



# Million Hearts Campaign Bibliography

## Research Outline

### 1. Instructional Strategy

#### a. Fogg Behavioral Model

- i. Fogg, B.J. (2009). A Behavior Model for Persuasive Design. Persuasive '09, April 26-29, Clermont California, USA.
  1. Three elements must be present in order to activate an intended behavior: Motivation, ability, and trigger
  2. Spark trigger (high ability, low motivation): Engage those with low motivation to participate

### 2. mLearning

#### a. Acceptability and Feasibility

- i. Gerber, B. S., Stolley, M. R., Thompson, A. L., Sharp, L. K., & Fitzgibbon, M. L. (2009). Mobile phone text messaging to promote healthy behaviors and weight loss maintenance: a feasibility study. *Health Informatics Journal*, 15(1), 17–25. doi:10.1177/1460458208099865
  1. Study to evaluate effectiveness of SMS text program to help African-American women with weight management; messages sent to participants 3 times/week
  2. Results: Over 4,500 messages were sent during first 4 months of the program; SMS text program would be feasible and acceptable.
- ii. Haug, S., Meyer, C., Schorr, G., Bauer, S., & John, U. (2009). Continuous individual support of smoking cessation using text messaging: A pilot experimental study. *Nicotine & Tobacco Research*, 11(8), 915–923. doi:10.1093/ntr/ntp084
  1. Study designed to evaluate the acceptability and feasibility of SMS text-based program for smoking cessation in young adults; one focus was on support intensity (one message per week versus three)
  2. Results: Program seems acceptable to target population
- iii. Obermayer, J. L., Riley, W. T., Asif, O., & Jean-Mary, J. (2004). College Smoking-Cessation Using Cell Phone Text Messaging. *Journal of American College Health*, 53(2), 71–78. doi:10.3200/JACH.53.2.71-78
  1. Feasibility study for Web and text-based smoking cessation program for college-age students; participants receive messages with increasing frequency, and are able to send SOS message when in need of additional support
  2. Key results: After 6 weeks, 42% made at least one attempt to quit; high satisfaction ratings with text-based features and overall program.
- iv. Rami, B., Popow, C., Horn, W., Waldhoer, T., & Schober, E. (2006). Telemedical support to improve glycemic control in adolescents with type 1 diabetes mellitus. *European Journal of Pediatrics*, 165(10), 701–705. doi:10.1007/s00431-006-0156-6
  1. Feasibility study of a telemedical support program and evaluation of the effectiveness of glycemic control in Type I Diabetes adolescents; participants sent relevant data to system daily via text, and return text offered advice based on the information



2. Results: Improved glycemic control, deemed feasible program
- v. Wilkins, A., & Mak, D. B. (2007). . . . Sending out an SMS: an impact and outcome evaluation of the Western Australian Department of Health's 2005 chlamydia campaign. *Health promotion journal of Australia: official journal of Australian Association of Health Promotion Professionals*, 18(2), 113–120.
1. Evaluation of the Western Australian Department of Health 2005 chlamydia campaign
  2. Results: 58.2% of participants rated SMS as a good or very good method of communication; participants preferred obtaining sexual health information via the Internet
- b. Text
- i. Armstrong, A. W., Watson, A. J., Makredes, M., Frangos, J. E., Kimball, A. B., & Kvedar, J. C. (2009). Text-Message Reminders to Improve Sunscreen Use: A Randomized, Controlled Trial Using Electronic Monitoring. *Archives of Dermatology*, 145(11), 1230.  
doi:10.1001/archdermatol.2009.269
    1. Study designed to evaluate effectiveness of text-based program and sunscreen adherence behaviors
    2. Results: Higher adherence rate (56.1%) of test group versus control group (30%); positive level of participant satisfaction (69% would continue using the program, 89% would recommend it to others)  - ii. Feder, J. L. (2010). Cell-phone medicine brings care to patients in developing nations. *Health Affairs*, 29, 259-263. Retrieved at <http://www.ncpa.org/pdfs/Cell-Phone-Medicine-Brings-Care.pdf>.
    1. VidaNET: Text-based program to help HIV patients manage their care and medication administration
    2. Other initiatives: CardioNET (heart health) and DiabeDario (diabetes maintenance)  - iii. Fjeldsoe, B. S., Miller, Y. D., & Marshall, A. L. (2010). MobileMums: A Randomized Controlled Trial of an SMS-Based Physical Activity Intervention. *Annals of Behavioral Medicine*, 39(2), 101–111.  
doi:10.1007/s12160-010-9170-z
    1. MobileMums: Program designed to increase postnatal physical activity; 12-week program with 3-5 text messages per week plus support
    2. Results: Increased physical activity  - iv. Franklin, V. L., Waller, A., Pagliari, C. and Greene, S. A. (2006). A randomized controlled trial of Sweet Talk, a text-messaging system to support young people with diabetes. *Diabetic Medicine*, 23: 1332–1338. doi: 10.1111/j.1464-5491.2006.01989.x
    1. SweetTalk: Text-based program designed to increase patient self-efficacy and glycemic control in juveniles with Type I diabetes
    2. Results: SweetTalk associated with increased self-efficacy and adherence to insulin therapy; high patient satisfaction with text-messaging features (83% of participants felt that SweetTalk was useful, 90% wanted to continue the program)  - v. Hurling, R., Catt, M., De Boni, M., Fairley, B. W., Hurst, T., Murray, P., ... Sodhi, J. S. (2007). Using Internet and Mobile Phone Technology to Deliver an Automated Physical Activity Program:

Randomized Controlled Trial. *Journal of Medical Internet Research*, 9(2), e7.  
doi:10.2196/jmir.9.2.e7

1. Study designed to measure the effectiveness of an Internet and mobile-based program.
  2. Results: Increased level of physical activity from the test group
- vi. Joo, N.-S., & Kim, B.-T. (2007). Mobile phone short message service messaging for behaviour modification in a community-based weight control programme in Korea. *Journal of Telemedicine and Telecare*, 13(8), 416–420. doi:10.1258/135763307783064331
1. Study to measure effectiveness of SMS text-based program in an anti-obesity campaign; messages sent once a week for 12 weeks
  2. Results: 47% of participants completed weight control program; positive participant reaction to SMS text material
- vii. Khokhar, A. (2009). Short Text Messages (SMS) as a reminder system for making working women from Delhi breast aware. *Asian Pacific Journal of Cancer Prevention*, 10(2), 319–321.
1. SMS text-based program to increase breast self-examination in Delhi population; reminder messages sent every month
  2. Key result: Increased number of breast self-examinations after two months
- viii. Levine, D., McCright, J., Dobkin, L., Woodruff, A. J., & Klausner, J. D. (2008). SEXINFO: a sexual health text messaging service for San Francisco youth. *American journal of public health*, 98(3), 393–395. doi:10.2105/AJPH.2007.110767
1. SEXINFO: Text-based program with companion website designed to increase sexual health literacy and decrease gonorrhea infection rates in San Francisco youth population
  2. 4,500+ inquiries in the first 25 weeks, higher awareness and confidence rating reported
- ix. Rodgers, A., Corbett, T., Bramley, D., Riddell, T., Wills, M., Lin, R.-B., & Jones, M. (2005). Do u smoke after txt? Results of a randomised trial of smoking cessation using mobile phone text messaging. *Tobacco Control*, 14(4), 255–261. doi:10.1136/tc.2005.011577
1. Study to evaluate effectiveness of text-based smoking cessation program
  2. Results: 28% of participants in test group quit versus 13% of the control group; program is attractive based on affordability, ease of use, and delivery of personalized content.
- x. Shapiro, J. R., Bauer, S., Hamer, R. M., Kordy, H., Ward, D., & Bulik, C. M. (2008). Use of Text Messaging for Monitoring Sugar-sweetened Beverages, Physical Activity, and Screen Time in Children: A Pilot Study. *Journal of Nutrition Education and Behavior*, 40(6), 385–391. doi:10.1016/j.jneb.2007.09.014
1. Acceptability study of text-based service to monitor health behaviors in children, specifically regarding physical activity and sugar consumption
  2. Results: Increased self-monitoring behavior in test group
- xi. Shapiro, J. R., Koro, T., Doran, N., Thompson, S., Sallis, J. F., Calfas, K., & Patrick, K. (2012). Text4Diet: A randomized controlled study using text messaging for weight loss behaviors. *Preventive Medicine*, 55(5), 412–417. doi:10.1016/j.ypmed.2012.08.011
1. Text4Diet: Study designed to evaluate effectiveness of a text-based weight loss intervention

2. Results: Positive improvement in behaviors and weight outcomes based on high adherence (level of text-message response); high satisfaction rate regarding text messaging features
- xii. Whittaker, R., Matoff-Stepp, S., Meehan, J., Kendrick, J., Jordan, E., Stange, P., ... Rhee, K. (2012). Text4baby: Development and Implementation of a National Text Messaging Health Information Service. *American Journal of Public Health, 102*(12), 2207–2213. doi:10.2105/AJPH.2012.300736
1. Text4Baby program to increase health literacy during and after pregnancy (prenatal and postnatal)
  2. Sends 3 free messages a week (117 prenatal, 147 postnatal)
  3. Enrollment believed to be high because it was free, quick, and easy to use (over 320,000 enrolled)
- xiii. World Health Organization (2011). mHealth: New horizons for health through mobile technologies. *Global Observatory for eHealth Series, 3*.
1. Ministry of Health and Family Welfare of Bangladesh want to raise citizens' health awareness
  2. National Immunization Day: send SMS text messages to all mobile telephones in the country
  3. Other initiatives: Vitamin A Week, National Breastfeeding Week, National Safe Motherhood Day
- c. Email
- i. Kubota, A., Fujita, M., & Hatano, Y. (2004). [Development and effects of a health promotion program utilizing the mail function of mobile phones]. [*Nihon kōshū eisei zasshi*] Japanese journal of public health, *51*(10), 862–873.
    1. i-exerM: Text-based weight reduction program with some web interface
    2. Results: 46% of participants reduced weight; positive participant evaluation of program, indicating that it was "greatly effective" for "stimulating consideration of body reduction and starting concrete efforts."