

# 2019-09 Mobile Health Data Exchange

## Submitting WG/Project/Implementer Group

## Justification and Objectives

The purpose of this track is to explore similarities and differences in FHIR Resources produced by different pathways available to exchange consumer health data with Mobile health applications and devices (e.g., Fitbit, Apple Watch, et cetera).

**This track will use FHIR R4.**

## Clinical input requested (if any)

Clinical input may be helpful in review of differences between FHIR Resources.

## Related tracks

(used to help guide seating arrangements and possibly drive track consolidation)

## Proposed Track Lead

Nathan Botts and Keith Boone.

## Expected participants

5-10

## Track Orientation

A webinar will be hosted on [date at time](#) to share further participation information about this track.

## System Roles

Describe each type of system that could participate in the track

Please include information here regarding how much advance preparation will be required if creating a client and/or server.

## Mobile Health Data Supplier

A mobile health application that can record data about a consumer (e.g., step count, vital signs, et cetera), or a mobile health device that can record data about a consumer (e.g., scale, thermometer) and store it using a mobile health platform (e.g., Apple Health Kit, Google Health).

The mobile health application should be initialized with some data that can be exchanged (e.g., used to track steps).

Health Devices that are expected to be tested include:

- [iHealth BP7 Blood Pressure Cuff](#) - Keith Boone
- [Fitbit Data synchronized with a patient-owned PHR system](#) - Nathan Botts

## Mobile Health Data Repository

The mobile health application / device will store data in a repository. This could be stored directly on a mobile device (e.g., through Google Health, Apple Health Kit or other proprietary storage mechanism).

The mobile health data repository must provide a means by which data can be accessed through an API.

FHIR Samples can also be shared to <https://github.com/keithboone/mobile-data-exchange>. Please contact [kboone@ainq.com](mailto:kboone@ainq.com) for write access.

## Mobile Health Data Extractor

An application that can extract data from a Mobile Health Application or Device and transmit it to a FHIR Server. This actor will extract data from a Mobile Health Data Repository and store it to a FHIR Server.

## FHIR Server

A place where FHIR Resources will be stored by the Mobile Health Data Extractor.

## Exchange Personal Health Data Scenario

### Scenario Step 1 Configure Health Device / Mobile Application

Action:

Configure the personal health device to capture health data for a consumer.

Precondition:

Success Criteria:

The device is configured and data has been stored.

Consumer health data is stored in a Mobile Health Data Repository somewhere.

Bonus point: Document the steps taken to configure the device and exchange data for later review by work group.

### **Scenario Step 2 Extract Personal Health Data**

Action:

Extract personal health data from the device/application and store it in a FHIR Server

Precondition:

The personal health device or application is configured to capture health data for a consumer, and some health data has been captured.

Success Criteria:

Data is stored in a FHIR Format.

Bonus point: Document the steps taken to configure the device for later review.

### **TestScript(s)**

Indicate any test scripts that will be used to help verify system behavior

### **Security and Privacy Considerations**

Only test data and test accounts should be used for this, not individual devices or accounts.

### **Informed Consent**

For users who want to or are willing to use personal accounts or data, an informed consent form must be signed before participation: [https://www.surveymonkey.com/r/HL7\\_Mobile\\_Health\\_Exchange\\_Informed\\_Consent](https://www.surveymonkey.com/r/HL7_Mobile_Health_Exchange_Informed_Consent)