

# Mobile health: Connecting technology, community education and research

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New technology is appearing at a rapid rate and is becoming more accessible and easier to use. When I think about how community education, technology and research can be connected together, the initiative which comes to my mind is the inception of mHealth (mobile health related messages). In the recent years there have been an ever increasing number of cell phone users. Cell phones can be used as an engine to disseminate information within a community. One of such projects is called [Text4baby](#).

Having a healthy pregnancy is one of the best ways to give birth to a healthy new born and this positively affects the early years' of a child's life. Although accessing health care is considered to be a fundamental right, but in many underserved communities women are deprived from using prenatal care effectively. The barriers to receive pre natal care could range from language, insurance, transportation or simply nonexistence of public health care system (Byrd et al., 1996 p.537). The World Health Organization reports that every day, approximately 830 women die from preventable causes related to pregnancy and childbirth (retrieved from <http://www.who.int/mediacentre/factsheets/fs348/en/>). During the investigation on the effectiveness of health care in USA, the Health Resources and Service Administration Committee reported that reduction of infant deaths is a high priority for United States (retrieved from <https://www.hrsa.gov/advisorycommittees/mchbadvisory/InfantMortality/Correspondence/recom>

[mendationsjan2013.pdf, p.2](#)). Text4baby aims to supplement health care by providing information, facilitating consultation through phone.

Text4Baby was launched in 2010 and is the first free national mHealth text messaging services in USA. This innovative program was conceptualized and supported by National Healthy Mothers, Healthy Babies Coalition, Voxiva, The Wireless Foundation, Johnson & Johnson and U.S Department of Health and Human services ( retrieved from <https://www.hrsa.gov/sites/default/files/archive/healthit/txt4tots/text4babyfinalreport.pdf, p.3>). Each of these partners had unique responsibilities for the development of this program. While medical institutions like American College of Obstetricians and Gynecologists (ACOG) and American Academy of Pediatrics (AAP) are responsible for drafting and review of the message content, partners like Voxiva ensures the technical integrity of the messaging system. The program relies on the leverage of federal agencies, academic institutions, medical association and nonprofit organizations to reach its target audience.

The Text4baby program provides text messages to the recipients that include evidence based health tips, appointment reminders and referral telephone numbers. Depending on the gestational week Text4baby sends tailored messages thrice a week till baby's first birthday (retrieved from <https://www.text4baby.org/about/text4baby>). The messages are delivered either in English /Spanish.

As a part of their mission to reach diverse communities, Text4baby has partnered with National Council of La Raza (Spanish organization), Ebony (organization for African American) to promote their service. In order to improve their mass media presence, Text4baby also has a [website](#) and is also present in [facebook](#), [twitter](#) and other social platforms.

A formal evaluation of the program was carried out by U.S Department of Health and Human Service in 2015. The evaluators studied 4 community health sites from different corners of USA (Northeast, Midwest, South and West). The evaluation used both qualitative and quantitative methods to find out the effectiveness of the program. Although the findings cannot be generalized, but in essence, the investigators found out (retrieved from:

<https://www.hrsa.gov/sites/default/files/archive/healthit/txt4tots/text4babyfinalreport.pdf>, p. 61-65)

1. The participation rate was lower than expected. At the community health centers, only 8-38 % of the women were aware of Text4Baby program and of them participation ranged from 2-16%. A majority of the women who didn't participate cited difficulty with texting and English language proficiency as a barrier to participate in the program. The evaluators noted that enrolment for Text4baby were high only when the health care center had poster for this program, which implies still many expecting mothers are unaware of the existence of this program. These suggest that Text4baby should be integrated as a complementary service into existing health care programs to promote participation in the program.

2. Although the participation was low, but women who received Text4baby messages valued the program (90%) and would refer this program to other members of family or friend.

3. Compared to women who are not aware of Text4baby program, those who participated reported more adherences to exercising (93% vs. 84%), getting a flu shot ( 88% vs. 76%) and calling a helpline if depressed ( 81%vs. 65%).

Another evaluation was carried out by School of Nursing, Johns Hopkins University in San Diego, California (retrieved from <https://nursing.jhu.edu/news->

[events/documents/magazine/spring-12.pdf](#), p.20). This report also showed mothers who receive Text4baby messages are more proactive in taking care of themselves.

As a part of ongoing evaluation, data collected from this program will be analyzed to develop insights about user experiences. These fact sheets will be used for other similar organizations like Healthy start, Special Supplemental Nutrition Program for Women Infant and Children (WIC), Medicaid (retrieved from <https://www.hrsa.gov/sites/default/files/archive/healthit/txt4tots/text4babyfinalreport.pdf>, p 14). One can also hope that the research findings from this program will be used to tailor future health policies.

The model of mHealth has been adapted to other countries in the world. [GiftedMom](#) has been launched in Cameroon. While reading about the story of inception of GiftedMom I felt inspired how 23 year old Alain Nteff collaborated with Dr. Conrad Tankou to create an app which is aiming to help expecting mothers from African subcontinent (retrieved from [https://www.huffingtonpost.com/2015/01/21/alain-nteff-gifted-mom\\_n\\_6510348.html](https://www.huffingtonpost.com/2015/01/21/alain-nteff-gifted-mom_n_6510348.html)). [Zero Mothers Die](#) app has been introduced in Ghana, Gabon, Mali and Nigeria. Similarly, [M-mitra](#) project has been launched in India to improve the wellbeing of pregnant women.

China has also introduced mHealth service. In one of the studies on the effectiveness of text messages, the researcher found out that recipients prefer text messages which are tailored to their gestational age, and reinforcement of the message content from the health care workers may play a key role (Y et al, 2015, p10)

While writing this essay, I remembered, about two and half years back I was also a recipient of Text4baby messages. As a first time mom, Text4baby helped me determine questions to ask the doctor. I also enjoyed getting weekly updates on the baby's milestones.

Healthcare should be affordable and accessible to all. It is still a long way to have universal health coverage for all. Thomas Kalil advocates we need to “harness the power of mobile revolution” (retrieved from <http://www.mitpressjournals.org/doi/pdf/10.1162/itgg.2009.4.1.9>) . In my view mHealth is probably one of the ways in which we can strive to close the gap in maternal health crisis.

### References

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