How To Use Mobile Phones For Delivering Tailored Behavior Change Messages

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Objectives

- Introduction to mobile technology and mobile health
- Review mobile health initiatives and delivery practices
- Discuss barriers to mobile health implementation
- Conclusion & questions
Mobile Technology

- Mobile technology, i.e., mobile phones, have become widely adopted and accessible around the world, across socioeconomic and demographic groups.

- Estimates show that there are now close to 5 billion mobile phone subscribers worldwide, with 95% of countries in the world having mobile phone networks.

- Such proliferation of mobile technology is having important implications for health communication

Source: Cole-Lewis & Kershaw, 2010
Mobile Health (mHealth)

- refers to the use of mobile technology--such as mobile phones--to deliver health care;

- is recognized as a complementary strategy for improving healthcare services, even in the most resource-poor settings;

- initiatives have been developed to address an array of health issues, often using mobile phones.
Mobile phone technology that has been used for mHealth include:

- Voice calling
- Video messaging
- Internet
- Text messaging
Mobile Health Initiatives

- mHealth initiatives are developed to provide care, preventive management support, and promote behavior change that will lead to improved health outcomes.

- mHealth initiatives deliver intervention on topics such as:
  - Treatment compliance
  - Appointment reminders
  - Community mobilization & health promotion
  - Awareness raising over health issues
  - Patient monitoring
Globally, mHealth initiatives have been implemented across many countries, including most Member States.

The 2009 WHO global eHealth survey found that:

- 83% of the 112 participating Member States have at least one mHealth initiative in their country
- Of the 83%, ~75% reported four or more types of mHealth initiatives
- Only 19 responding Member State countries did not report any mHealth initiative

Source: WHO, 2011
Mobile Health Initiatives, continued

mHealth initiatives by countries:

- Afghanistan (1)
- Albania (1)
- Angola (1)
- Argentina (3)
- Australia (2)
- Bangladesh (17)
- Bolivia (2)
- Botswana (1)
- Brazil (8)
- Bulgaria (1)
- Burundi (1)
- Cambodia (2)
- Canada (3)
- China (2)
- Costa Rica (1)
- Democratic Republic of the Congo (1)
- East Timor (1)
- Egypt (1)
- Ethiopia (5)
- Georgia (2)
- Macedonia (1)
- Madagascar (1)
- Malawi (2)
- Mali (1)
- Mexico (10)
- Montenegro (1)
- Mozambique (6)
- Pakistan (1)
- Russia (2)
- Rwanda (6)
- Samoa (1)
- Saudi Arabia (1)
- Serbia (1)
- South Africa (34)
- Sri Lanka (1)
- Tajikistan (1)
- Tanzania (19)
- Togo (3)
- UAE (2)
- United Arab Emirates (18)
- United Kingdom (1)
- United States (7)
- Venezuela (3)

**About HUB**: Health Unbound is an interactive network and online knowledge resource center for the mHealth community. It aims to connect stakeholders throughout the healthcare community around the platform of mobile health.

Source: Health Unbound, 2013
Mobile Health Initiatives, continued

mHealth initiatives in the United States:

- **Perinatal Appointment Compliance Tool (PACT) Program**
- **Partners Healthcare Text Messaging Program**
- **Text4Baby**
- **HolaDoctor**
- **Bedsider**
- **Maternal Concept Lab (MCL)**
- **MCHIP Quality of Care (QoC) Toolkit (for Maternal & Newborn Health)**

Source: Health Unbound, 2013
Mobile Health Initiatives, continued

Text4Baby mHealth initiative:

Free health text messaging service in the U.S. that supports moms by providing accurate, text-length health information and resources in a format that is personal and timely, using a channel she knows and uses. These messages provide reminders and information about immunizations, nutrition, oral health and child development, as well as toll-free numbers for health services. Text4Baby was formed as a public-private partnership, including government, corporations, academic institutions, professional associations, tribal agencies and non-profit organizations. The results showed very high satisfaction with the service, increase in users’ health knowledge, improved interaction with healthcare providers, improved adherence to appointments and immunizations, and increased access to health resources for the mothers.

Source: Health Unbound, 2013
Mobile Health Initiative Delivery

- mHealth initiatives often differ in their stage of development.

- WHO uses the following stages to identify the type of mHealth initiative taking place in a country:
  - Informal
  - Pilot
  - Established
Mobile Health Initiative Delivery, continued

For sustainability and scalability, mHealth initiatives should embody the following best practices that are the building blocks for delivering a successful intervention:

- Multi-sectoral partnership
- Measurable goals
- Collaboration
- Integration
- User-friendly
- Use of open source software
- Accessible
Mobile Health Initiative Delivery, continued

- Multi-sectoral partnership
  - Establish partnership with experts in the field of technology, healthcare, and academia

- Measurable goals
  - Establish measurable goals to assess for success or failure of the project

- Collaboration
  - Collaborate with ongoing mHealth initiatives and projects to share techniques, software applications, and best practices
    - Resources such as HUB offers such collaboration opportunities
Mobile Health Initiative Delivery, continued

- Integration
  - Develop strategic connections within the country’s national/regional health care programs to secure long-term sustainability and funding goals

- User-friendly
  - Maintain focus on usability and user-friendly designs

- Open source software
  - Use open-source software to create mHealth applications
    - Resources such as InSTEDD offers free and open source access to communication technology tools
Examples of open source technology:

**Verboice**
Verboice lets you create and run applications via voice, thereby overcoming literacy and geographical barriers.

**GeoChat**
GeoChat is a collaboration tool that allows anyone to chat, report, and get alerts on their phone.

**Nuntium**
Nuntium is a tool that allows anyone to build robust and scalable messaging applications.

**Remindem**
Remindem helps you keep people informed of important things going on in their life and work.

**Riff**
Riff is a tool that helps groups analyze and visualize multiple streams of information.

**Resource Map**
Resource Map helps people track their work, resources and results geographically in a collaborative environment accessible from anywhere.

Source: InSTEDD, 2013
Mobile Health Initiative Delivery, continued

- Accessible
  - Message style, content, and delivery matches the intended purpose of the health communication
  - Health messages resonate with the target audience and encourage them to take action
  - Targeted and tailored health communication strategies are employed
Barriers to Implementation of mHealth Initiatives

- Competing health system priorities
- Lack of strong evidence to confirm its impact on health outcomes and health systems
- Limited evaluation studies on mHealth initiatives
- Gaps in cost-benefit studies

Source: WHO, 2011


Health Unbound: [http://www.healthunbound.org](http://www.healthunbound.org)

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• Thank you!
  • Questions?