

HL7 Mobile Health Projects Overview

Mobile Health Work Group

January 2016



Mobile Health Work Group Co-Chairs

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Emerging HL7 Mobile Health Standards

1. mFHASt

- Mobile Framework for Healthcare Adoption of Short-Message Technologies standard
 - ✓ transport, structure and content

2. Consumer Mobile Health Functional Framework - cMH2F

3. FHIRframe

- Mobile Health Application API Standards
 - FHIR Resources
 - Continua
 - Constantly Evolving

Mobile Framework for Healthcare Adoption of Short-Message Technologies (mFHAST)

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mFHAIST Goal

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



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

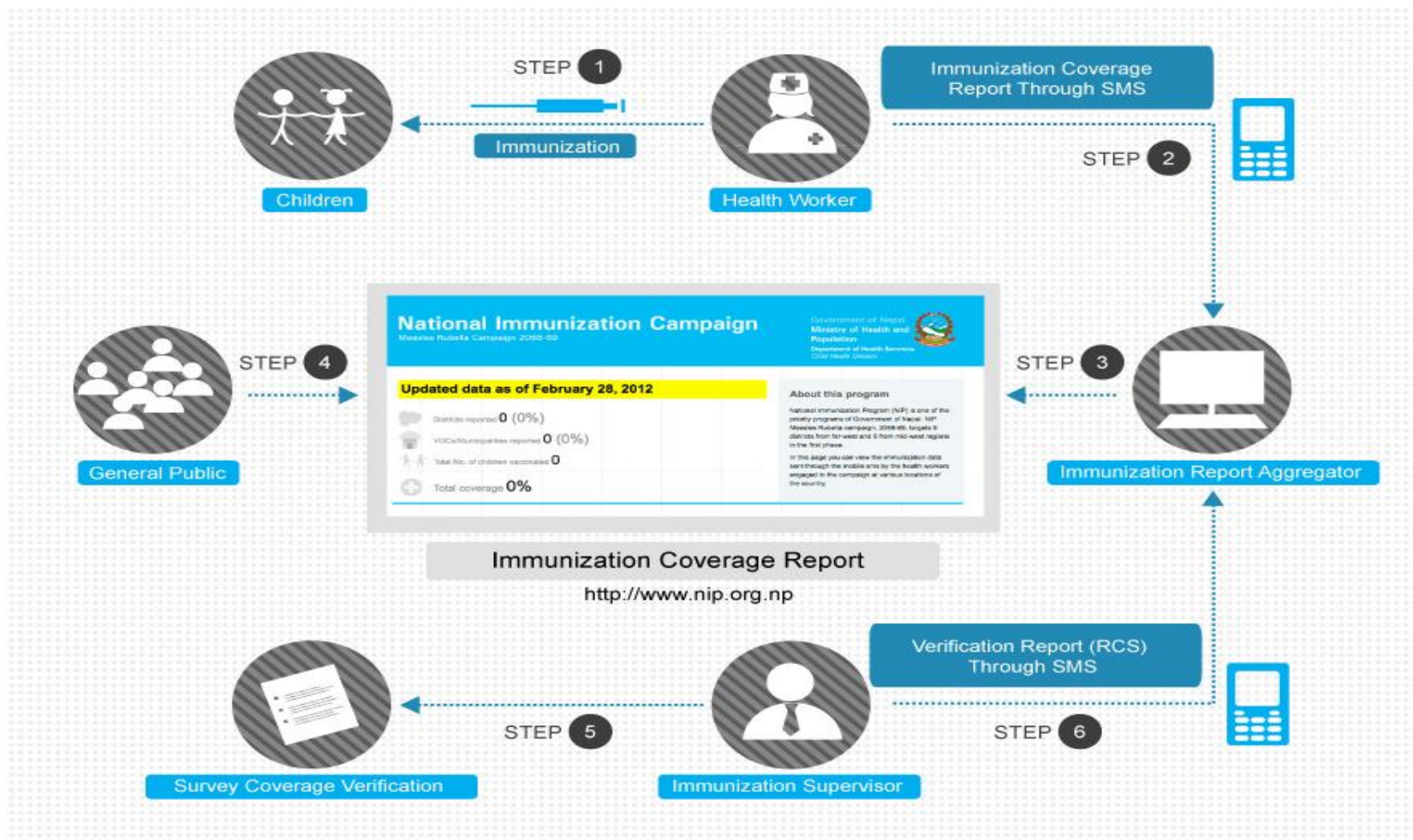


Short-message Tech in Healthcare

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

SMS Use Case -Immunization



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

Short-message Barriers

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

Consumer Mobile Health Functional Framework cMH2F

Tim McKay, Ph.D., CISSP
Kaiser Permanente

Consumer Mobile Health Functional Framework-Project Scope

- **Define security, privacy and data standards for secure mobile health applications (apps).**
- **Provide industry guidance and common methods to enable the development of mobile health smartphone apps targeted to healthcare consumers/citizens.**
- **Provide a framework for security, privacy and the integration of data generated from apps into PHR and EHR systems as well as into other types of data repositories (e.g., personal data stores, population care systems).**
- **Standards will not address the content of such apps.**

Consumer Mobile Health Functional Framework-Project Need

- **Standards for consumer smartphone health apps:**
 - **Focus on:**
 - **Security**
 - **Privacy**
 - **Data Controls**
 - **Allow for:**
 - **personal data tracking using mobile devices**
 - **integration of patient-sourced information into a person's record of care**
 - **clinical decision making using reliable, relevant information**

The proposed project will develop a framework against which Mobile Health Smartphone-based apps can be certified for conformance.

Limited Project Scope

- **Limited by initial set of use cases**
- **Focus on limited problem domain.**
- **Future iteration to add more use cases.**

January 2016 Ballot

- Very positive and constructive feedback for a Comment-Only ballot
- Next Steps – Ballot Reconciliation
- Contact reviewers to address feedback

FHIRframe

Project Leadership

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Lack of Mobile Data Interoperability

- Project Need

- **Expansive wave of healthcare devices are coming to consumer market.**
- **Consumer healthcare devices used to capture and exchange medical data and events.**
- **Lack of common data standards for data exchange to support mobile application development.**
- **The project will identify the current state of device APIs.**
- **The project will look at new HL7 products (FHIR) to fill the data interoperability gap for mobile health applications development.**

- **Identify current state of healthcare device APIs.**
- **Identify current APIs for exchanging data with EHR and PHR systems.**
- **Look at FHIR Argonaut Project as core set of resources for data interoperability**
- **Understand common mobile application use cases:**
 - **Data capture from medical devices**
 - **Data storage on smartphone or tablet**
 - **Data access with electronic health record**

Mobile Health Friday Calls

Dates: Every Friday

Time: 11:00 AM Eastern U.S.

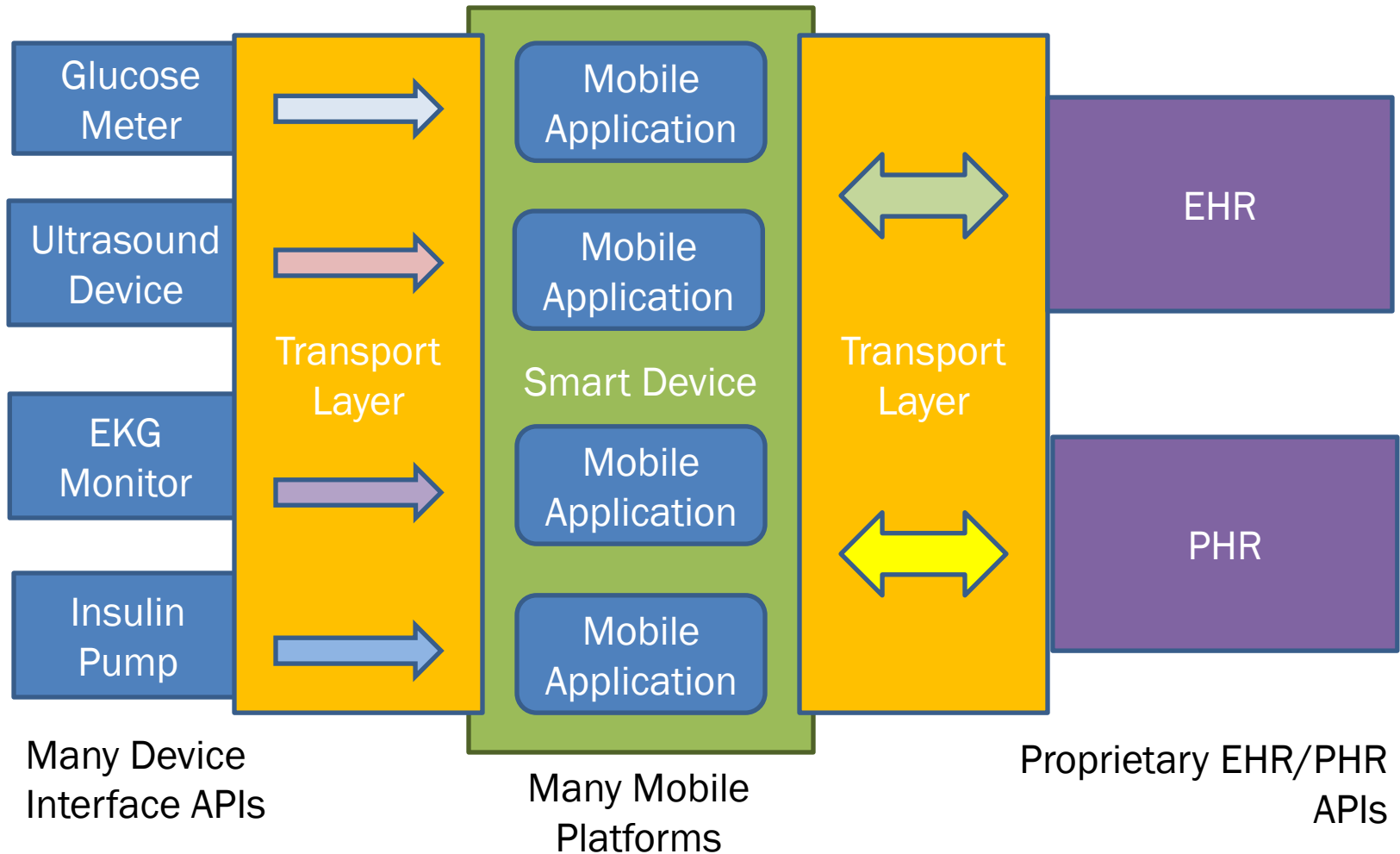
- Mobile Health Wiki page

http://wiki.hl7.org/index.php?title=Mobile_Health

- HL7 Mobile Health NEWS

http://wiki.hl7.org/images/2/21/HL7_MHWG_NEWS_2013-02_V1Is1.pdf

Current State Mobile Health APIs



Resources...

- Mobile Health Alliance

www.mhealthalliance.org/

- Continua Health Alliance

<http://www.continuaalliance.org/about-continua>

- PWC white paper – Touching lives through mobile health

www.pwc.com/in/en/assets/pdfs/telecom/gsma-pwc_mhealth_report.pdf

THANK YOU!

- Question?