Key considerations for community-informed mHealth

Mobile health (mHealth) has potential to improve patient access to personal health management tools. To be most effective and equitable, mHealth needs to be designed and implemented with patient needs and community perspectives in mind. This resource provides considerations based on findings from community-based health research about mHealth.[1] These considerations can help mHealth researchers and developers question assumptions about community needs and approach their work through a community-informed lens. These considerations may arise differently across different communities and, thus, it is important not to treat these as "prescriptive" guidelines but seek to incorporate the values of the communities they work with.

The following 5 questions can help guide you and your team in the development of a new tool, or the adaptation of an existing tool, for a particular community.

1. WHY is the tool important?

As you think about the goal of your project, consider which categories of benefits it is offering that are valuable to the patient communities you're trying to reach. Some benefits might include:

- ☐ General monitoring
- ☐ Providing peace of mind
- ☐ Allowing continuation of regular activities
- ☐ Screening to lead to a diagnosis
- ☐ Preventing serious health events
- ☐ Other potential benefits (specify below)
    - ☐
    - ☐
    - ☐

Communicate with community members to identify as well as validate these perceived benefits. If the benefits are not clear (e.g., not perceived as "benefits" by community members), reconsider use cases of the tool and the "need" for creating a technological solution.

2. WHO is the tool reaching?

The patient communities who could benefit most from mHealth may not be able to easily access it. Consider whether the patients you are trying to reach:

- ☐ Are familiar with mHealth in general
- ☐ Are comfortable using mobile technology
- ☐ Have heard about mobile health technology for this condition
- ☐ Can easily access the device & supportive technology needed to use it
- ☐ Would benefit from guidance to learn to use the technology
- ☐ Understand the language used in the device and instructions
- ☐ Other considerations (specify below)
    - ☐
    - ☐
    - ☐

Next, address the access barriers that you identify. What community pathways can you use to increase awareness? What language and literacy level will community members understand? What changes can you make to the design to improve accessibility?

3. WHERE and WHEN will the tool be used?

Engage with the community to understand their specific needs and preferences and how/where the tool could fit into the daily life of a patient in the community. Some factors to think about include:

- ☐ Cost and insurance coverage
- ☐ Ease and comfort of daily use
- ☐ Technical issues (battery, storage, software updates, internet access)
- ☐ Constraints based on where the device will be used (school, work)
- ☐ Other considerations (specify below)
    - ☐
    - ☐
    - ☐

Reduce the burden associated with each of these factors as much as possible.

4. WHAT data are needed?

Examine the benefits and risks of data sharing from the community's perspective. Consider:

- ☐ Benefits of data sharing for this community
- ☐ Sensitivity of the health condition
- ☐ Strength of data security
- ☐ Other sensitive data, like location
- ☐ Other considerations (specify below)
    - ☐
    - ☐
    - ☐

Reduce the risk and increase the community benefit associated with data collection, use, and sharing where possible. Communicate clearly about data sharing practices, reasons for data sharing, and protections.

5. HOW does someone use the tool?

Simplify the design where possible and provide resources to support patients. You could:

- ☐ Provide clear, step-by-step instructions
- ☐ Build in time for patients to practice
- ☐ Create a tutorial to guide patients
- ☐ Provide personalized support
- ☐ Other considerations (specify below)
    - ☐
    - ☐
    - ☐

Designing tools that support individuals with different levels of familiarity and comfort with using technology will contribute to more successful use across a wider range of people.

References

1. Kraft et al. Community Perspectives on Artificial Intelligence-Enabled Mobile Health Tools: A Focus Group Study of Hispanic and Latinx Community Members. J Med Internet Res (submitted). doi:10.2196/59817