

Examples from the Field: Going Mobile to Improve Public Health

Texting4Health, Stanford University, Feb 29, 2008

CDC.gov



Interactive
Media

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Centers for Disease Control and Prevention
Coordinating Center for Health Information and Service
National Center for Health Marketing



Three Mobile Projects at CDC

- HIV Testing Centers via SMS
- Mobile Alerts from the CDC.gov Web site
- Mobile Technology for Diabetes Management

Talk Goals:

- To share examples, results, and learning
- To generate questions

HIV Test Centers Via SMS

Introduction

Purpose:

Motivate people to get tested for HIV

How it Works

- Mobile phone user **texts their zip code to a short code**
- The zip code is matched to a database of HIV testing centers
- The user receives a text message reply with the name and number of the nearest testing center

```
HIV testing
center near you:
Gwinnett County
Health
Department, 770-
339-4283. For
more locations
call 1-800-232-
4636
```

Example text
response

HIV Test Centers Via SMS

Initial Launch

Initial launch in March 2007

Public education partnership of the

- Kaiser Family Foundation,
- Viacom, and the
- CBS Corporation.

World AIDS Day Launch

In November 2007, DHHS released a collaborative, multifaceted campaign promoting this SMS service and World AIDS Day activities and information.

Collaborators included:

- The Kaiser Family Foundation
- The National Center for Health Marketing (NCHM)
- The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)
- Department of Health and Human Services

HIV Test Centers Via SMS Promotional Graphics



Text:
Your Zip Code

To:
KnowIt
or 566948

To find HIV
Test Centers
near you.

www.hivtest.org

Know your HIV status?
Text: Your Zip Code
To: KnowIt or 566948
To find HIV Test Centers near you.
www.hivtest.org



WORLD AIDS DAY
Take the test.
Take control.
www.hivtest.org

Know Your HIV Status?
To find HIV Test Centers near you:
*Text: Your Zip Code
To: KnowIt or 566948*
www.hivtest.org

¿Sabes si tienes el VIH?
Envía un mensaje de texto con: tu código postal
A: KnowIt o al 566948
para encontrar un centro cercano que te haga la prueba.
www.hivtest.org

Add a Badge to Your Page!

Let your friends know you support healthy choices. Grab one of the badges below and add it to your MySpace page. Simply copy the code beside the image you want and paste it in your About Me section.

	<pre><center> <img</pre>
	<pre><center><a href="http://www.msplinks.com/MDFodHRwOi8vd3d3LmhpdnRlc3Qub3JnP3NfY2lkPWVhpdI93YWRFZXh0ZXJlYWw0" title="Know Your HIV Status? To find HIV Test Centers near</pre>
	<pre><center><a href="http://www.msplinks.com/MDFodHRwOi8vd3d3LmhpdnRlc3Qub3JnP3NfY2lkPWVhpdI93YWRFZXh0ZXJlYWw0" title="Know Your HIV Status? To find HIV Test Centers near</pre>

Take the test.
Take control.
www.hivtest.org



HIV Test Centers Via SMS Campaign Coverage Across Channels

Blogs



Web sites



Online Newsletters



TV News



Proposed Best Practices for Usability

The Challenge: Convey the relevant information within 160 character SMS limitation without being cryptic

- Avoid abbreviations or txtng shorthand when possible (e.g. "you are" instead of "u r")
- Apply good writing principles, in spite of the limited real estate: grammar, punctuation, etc. can make a difference
- Do not rely on SMS as the sole channel: leverage phone, IVR, web, and others
- General rule: Basic usability principles still apply

See also: Mobile Marketing Association Best Practices

<http://mmaglobal.com/bestpractices.pdf>

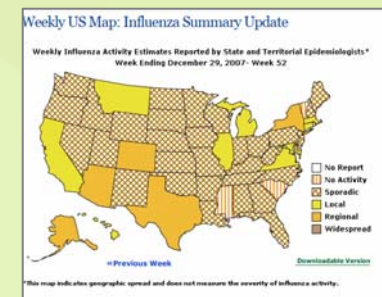
HIV Test Centers Via SMS Credits

- The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)
 - Susan Robinson
 - Angie Tracey
 - Cynthia Crick
 - Erin Dixon
- The Kaiser Family Foundation
 - Tina Hoff
 - Stephen Massey
 - Kimberly Dasher
 - Jennifer Kates
 - Carmelite Souffront
 - Jen Sarche
 - Allison McKenzie
- The National Center for Health Marketing (NCHM)
 - Janice Nall
 - Ann Aikin
 - Kathleen Carey
 - Erin Edgerton
 - Nick Sabadosh
 - Sarah Hinkle
 - Tom Seibert
 - Weis Rafi
- The Department of Health and Human Services (HHS)
 - Miguel Gomez
 - Jennie Anderson

Mobile Alerts from CDC.gov

Mobile Alerts from CDC.gov Overview

- Existing service on the CDC.gov Web site to “Get Email Updates”
- Service provided by GovDelivery
- Visitors select their subscriptions from the list of available topics on CDC.gov
- GovDelivery started offering wireless text messages (SMS) in addition email updates
- The CDC.gov team, in collaboration with Emergency Preparedness and Response, identified the “Flu” website as a good candidate to trial the new wireless service
 - Specifically, many CDC.gov visitors eagerly await updates to the **Flu maps** – with this service, they would know immediately when new ones are available



Mobile Alerts from CDC.gov Web Interfaces

CDC Centers for Disease Control and Prevention
CDC en Español | Other Languages Deutsch
CDC Home Diseases and Conditions

Seasonal Flu

WHAT YOU SHOULD KNOW ABOUT ...
INFO FOR HEALTH PROFESSIONALS
2007-08 ACIP Recommendations
Vaccination
Antiviral Drugs
Infection Control
Clinical Description & Lab Diagnosis
Free Flu Materials
2007 National Influenza Vaccination Week (NIVW)
Flu Activity & Surveillance
Training
References & Resources
INFO FOR SPECIFIC GROUPS
OTHER FLU WEBSITES
Avian Flu
Pandemic Flu
Swine Flu

Flu Activity & Surveillance

Reports & Surveillance Methods in the United States

- Current United States Flu Activity Map
- Weekly U.S. Influenza Surveillance Report
- International Influenza Surveillance

Past Weekly Surveillance Reports

Years	Report for the week ending
2007 - 2008	February 16, 2008—Week 7 <input type="button" value="Go!"/>
2006 - 2007	2006-07 Influenza Season Summary <input type="button" value="Go!"/>
2005 - 2006	2005-06 Influenza Season Summary <input type="button" value="Go!"/>
2004 - 2005	2004-05 Influenza Season Summary <input type="button" value="Go!"/>

PAGE OPTIONS
Text Size: - +
 Email this page
 Printer-friendly version
 Get RSS
Media:
 RSS

Get Seasonal Flu updates sent directly to your mobile phone.

Contact Us
CDC-INFO
888-232-6222
cdcinfo@cdc.gov

CDC Department of Health and Human Services
Centers for Disease Control and Prevention

Quick Subscribe for nsabadosh@cdc.gov

Centers for Disease Control and Prevention (CDC) offers updates on the topics below. Subscribe by checking the boxes; unsubscribe by unchecking the boxes.

Access your [subscriber preferences](#) to update your subscriptions or modify your password or e-mail address without adding subscriptions.

The icon means [Wireless Alerts](#) are available for this item.

- CDC Office of The Director
- Emergency Preparedness and Response
- Avian Flu
- CDC Washington
- Cancer
- E. coli
- Environmental Health
- HIV/AIDS
- Health Marketing
- Injury, Violence & Safety
- Malaria
- Men's Health
- National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)
- National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)
- National Center for Health Statistics
- National Institute for Occupational Safety and Health (NIOSH)
- National Office of Public Health Genomics (NOPHG)
- Nutrition and Physical Activity (DNPA)
- Oral Health
- Partners Portal
 - CDC Partners Portal Home
 - CDC Partnership Fact Sheets
 - Events

HIV Test Centers Via SMS Custom Help Pages

Overview of service and how to sign up

Email formats for the major wireless carriers
(e.g. 4045551212@vtext.com)

The screenshot shows the CDC website's 'Seasonal Flu' page. The header includes the CDC logo and navigation links. The main content area is titled 'Stay Informed—Anytime, Anywhere with Wireless Alerts'. It explains that users can receive 'Seasonal Flu Activity Report or News & Highlights' via text messages. A 'Subscribe Now!' button is prominently displayed at the bottom of the main content area. The footer contains contact information and a USA.gov logo.

The screenshot shows the 'Don't Know Your Phone's Email Address?' section of the CDC website. It provides a list of wireless carriers and their corresponding email address formats. A disclaimer states that CDC does not charge for the service but that wireless carriers may charge a fee for email or text messages. The footer includes contact information and a USA.gov logo.

Your Wireless Carrier or Cell Phone Provider	Your Phone's Email Address (example: 4041234567@vtext.com)
Verizon	YourPhoneNumber@vtext.com
Cingular	YourPhoneNumber@mobile.mycingular.com
AT&T	YourPhoneNumber@mobile.att.net
T-Mobile	YourPhoneNumber@tmomail.net
Sprint	YourPhoneNumber@messaging.sprintpcs.com
Nextel	YourPhoneNumber@messaging.nextel.com
MCI On East Coast	YourPhoneNumber@vtext.com (service provided by Verizon)

Mobile Alerts from CDC.gov

Mobile Subscriptions Stats

Email Subscriptions – Mobile Alerts



Date Sent	Number Delivered
10/19/2007	173
12/28/2007	629
1/11/2007	688

HIV Test Centers Via SMS Flu Map Views

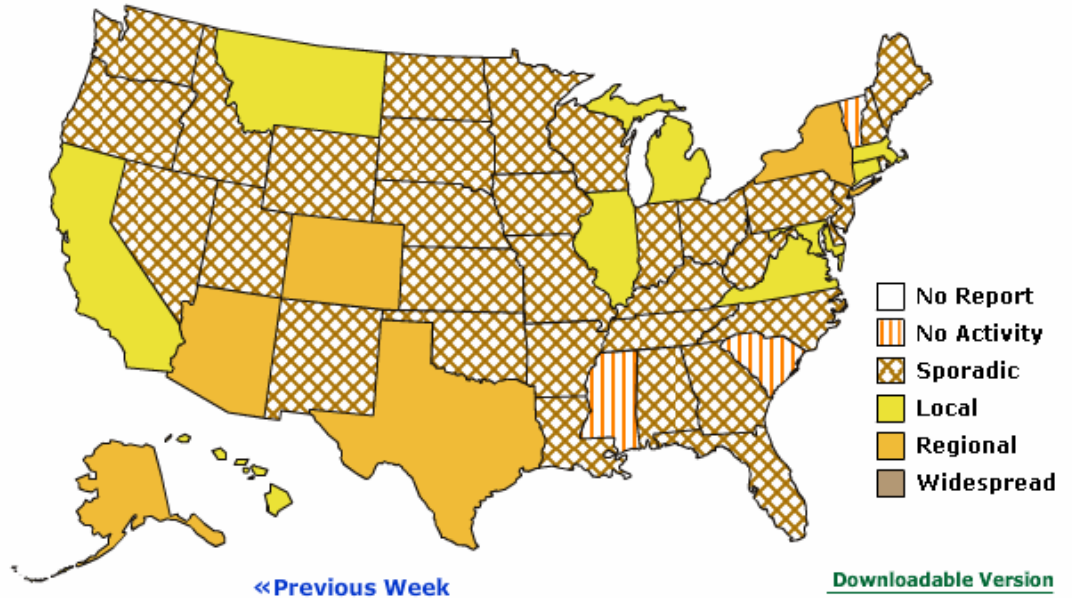
Weekly Flu Map

October 1, 2007 –
January 9, 2008

- Nearly 350,000 views
- 118,263 views of map independent of flu update
- 3.4 minutes spent on flu map page

Weekly US Map: Influenza Summary Update

Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*
Week Ending December 29, 2007- Week 52



*This map indicates geographic spread and does not measure the severity of influenza activity.

**Mobile Technology
for
Diabetes Management**

The Goals

Goal

Support *active* and *skillful* **diabetes management**

- Develop a mindset necessary for active engagement
 - Proactive attitude
 - Sense of control and empowerment
- Develop a set of skills necessary for management
 - General reflective thinking
 - Understanding of diabetes

The Approach

- Approach:** Leverage the strengths of mobile and web technologies to support **reflective thinking** skills and **social interaction** with healthcare providers
- Continuation of existing research project started at **Georgia Institute of Technology** and leveraging their MAHI (Mobile Access to Health Information) system

Mobile Technology for Diabetes Management

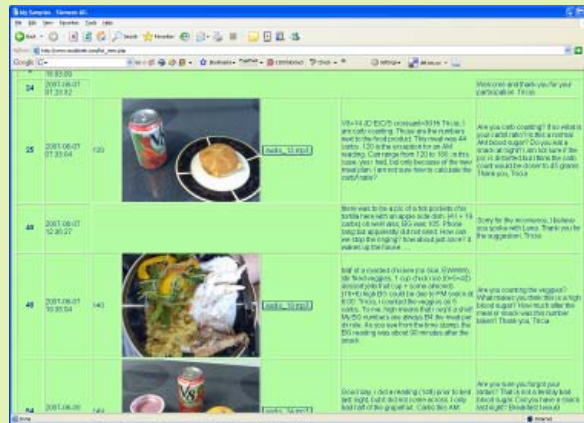
MAHI (Mobile Access to Health Information) Architecture

User

Glucometer with custom bluetooth transmitter



Web Site displays user uploaded data and HCP feedback



Healthcare Provider

Web Browser interface – enables HCP to reply to user entries



Wireless data upload

Mobile Phone with camera, text logging, bluetooth, and wireless upload capabilities

Mobile Technology for Diabetes Management Deployment Study

- 49 individuals enrolled in diabetes education program
 - St. Clare's Hospital Diabetes Education Center, Dover, NJ
- 25 experimental group, 24 control group
- Recruitment criteria:
 - age (below 65)
 - experience owning and using a cell phone (over 1 year)

Mobile Technology for Diabetes Management Measures

Emotional

- Health Locus of Control Questionnaire
- Diabetes Quality of Life Questionnaire

Cognitive Skills

- Diabetes understanding

Behavior

- Change in actual behavior
- Achievement of goals

Numerous Qualitative Measures

Mobile Technology for Diabetes Management

The Measures – Analysis to Date

Health Locus of Control questionnaire

- Significantly more MAHI users switched from external locus of control (viewing others or chance as sources of change) to **internal locus of control** (viewing self as the agent of change)

Achievement of Goals

- Significantly more MAHI users **achieved their personal diet goals**

No difference between experimental (MAHI) and control groups for:

- Diabetes Quality of Life questionnaire
- Diabetes Understanding
- Change in Actual Behavior

Mobile Technology for Diabetes Management

Next Steps...

CDC Teams Review Existing GaTech Research (2008)

- Review of data and methodology by diabetes domain experts
- Usability evaluation of MAHI technologies
- Health communications: Review existing health messaging approach and develop recommendations for improvements
- Secondary research about use of mobile technologies by older adults

Then:

- Incorporate changes into MAHI system and approach
- Conduct another study with the MAHI system (2008-2009)
- Analyze data and report findings (2009)

Mobile Technology for Diabetes Management Credits

Georgia Tech/GVU

- Elizabeth Mynatt
- Lena Mamykina
- Jiten Chhabra
- Daniel Greenblatt

Nation Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

- Veronica Davison
- Dr. Lawrence Barker
- Dr. Edward Gregg
- Angela M Green Phillips
- Dr. Ann Albright
- Darlene Thomas

The National Center for Health Marketing (NCHM)

- Ann Aikin
- Erin Edgerton
- Scott Mullins
- Janice Nall
- Nick Sabadosh

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101010000101110101010101010100010101101110110110

Thank you

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