cost of implementing the system but also the recurring or ongoing maintenance costs over the course of a project. This figure is frequently underestimated as key facets of IT implementations and maintenance can be omitted. This topic is an important one, as ministries of health and donors want to know. It is also key to project sustainability – after the donor funding goes away or when the pilot is ready to be scaled up.

One resource to assist with budgeting for an mHealth project is Dimagi’s [Total Cost of Ownership \(TCO\) Model tool](#)²⁰. This tool was developed to help organizations estimate the total cost of adopting CommCare or other mobile technologies for their community health workers or other mobile users. This tool provides a budget for adopting CommCare over the next five years. It is meant to provide a concrete example for planning.

17 www.ghspjournal.org/content/early/2013/08/06/GHSP-D-13-00031.full.pdf

18 www.mhealthalliance.org/images/content/un_007_evidencegapreport_digital_aaa.pdf

19 www.coregroup.org/storage/documents/mhealth/mHealth_Guide_for_Newborn_Health_online.pdf

20 confluence.dimagi.com/display/commcarepublic/Budgeting+for+a+Project



16. What are the different types of mobile phones? What types of phones do CHWs and community members have?

The types of mobile phones used in mHealth vary and can include basic phones, feature phones, and smartphones. A basic phone provides access to both voice and text-based services (also called SMS which stands for Short Message Service). A feature phone provides access to voice, text, and internet services, thus enabling the use of applications and multimedia content such as videos. A smartphone has in addition an advanced operating system to access the internet, enables the use of wireless internet (Wi-Fi) and Global Positioning System (GPS) or location-based service. While smartphones have overtaken the market in developed countries, in low resource settings, basic and feature phones are much more common, as smartphones only account for only about 10 percent of phones.

17. In my project area, most of the population is illiterate. How can mHealth be used?

Interactive voice response technology allows illiterate users to benefit from mHealth.

In areas where illiteracy rates are high, the problem of not being able to read or send a text message can be overcome with a mobile phone by using what people are most comfortable with- voice. Interactive voice response (IVR) is a technology that allows customers to interact via phone keypad or speech recognition and can respond with prerecorded audio. This technology also allows personalization to the local language and dialect.

One example is [Mobile Kunji](#)²¹, a multimedia job aid designed to be used by frontline health workers during their counseling sessions with families in Bihar state, India. Mobile Kunji uses an IVR-based mobile service and a printed deck of cards to deliver multimedia content without distributing expensive hardware. The phone-sized Kunji cards have illustrations and key messages around maternal and child health, and each card has a unique mobile shortcode that corresponds to a specific audio message that can be played to the family from the health workers' mobile phones.

18. How can I ensure that gender is addressed in my mobile health project?

The MNCH Analytical Framework is a useful tool for understanding gender and mHealth.

Ownership and access to mobile phones in the developing world is currently still dominated by men. The report "[Women & Mobile: A Global Opportunity: A Study on the Mobile Phone Gender Gap in Low- and Middle-Income Countries](#)"²² notes that women in developing countries are 21 percent less likely to own mobile phones than men. We know that gender inequity and women's low social status and disempowerment have a significant impact on women's health, maternal health and overall demand for maternal health care services. "[Addressing gender and women's empowerment in mHealth for MNCH: An analytical framework](#)"²³ is a tool that can be used to further examine, understand and analyze gender related issues and implications within mHealth interventions in order to address them by developing meaningful mHealth intervention strategies and approaches.

21 www.bbc.co.uk/mediaaction/where_we_work/asia/india/india_sdp_empowering_chw_ma_mk.html

22 www.gsma.com/mobilefordevelopment/gsma-women-mobile-a-global-opportunity

23 www.mhealthalliance.org/images/content/gender_analytical_framework_report.pdf

19. How are phones charged in low resource settings?

Charging phones in developing countries is an issue. More than 80 percent of Africans live without electricity in their homes. Charging points, usually local shops or kiosks, meet the demand. However, these can be expensive and charging is time-consuming. Solar and mechanical chargers are other options for mobile phones. Solar chargers can provide up to 20 minutes of talk time after one hour of solar charging. Mechanical or kinetic charging is an alternative that is widely used. A bicycle, for example, can be connected to a car battery so that power can be distributed to several phones at the same time.

20. How do I get funding for my mHealth idea? Where do I search for funding opportunities?

For those working in maternal and newborn care, “[Saving Lives at Birth: A Grand Challenge for Development](#)”²⁴ is one funding opportunity. This fund seeks groundbreaking prevention and treatment approaches for pregnant women and newborns in poor, hard-to-reach communities around the time of delivery.

The [GSMA Mobile for Development](#) has a [webpage](#)²⁵ highlighting various funding and development opportunities that exist for those working within mobiles for development (not specifically mHealth).

The [National Institutes of Health \(NIH\) Fogarty International Center](#)²⁶ has funding opportunities in mobile health in low and middle income countries.

The [University of Connecticut Center for Health, Intervention, and Prevention](#)²⁷ maintains a list of funding opportunities, including foundations that have funded eHealth/mHealth.

21. What is open-source software, and is it free of charge?

Open-source means that the source code for a software program or application is freely available, which enables software developers to adapt or make improvements to the application as needed. The code is made available in public repositories and is supported through developer communities. While the code is available for no charge, when you use it in your program with the assistance of a developer or a company, there probably will be fees related to supporting your application and the services that the developer or company provides. Thus, while the software is available free of charge, support, maintenance and other fees may result from its use.

While using open source software may be advisable in certain contexts, don't forget to budget for support, maintenance and customization costs.

24 www.savinglivesatbirth.net
25 mobiledevelopmentintelligence.com/insight#!Funding_and_Investment_Opportunities
26 www.fic.nih.gov/programs/Pages/mhealth.aspx
27 www.chip.uconn.edu/research-interest-groups/emrig/funding-opportunities



22. What exactly is mobile money and how can it be used in health programs?

Mobile money services, also known as mobile banking or mobile payments, involve the use of a mobile phone to interact with a personal bank account to pay for goods and services, similar to the use of a debit or credit card. Mobile banking, especially popular in East Africa, has been developed as a means of extending financial services to people who do not have access to banks. Mobile money agents can be found at small retail shops or elsewhere and have been trained to conduct mobile money transactions, including deposits and withdrawals.

The best known example of mobile money is [M-PESA²⁸](#) in Kenya which is used by over two-thirds of the country's adult population.

Mobile money enables quick and secure payment, and is being used in health programs to reimburse providers and facilities for services in remote areas where infrastructure, including banking infrastructure, is limited. One example is using mobile health vouchers in Madagascar ("[Mobile money: Using mobile finance to reimburse sexual and reproductive health vouchers in Madagascar](#)"²⁹). Mobile money is also being used to pay community agents in the Mobile Alliance for Maternal Action (MAMA) initiative in Bangladesh, branded as 'Aponjon'. In Nigeria mobile money is being tested as a way to deliver conditional cash transfer (CCT) payments under a project to incentivize antenatal care, facility-based deliveries, postnatal care, and immunizations.

23. What is the mobile ecosystem that I hear about?

The mobile ecosystem refers to the landscape or the complex system including the range of variables that one must consider before planning an mHealth project or program in a country or area. A mobile ecosystem includes different mobile devices, business models, content delivery models, and user habits. A landscape analysis should be completed prior to the design of any project to examine the technology available, the policy and regulatory environment in a country, mobile services and local technical capacity, other activities in mHealth, and how target users are using their phones. Information on how to conduct a landscape analysis can be found in "[Integrating Mobiles into Development Projects Handbook³⁰](#)" as well as in "[The mHealth planning guide: Key considerations for integrating mobile technology into health programs³¹](#)".

24. How do we ensure sustainability in mHealth?

One of the biggest questions today in mHealth is how to ensure sustainability. Three best practices that have been identified by experts are to build for sustainability:

- Plan for sustainability from the start, including planning for long-term financial health, e.g., assessing the total cost of ownership.
- Utilize and invest in local communities and developers by default, and help catalyze their growth.

28 www.economist.com/blogs/economist-explains/2013/05/economist-explains-18#sthash.NuoROMhe.dpuf

29 mariestopes.org/sites/default/files/12pp_Marie%20Stopes_Mobile_Money%20FINAL.pdf

30 www.usaid.gov/sites/default/files/documents/1861/M4DHandbook_August_2014.pdf

31 www.k4health.org/toolkits/mhealth-planning-guide

A landscape analysis should include the technology and mobile services available, the policy and regulatory environment, and local technical capacity.

- Engage with local governments to ensure integration into national strategy, and identify high-level government advocates.

These and other best practices in digital development have been identified in the document “[The Greentree Consensus: Principles for Digital Development](#)”³².



“The Greentree Principles” outline best practices in digital development.

25. What is human-centered design?

Alternately called participatory design, user-centered design, or human-centered design, the principle is the same: Involve those that directly face the problems in the design of the solutions rather than seeking behavior change for the individuals to adapt to the product. Design with the user is the first principle for digital development (see “[Principles for Digital Development](#)”³³), and it means:

- Develop context appropriate solutions informed by user needs.
- Include all user groups in planning, development, implementation and assessment.
- Develop projects in an incremental and iterative manner.
- Design solutions that learn from and enhance existing workflows and plan for organizational adaptation.
- Ensure solutions are sensitive to, and useful for, the most marginalized populations: women, children, those with disabilities, and those affected by conflict and disaster.

Various toolkits are available to guide your human-centered design approach:

- “[The Human-Centered Design Toolkit](#)”³⁴ by IDEO is a free innovation guide for social enterprises and NGOs that work with impoverished communities in Africa, Asia and Latin America. The Toolkit provides the tools to help international staff and volunteers understand a community’s needs in new ways, find innovative solutions to meet those needs, and deliver solutions with financial sustainability in mind.
- “[The Development Impact & You \(DIY\) Toolkit](#)”³⁵ by Nesta contains practical tools to trigger and support social innovation and is especially designed for development practitioners to invent, adopt or adapt ideas that can deliver better results.

32 ict4dprinciples.org/wp-content/uploads/2014/06/Green_Tree_v5.pdf

33 ict4dprinciples.org

34 www.ideo.com/work/human-centered-design-toolkit/

35 diytoolkit.org



26. Are there guidebooks and lessons learned on planning and design of mHealth projects, now that I know the basic design principle?

In addition to outlining the basics, the “[The mHealth Planning Guide: Key Considerations for Integrating Mobile Technology into Health Programs](#)”³⁶ identifies and walks you through the key planning and design considerations, including defining the target audience, exploring technology access and mobile use of target audience, and conducting formative research with members of the target audience.

The [mobile 4 Reproductive Health project](#)³⁷ has a good short description of their planning and design process emphasizing the need for close collaboration with key stakeholders, a methodical approach to content development, and consideration of the cost of the service.

Marie Stopes International’s resource “[SMS 4 SRH: Barriers to youth access to sexual and reproductive health information and services, and potential mHealth solutions](#)”³⁸ offers lessons that are applicable to the design of all mHealth projects.

27. What is scale up of mHealth projects, and why is it important? Where can I find examples of mHealth projects that have scale up?

Good examples of scaled up mHealth projects are included in the “[Scaling Up Mobile Health](#)” compendium.

mHealth projects ideally should progress from initial pilot project to scale up and then sustainability. Earlier mHealth projects tended to focus on single solutions, such as addressing a disease (HIV/AIDS or diabetes) or a particular area (treatment compliance, data collection or disease surveillance). These projects were not integrated into the health system, rather they were isolated approaches. “Pilotitis” was one term given to the plethora of mHealth projects that stalled at the pilot stage and did not make a larger contribution to the overall health system in a country.

Ten case studies of projects achieving regional, national or cross-country scale up are profiled in the report “[Scaling Up Mobile Health: Developing mHealth Partnerships for Scale](#)”³⁹ which also analyzes their success factors, and includes a comprehensive set of recommendations.

Best practice guidelines in designing for scale (including in the Greentree principles) are:

- Design for scale from the start, and assess and mitigate dependencies that might limit ability to scale.
- Employ a “systems” approach to design, considering implications of design beyond an immediate project.
- Be replicable and customizable in other countries and contexts.
- Demonstrate impact before scaling a solution.
- Analyze all technology choices through the lens of national and regional scale.
- Factor in partnerships from the beginning, and start early negotiations.

36 www.k4health.org/toolkits/mhealth-planning-guide

37 m4rh.fhi360.org/?page_id=44

38 www.maristopes-us.org/sites/www.msi-us.org/files/SMS%204%20SRH%20%282013%2011%2013%29.pdf

39 www.adaorganization.net/uploads/2/3/7/1/23713723/developing_mhealth_partnerships_for_scale_printer_friendly_low.pdf



28. Why is there so much focus on interoperability in eHealth and mHealth, and what is the importance of standards?

Interoperability refers to the ability of systems and devices to interact and exchange and make use of information. Standards define the entities and their interactions. The development of these standards has not kept up with advancements in technology. The Open Health Information Exchange ([OpenHIE⁴⁰](#)) community works to help underserved environments better leverage their electronic health information through standardization.

29. What is data security and why is it important?

The use of technology such as mobile phones to collect and transmit patient health information brings a new level of need for the protection of personal information. Security and privacy of such data, as well as the protection of individual health information, are major concerns in mHealth. A 2011 World Health Organization Report cited these issues as two of the top barriers to the expansion of mHealth. Thus data security and privacy is crucial. There is agreement that reasonable data security measures must be adopted to ensure that personal health information remains secure and is not shared.

30. What kinds of evaluation models are available for mHealth projects? What are we actually measuring?

Due to the fact that the majority of mHealth projects have been small scale implementations or pilots, there is a lack of evaluation. Early mHealth projects tended to focus on usability rather than the health outcomes. Ideally, you would measure health outcomes, and look at standardized indicators. While the evidence base is growing (see the [mHealth Evidence Database⁴¹](#)), ministries of health require information about health outcomes as well as impact assessment and scale up to inform policy.

There are four areas along the mHealth implementation continuum for evaluation: concept development/prototype testing, usability/feasibility testing, health outcome assessment, and impact assessment and scale up. Evidence on the latter two is scarce but growing. The June 2014 meeting of the mHealth Working Group was dedicated to the topic of “[mHealth Evidence Generation: A focus on Evaluation Design⁴²](#)”. An overview presentation as well as presentations illustrating each area are available.

“[The MAMA Global Monitoring and Evaluation Framework⁴³](#)” is one guide that is available for project implementers to help them develop national Monitoring and Evaluation plans to monitor and report on progress when implementing mobile messaging programs for mothers.

Presentations
from the mHealth
Working Group
meeting on
evaluation design
are available
online

40 [ohie.org](#)

41 [www.mhealthevidence.org](#)

42 [www.mhealthworkinggroup.org/blog/presentations-now-available-june-16-2014-meeting-mhealth-evidence-generation-focus-evaluation](#)

43 [www.mobilemamaalliance.org/sites/default/files/MAMA_Global_MEPlan_FINAL_all.pdf](#)



Key Resources for mHealth

Title	Authors	Year	Citation	Link
Integrating Mobiles into Development Projects Handbook	By Josh Woodard, Jordan Weinstock, and Nicholas Leshner	2014	USAID, FHI 360, and Open Revolution	http://www.usaid.gov/sites/default/files/documents/1861/M4DHandbook_August_2014.pdf
mHealth resources to strengthen health programs	Kelly L'Engle, Laura Raney, and Margaret D'Adamo	2014	<i>Global Health: Science and Practice</i> , 2 (1):130-131. (11 February 2014)	http://www.ghspjournal.org/content/2/1/130.full.pdf#page=1&view=FitH
Technical Platforms for Mobile Messaging	MAMA	2014	MAMA, June 2014	http://www.mobilemamaalliance.org/sites/default/files/Mobile%20Messaging%20Tech%20Platforms%20.pdf
The mHealth planning guide: Key considerations for integrating mobile technology into health programs	K4Health	2014	Knowledge for Health Project, Johns Hopkins Center for Communication Programs	https://www.k4health.org/printpdf/book/export/html/20939
Addressing gender and women's empowerment in mHealth for MNCH: An analytical framework	Madhu Deshmukh and Patricia Mechael	2013	mHealth Alliance, UN Foundation	http://www.mhealthalliance.org/images/content/gender_analytical_framework_report.pdf
How are mobile phones empowering women and leading to better maternal health? [website]	various	2013	Skoll World Forum	http://skollworldforum.org/debate/how-are-mobile-phones-empowering-women-and-leading-to-better-maternal-health/
How do we cure mHealth pilotitis? [website]	various	2013	Skoll World Forum	http://skollworldforum.org/debate/how-do-we-cure-mhealth-pilotitis-critical-lessons-in-reaching-scale/
mHealth Basics: Introduction to Mobile Technology for Health	Cornelia Kip Lee, Laura Raney, and Kelly L'Engle	2013	USAID Global Health eLearning Center course	http://www.globalhealthlearning.org/course/mhealth-basics-introduction-mobile-technology-health

Title	Authors	Year	Citation	Link
mHealth innovations as health system strengthening tools: 12 common applications and a visual framework	Alain B Labrique, Lavanya Vasudevan, Erica Kochi, Robert Fabricant, and Garrett Mehl	2013	Glob Health Sci Pract 2013;1(2):160-171.	http://www.ghspjournal.org/content/1/2/160.full.pdf
Scaling Up Mobile Health: Developing mHealth Partnerships for Scale	Jeannine Lemaire	2013	Advanced Development for Africa	http://www.adaorganization.net/uploads/2/3/7/1/23713723/developing_mhealth_partnerships_for_scale_printer_friendly_low.pdf
mHealth Implementation Opportunities, Issues and Challenges - mHealth Summit Auxiliary Session Notes	mHealth Working Group	2012	mHealth Working Group, 5 December 2012	https://www.mhealthworkinggroup.org/resources/mhealth-implementation-opportunities-issues-and-challenges-mhealth-summit-auxiliary
Barriers and Gaps Affecting mHealth in Low and Middle Income Countries	Patricia Mechael, Hima Batavia, Nadi Kaonga, Sarah Searle, Ada Kwan, Adina Goldberger, Lin Fu, and James Ossman	2010	Center for Global Health and Economic Development Earth Institute, Columbia University, 2010	http://www.mhealthalliance.org/images/content/publications/barriers_and_gaps.pdf
ASH mHealth Compendium First Edition	McQueen, Suzzane, Sarah Konopka, Nicole Palmer, Gwendolyn Morgan, Sunday Bitrus, and Lungi Okoko	2012	Arlington VA: African Strategies for Health, November 2012.	http://www.africanstrategies4health.org/uploads/1/3/5/3/13538666/mhealthcompendiumupdated_final.pdf
ASH mHealth Compendium Second Edition	Gayle Mendoza, Lungi Okoko, Gwendolyn Morgan, and Sarah Konopka.	2013	Arlington VA: African Strategies for Health, May 2013.	http://www.africanstrategies4health.org/uploads/1/3/5/3/13538666/usaid_mhealth_compendium_vol_2_us_letter_web.pdf
ASH mHealth Compendium Third Edition	Gayle Mendoza, Lungi Okoko, Sarah Konopka, and Edna Jonas	2013	Arlington VA: African Strategies for Health, November 2013.	http://www.africanstrategies4health.org/uploads/1/3/5/3/13538666/mhealth_compendium_volume_3_a4_small.pdf



EXPERT NETWORK

There are over 50 carefully vetted mHealth experts in our network from around the world.



MATCH MAKING SERVICE

We link up health implementers with individuals or organizations with the right skills and experience.



NEUTRAL

We are not linked to any service provider so can give straight forward recommendations



QUALITY ASSURANCE

All our experts are carefully vetted and projects are overseen and evaluated to ensure the best quality results.

About mHELP

The mHealth Expert Learning Program (mHELP) provides support and technical assistance to individuals, governments, the private sector, and non-governmental organizations in low- and middle-income countries that wish to implement electronic health (eHealth) and mobile health (mHealth) into their health programs.

With an extensive database of vetted mHealth consultants, mHELP is a global, neutral partner that can deploy experts across the globe to support mHealth initiatives of all types.

Focused on improving reproductive health, maternal, newborn and child health, and HIV and AIDS, mHELP offers a range of services designed to build capacity and strengthen implementation. These include:

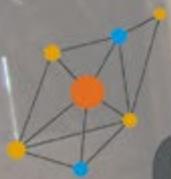
- advice for small projects and queries
- guides and resources
- needs assessments and specification development
- training courses, and
- consultancies on all aspects of mHealth.

To get mHealth advice or support, including assistance in setting up a messaging system or selecting a service provider, please visit www.mhelp.org or send an email to info@mhelp.org

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