AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

January 2021 CDS Connect Work Group Call
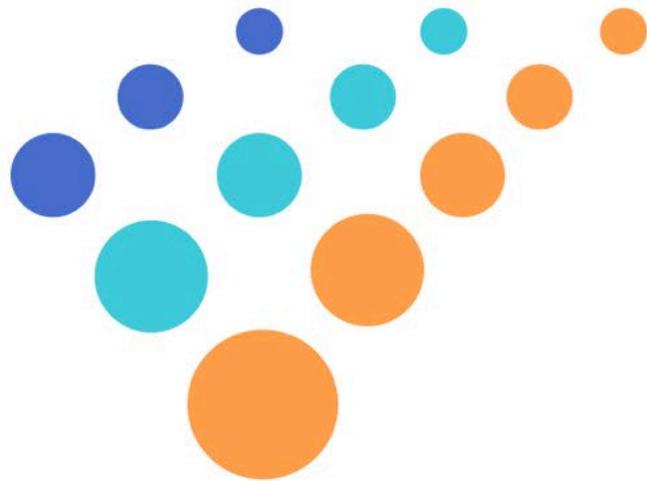
Agenda

Schedule	Topic
3:00 - 3:02	• Roll Call, Michelle Lenox (MITRE)
3:02 - 3:05	• Review of the Agenda, Maria Michaels (CDC)
3:05 - 3:50	• Lessons Learned: b.well Connected Health (b.well)
3:50 - 3:55	• What's New with CDS Connect This Month (MITRE)
3:55 - 4:00	Open Discussion and Close Out, Maria Michaels (CDC) • Open discussion and announcements • Concluding comments, review next steps and adjourn

Objectives

- Lessons Learned: b.well Connected Health
- Share new features and resources available for CDS Connect
- Discuss topics of interest to members relating to opportunities for CDS Connect

Comprehensive Product Suite That Fuels the Front End Experience

b.ELT

Patient Consent

Data Collection

Data Pre-Processing

Data Normalization

De-Duplication

Aggregation

Value-Add Routines

b.informed

Transparency to Real-Time Data & Dynamic Custom Dashboards

b.engaged

Real-time Engagement & Learning Platform

b.connected
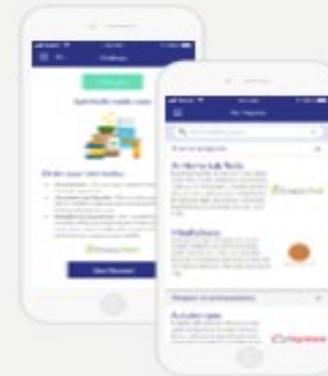
Single Place for All Programs Through an API Interface

b.well

Deliver an Impactful & Sticky Consumer Experience

b.well CDS USPSTF Recommendations

Pilot date: June – August 2019, 8 weeks

| Recommendation Name	Recommendation Description
Healthful Diet and Physical Activity for CVD Prevention	Offering or referring adults who are overweight or obese and have had additional CVD risk to intensive behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention
Statin Use for Primary Prevention of CVD (includes logic/artifact for ASCVD risk calculation)	Adults age 40 to 75 years without a history of CVD who meet the screening criteria should consider use of a low- to moderate-dose statin for the prevention of CVD
Screening for Abnormal Blood Glucose Part 1	Screening for abnormal blood glucose as part of CVD risk assessment in adults who are overweight or obese
Screening for Abnormal Blood Glucose Part 2	Adults with abnormal blood glucose should be referred to intensive behavioral counseling interventions to promote a healthful diet and physical activity

CDS Pilot Population & Outcomes

Population: 3,844 users identified for CDS recommendations
- Male 47% (1811)
- Female 53% (2033)

Breakdown of gender and age

Recommendation	User Count	Female Count	Male Count	Average Age
Glucose Part 1, Screening	2,874	1,698	1,176	50
Glucose Part 2, Counseling	400	130	270	51
Healthful Diet and Physical Activity for CVD Prevention	1,639	705	934	48
Statin Use for the Primary Prevention CVD	118	21	97	64

CDS Recommendation Outcomes

USPSTF Recommendation	Total educational challenges completed	Total action challenges completed	Number of users who completed 1 educational challenges	Number of users who completed 1 action challenges
Glucose Part 1, Screening	37% (350)	83% (136)	41% (154)	83% (114)
Glucose Part 2, Counseling	46% (124)	96% (44)	53% (50)	94% (32)
Healthful Diet & Physical Activity for CVD Prevention	46% (671)	92% (182)	50% (174)	97% (144)
Statin Use For CVD Prevention	11% (2)	-	13% (2)	-

- By integrating the CDS tool, we were able to produce real time Care Needs (recommendations) by passing our data through the CDS tool. A more efficient approach than our long batch process, both producing similar outcomes.

- By integrating the CDS engine/tool, we were able to automate 4 USPSTF recommendations and increase prevention gaps in care closure with consumer facing education in our platform.

b.well Lessons Learned

- **Enhancements**
  - ▶ Expanded our use of LOINC codes and RxNorms (mapped to NDC)

- **Key Resources**
  - ▶ Helpful for DevOps engineers to have knowledge of JSON, RESTful API's Webhooks, clinical coding and FHIR
  - ▶ Detailed artifacts and documentation on how to install on our servers was key

- **Barriers**
  - ► The inability to use CPT codes, 95% of b.well codes had to be translated from CPT to SNOMED
  - ► Inability to track historical events such as eligibility changes at the user level
  - ► Difficult to track outcomes by using "met/closure" criteria as an exclusion rather than "met/close" criteria.
  - ► Lack of gap in care closure reporting for outcomes
  - ► USPSTF recommendation requirements prevented us from reaching a broader eligible population of users. We include at-risk population for users without a verified diagnosis in our normal workflow. At-risk users have data to confirm a probable diagnosis or condition, without a diagnosis code.

- **Data Barriers**
  - ► Data mapping consumed over 80 hours of resource time. Mapping of codes was extensive to ensure valid data points and not limit or exclude users from receiving appropriate recommendations.
  - ► Validation of pregnancy and breastfeeding status was difficult based on how our data is received or reported
  - ► Many data elements required an "active" status which is not always known within our data
  - ► Units are specified using UCUM standard, b.well data is often stored in measurements such as "inches" which are not supported by the standard.

Technical Integration using HL7 Standards
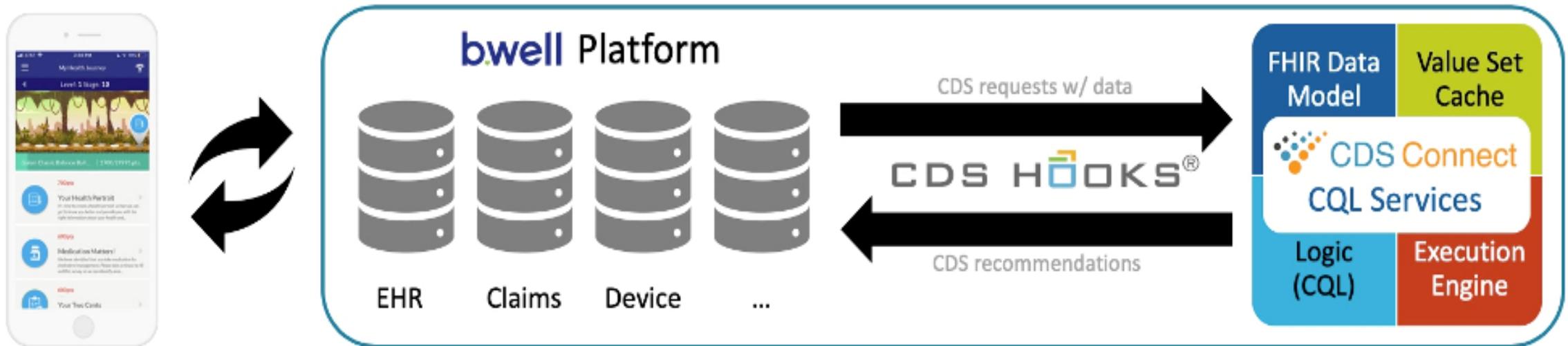
▶ Data is sent from b.well's FHIR servers into the CDS Connection CQL Services model using a combination of CDS Hooks + FHIR objects.

▶ The CDS Connect Servers then execute the clinical algorithm's using CQL on top of the data as desired.

▶ Results of these algorithm's are passed back to b.well to then operationalize the results in our product

Discussion

Open Discussion

WHAT'S NEW WITH CDS CONNECT

David Winters and Chris Moesel, MITRE

Updates and New Features

- Authoring Tool
  - ► Integration with Value Set Authority Center using API key
  - ► Continued updates to support reusability and maintainability
  - ► Minor UI enhancements and bug fixes

- Prototype Tools
  - ► Began working toward support for Clinical Quality Language (CQL) 1.4/1.5

- Repository
  - ► CPG-on-FHIR work is going through second round of internal testing with beta testing starting soon with select volunteers
  - ► Improved workflow for handling new accounts for non-Author role
  - ► User documentation update continues
  - ► Various bug fixes and software updates
  - ► Technical support for Repository contributors

- Link to CDS Connect: https://cds.ahrq.gov/cdsconnect

ANNOUNCEMENTS, OPEN DISCUSSION AND CLOSE-OUT

Maria Michaels

Office of Public Health Scientific Services

Centers for Disease Control and Prevention