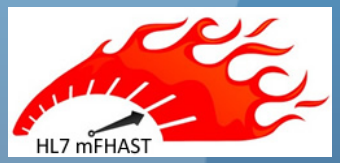
HL7 mFHAST Standard

mobile Frameworks for Healthcare Adoption of Short-Message Technologies



2015 HL7 January Working Group Meeting
San Antonio, TX – January 18-23, 2015
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mFHAST Goal

- To provide standards for communicating health services through short messages (e.g. SMS, Twitter, etc.)

mFHAST Status

- Evolved out of mHealth LMIC sub-workgroup activities
- New HL7 project/product (normative standard) in development
- Meeting Thursdays @ 1pm EST

Short-message Basics

- “Short-Message” encompasses the realm of technologies related to SMS, text messages, instant messages, Twitter, iMessage, USSD,etc
- Messages composed of approximately 140-160 characters
- Estimated that upwards of 200,000 SMS messages are sent every second
- Low-cost, low infrastructure, low learning-curve

How does 140 characters feel?

This is an example of 140 characters:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc eu fermentum urna. Vestibulum rhoncus non nisl eu malesuada. Duis turpis duis.

Short-message Tech in Healthcare

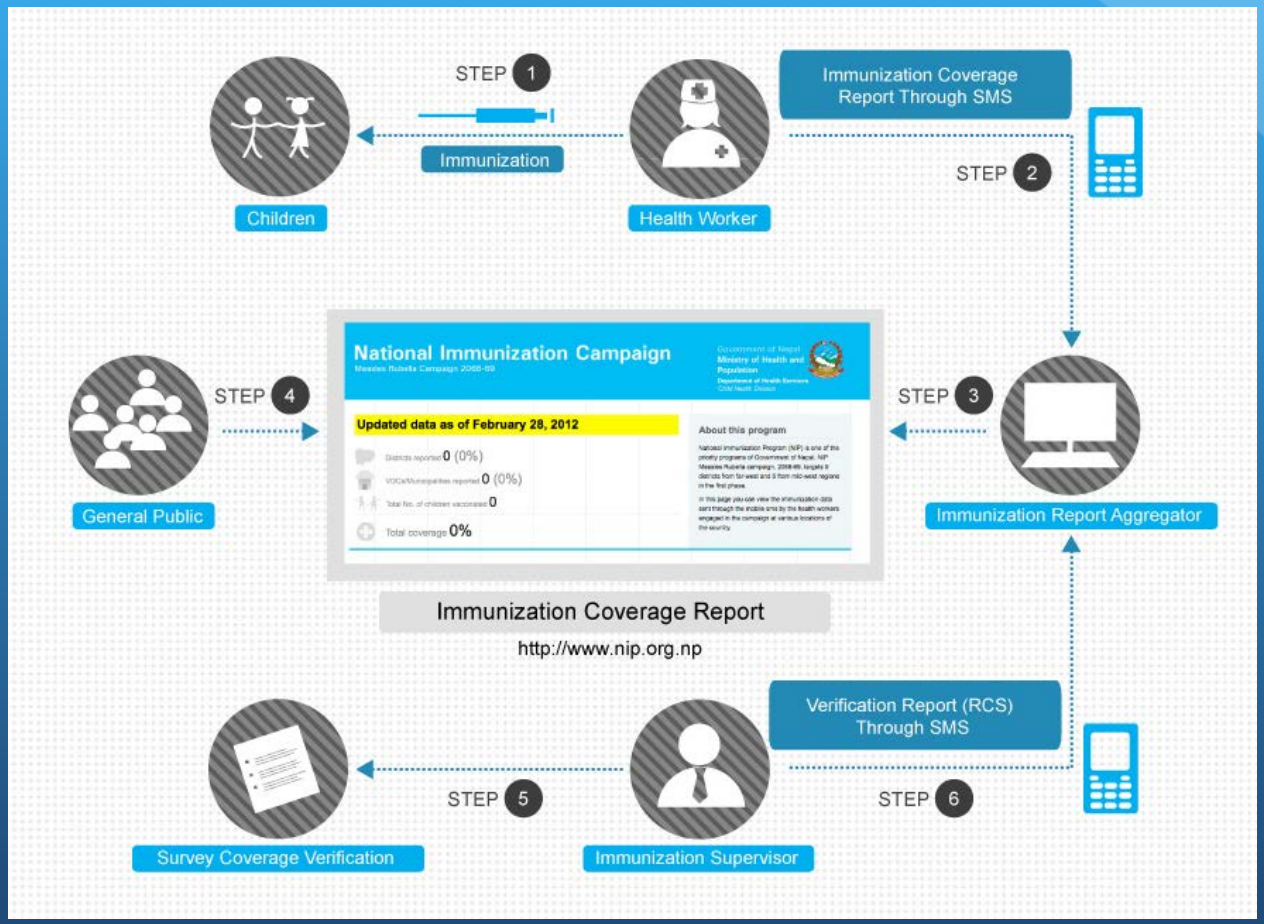
Multiple global short-message studies have reported success in improving health outcomes and activities related to:

- Smoking cessation
- Diabetes
- Weight management
- HIV
- Medication adherence
- Appointment attendance

mFHAST Domains

- Clinical reminders (e.g., appointments, treatments)
- Community health mobilization
- Health Education
- Vital Records
- Disaster Reporting
- Adverse Event Reporting
- Public Health and Emergency Response
- Surveillance and Tracking
- Women & Child

SMS Use Case - Immunization



Reference: http://www.nip.org.np

SMS Use Case – Maternal/Child Health

Set Up Free Appointment Reminders with Text4baby

1. Text REMIND (or CITA for Spanish) to 511411.
2. Enter appointment date. Enter 7/7/2014 as 07072014.
3. Enter appointment description with time, place and purpose (ex. 3pm apt w Dr Parker).
4. Reminder text will be sent three days before and the morning of appointment.
5. You can set up as many reminders as you need, at any time.

Reference: https://www.text4baby.org

SMS Use Case – Disease Management

Initial set of key Ebola messages is broadcast to all subscribers

An individual dials *112# from their mobile phone. The service is marketed via mobile, TV, radio and other channels

A USSD or IVR service is triggered in response to *112#

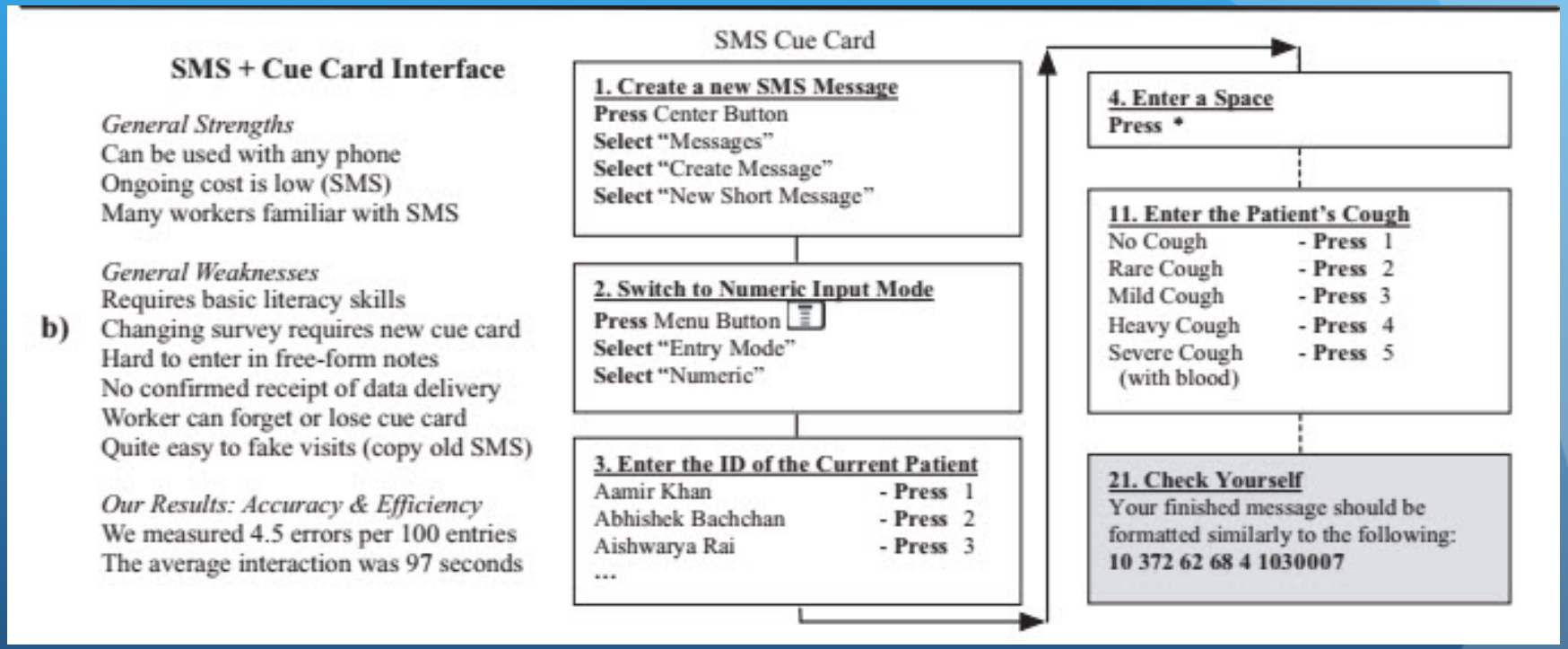
Two basic options:

1. Report a case
2. Request information

5

Reference: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/10/gsma-Ebola-Mobile-Response-Blueprint.pdf

SMS Use Case – TB



Reference: http://www.cs.cmu.edu/~ebrun/patnaik-ictd09.pdf

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Short-Message Standards Development

Reference: http://www.souktel.org/sites/default/files/resources-files/Towards-a-Code-of-Conduct-SMS-Guidelines.pdf

Short-message Barriers

- Ad-hoc implementations
- Lack of interoperability
- Security/Privacy/Consent
- Message size
- Stateless (at its most basic implementation)
- Cost of message
- Governmental and organizational policy and barriers

mFHAST Pathway of Inquiry

- What is the issue?
- What are the critical variables? (e.g., prioritization, response)
- What are the privacy/security/consent variables required?
- Who initiates/consumes/stores the message?
- What format/architectures are required?
- What are the temporal considerations?
- What are the limitations?

Short-Message Actors

- Healthcare Providers (at all levels)
- Business, Organizations
- Governments
- People (Families, Peers, Public)
- Systems

Short-Message Communication Methods

- Reminders
- Broadcasts (e.g., Alerts, Alarms)
- Education/Decision Support
- Structured Data Collection
- Interactive Health Communication

Short-Message Communication Structures

- Coded Response
- Short codes (reference sets)
- Free Text
- Structured Response

mFHAST Next Steps

- HL7 January Working Group Meeting 01/19/2015
  - 2nd presentation of mFHAST project
  - Develop (draft) mFHAST PSS
- Feb 2015: MH WG Finalization and voting on mFHAST PSS
- Q1 2015 – PSS submission, Documentation, education, use case development and requirements gathering
- Q2 2015 - Harmonization and specifications development
- Q3 2015 – Piloting and testing
- Q4 2015 - 1st Product draft submitted
- Q1 2016: (1st) Ballot

Great work precedes us!

SDO/Organizations

- HL7 EHR/PHR/FHIR/Medical Devices/PHER
- WHO eHealth Standardization and Interoperability Recommendations
- ISO/AHIMA/OASIS/IEEE/HIMSS

Initiatives

- Mobile Alliance for Maternal Action (MAMA) in Bangladesh and South Africa
- Millennium Development Goals
- mPowering Frontline Health Workers
- Saving One Million Lives initiative
- Asia e-Health Information Network

Organizations

- US Centers for Disease Control
- U.S. Office of the National Coordinator for Health Information Technology
- World Health Organization
- United Nations Foundation
- USAID / UNICEF
- mHealth Alliance
- Johnson & Johnson
- Gates Foundation