Multiple Chronic Conditions (MCC) eCare Plan Federal Partners Meeting

January 24, 2023

Jenna Norton
Arlene Bierman
EMI Advisors
RTI International
Oregon Health & Science University

Welcome! Please say hello **in the chat** by sending everyone your **name** and **affiliation**.

Agenda

Topic	Time	Presenter(s)
Welcome and Introductions	5 min	Jenna Norton, NIDDK Arlene Bierman, AHRQ
MCC eCare Plan Project Overview and Progress Update	10 min	Karen Bertodatti, EMI
MCC eCare Plan Topics and Agency Partner Feedback ● Patient/Caregiver App Demonstration and Discussion ● Update on Pilot Process ● MCC eCare Implementation Guide Walkthrough	55 min	EMI Advisors RTI International
Federal Projects Round Robin Update	45 min	Federal Partners
Concluding Remarks	5 min	Jenna Norton, NIDDK Arlene Bierman, AHRQ

Contractor Introductions

Evelyn Gallego, MBA, MPH, CPHIMS

Program Director

Karen Bertodatti, MPH, PMP

Project Manager

Savanah Mueller, MPH

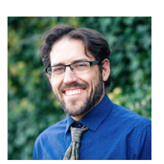
Project Analyst

Himali Saitwal, MS

Terminology SME

Gay Dolin, MSN, RN*

IG Developer/Clinical SME



Bret Heale, PhD*

Biomedical Informaticist-SME

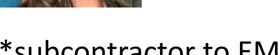
Dave Carlson, PhD, MBA*

Solutions Architect

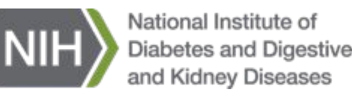
Sean Muir*

App Developer

Please say hello in the chat by stating your name and affiliation.



*subcontractor to EMI



Contractor Introductions

Laura Marcial, PhD

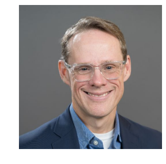
Pilot Lead

Jacqueline Bagwell, MS, MMCi

Associate Project Director

Eric Puster, DO

Physician Informaticist SME



David Dorr, MD, MS

Principal Investigator

Please say hello in the chat by stating your name and affiliation.

Housekeeping

Live transcription is available.

Use the hand raising feature when you want to comment and kindly wait for a facilitator to call on you before speaking.

Use the chat to share feedback at any time.

We are recording for note-taking purposes.

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Comprehensive Shared Care Plan Definition

1. Gives the person **direct access to health data**.
2. Puts the **person's goals at the center** of decision-making.
3. Is holistic, including **clinical and nonclinical data** (e.g., home- and community-based and social determinants needs and services).
4. **Follows the person** through both high-need episodes (i.e., acute illness) and periods of health improvement and maintenance.
5. Allows **care team coordination**. Clinicians able to 1) view information relevant to their role, 2) identify which clinician is doing what, and 3) update other members of an interdisciplinary team.

Source: U.S. Department of Health and Human Services 2015 Stakeholder Panel | Baker, et al. Making the Comprehensive Shared Care Plan a Reality. *NEJM Catalyst*. 2016: https://catalyst.nejm.org/making-the-comprehensive-shared-care-plan-a-reality/

Norton JM, Ip A, Ruggiano N, Abidogun T, Camara DS, Fu H, Hose BZ, Miran S, Hsiao CJ, Wang J, Bierman AS. *Assessing Progress Toward the Vision of a Comprehensive, Shared Electronic Care Plan: Scoping Review*. J Med Internet Res. 2022 Jun 10;24(6):e36569. doi: 10.2196/36569. PMID: 35687382.

NIDDK/AHRQ eCare Plan for Multiple Chronic Conditions (MCC) Project

Build capacity for pragmatic, patient-centered outcomes research (PCOR) by developing an **interoperable electronic care plan** to facilitate **aggregation and sharing of critical patient-centered data** across **home-**, **community-**, **clinic-**, and **research-** based settings for people with **multiple chronic conditions** (MCC).

https://ecareplan.ahrq.gov/collaborate/

MCC eCare Project Deliverables*

1. **Data elements, value sets, and FHIR mappings** to enable standardized transfer of data across health and research settings for kidney disease, diabetes, cardiovascular disease, chronic pain, and long-term COVID.
2. **HL7® Fast Health Interoperability Resource (FHIR®) Implementation Guide** based on defined use cases and standardized MCC data elements, balloted for trial use.
3. **Pilot tested provider-facing and patient/caregiver-facing e-care plan applications** that integrate with the EHR to pull, share, and display key patient data.

Chronic Kidney Disease

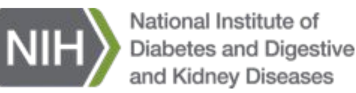
Diabetes

Cardio-vascular Disease

Chronic Pain

Long-term COVID Conditions

*All deliverables will be open-source and freely available.



Three Year Roadmap

Legend
- HL7 Connectathon
- Federal Partner Meeting
- Contract Monitoring Board

		2021	2022				2023				2024		
	Activity	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
		EMI Base Year (9/30/21 - 9/29/22)				EMI Option Year 1 (9/30/22 - 9/29/23)				EMI Option Year 2 (9/30/23 - 9/29/24)			
Stakeholder Engagement	Events												
	PCWG and TEP meetings												
Data elements/ Value Sets	Review and QA of existing MCC value sets												
	PASC data element identification with TEP												
	Build PASC value sets in VSAC												
MCC IG	FHIR profile domain mapping												
	Restructure and expand MCC eCare IG												
	Prepare MCC IG for Comment Ballot												
	Review MCC IG Comment Ballots												
	Prepare MCC IG for STU Ballot												
	Reconcile STU Ballots												
	Prepare and publish MCC IG as STU												
eCare Apps	Evaluate/design interoperability architecture												
	Provider app v1.1 revisions												
	Patient/Caregiver app v2.0 development												
	Build and iterate common data services												
	Update Provider app v1.3 backend												
	Update Patient/Caregiver app v2.1 backend												
	Revise/release Provider app v2.0												
	Revise/release Patient/Caregiver app v3.0												
Pilot site testing	Conduct v1.0 app pilot												
	Build research store												
	Conduct v2.0 app pilot												

MCC eCare Plan Project

Questions on any of the following?

- Project background and high-level update
- Long COVID manuscript
- HL7® FHIR® Implementation Guide development and balloting
- HL7® Connectathon 31 & 32
- eCare Plan SMART on FHIR applications

Connectathon 32: Notable Achievements

- Examined Standard Personal Health Record (SPHR) FHIR IG and recommend its beneficial use in eCare Plan implementation to exchange aggregated patient data from multiple provider sources.
- Exported a longitudinal personal health record from Apple Health, Epic, Cerner, Facebook, and MCC’s MELD Sandbox using native export and Sync for Science Procure Data Collection app.
- Analyzed exported patient data using two testing utilities provided by the SPHR track: Longitudinal Timeline Viewer and SPHR Record Analyzer.
- Discussed options to test IG value sets using de-identified data.
- Explored options for FHIR profile validation and server interaction testing. E.g., created FHIR TestScripts that test must-supports in profiles suitable for use in Aegis Touchstone.

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Patient/Caregiver Application Demonstration and Discussion

Dave Carlson, MBA, PhD, Clinical Cloud Solutions & EMI Advisors

Overview: SMART on FHIR Applications

Deliverable **3** **Pilot tested provider-facing and patient/caregiver-facing e-care plan applications** that integrate with the EHR to pull, share, and display key patient data.

Year 4

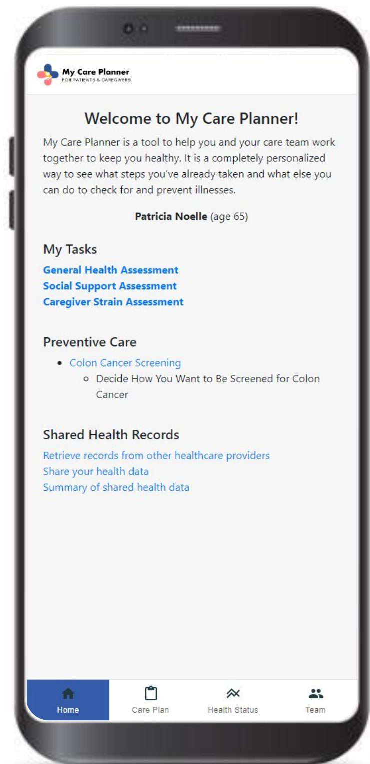
- Develop **Common Data Services Library.**
- Modify **Provider and Patient/Caregiver Application to use Common Data Services Library**.
- Support for **data aggregation and pilot implementation.**

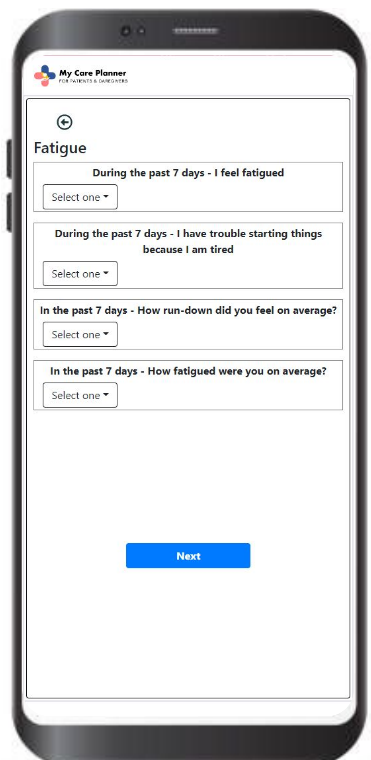
National Institute of Diabetes and Digestive and Kidney Diseases

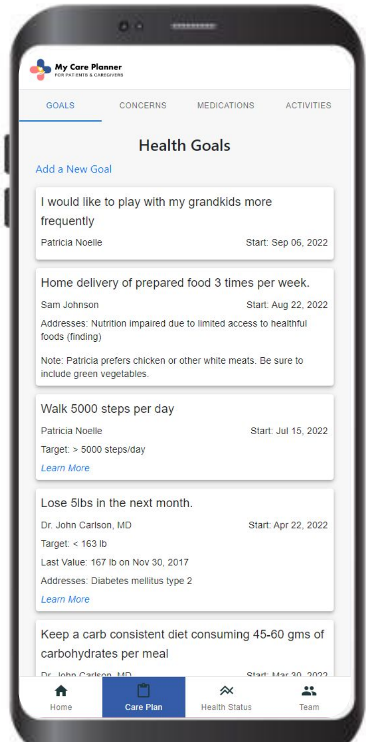
Patient/Caregiver App Vision and Status

Vision	Status
A **standards-based application** platform for patients and caregivers to engage them in participating in their care planning for multiple chronic conditions.	● Login for patient and caregivers using portal login. ● Direct communication with any FHIR endpoint. ● Configures to EHRs based on Cures Act requirements
Allows patients and caregivers to **write information** into the app that can be shared with their providers.	● **Exploring use of research store at OHSU pilot site.** ● Exploring use of .sphr package to save/share data.
Allows patients and caregivers to see their health data from all of their providers in one place to fully enable **goal-oriented care planning**.	● Ability to author goals in pt/cg app. ● **Exploring process for sharing goals and progress updates through research store.**
Supports better care coordination due to **fully interoperable data exchange**.	● Uses standard value sets to classify data elements relevant to MCC care planning. ● **Working on data aggregation for multiple EHRs.** ● Working on data access from non-EHR sources.
Serves as a **companion app to the provider-facing app** enabling shared care planning for the entire care team.	● Creating a Common Data Services Library to enable consistent exchange of data for both apps.

Patient/Caregiver App v2.0 Demonstration and Feedback







What's Next

- Collaborating on the development of a **research data store** at OHSU as a repository to save shared data aggregated by the patient/caregiver app with providers.
- Exploring other efforts that support patients in **getting access to their data,** including personal health devices and wearables, in a consistent FHIR standard so it can be shared and used for care planning.
  - HL7 FHIR IG for Standard Personal Health Record (SPHR)
- Developing the **Common Data Services Library**, a code library to perform generalized FHIR queries and data analysis, to enable retrieval and display of data in a consistent way across both applications to facilitate shared decision making.

Implementation of an e-Care Plan for People With Multiple Chronic Conditions

eCare Plan Version 2.0 Federal Partners Meeting

January 24, 2022

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Key Questions to Explore

- What **factors affect implementing** the eCP apps from an organizational and technical perspective?
- What **factors affect using** the eCP apps within and across organizations?
- How does use of the eCP apps **influence data collection and sharing** across settings?
- What are the **intra- and interorganizational sociotechnical factors to consider when implementing and using** the eCP apps?

Organization Chart

Project Director
Laura Marcial, PhD, FAMIA

Associate Project Director
Jacqueline Bagwell, MS, MMCi

Project Manager
Beth Lasater, MSPH

OHSU Clinical Advisors
David Dorr, MD, OHSU Lead and Technical Advisor
Emily Morgan, MD, Geriatrics Champion
Anthony Cheng, MD, Digital Health Lead

Medstar Health Research Team
Aaron Z. Hettinger, MD, MS, Site Principal Investigator
Kristen Miller, DrPH, Senior Scientific Director

Consultants
Tim Coffman, Dave Carlson, Bryn Rhodes,
Ken Kawamoto, Danny Van Leeuwen

Task 1
Design Pilot Test
Joel Montavon, PharmD, MBA

Task 2
Execute & Evaluate Pilot
Jacqueline Bagwell, MS, MMCi

Task 3
Connectathon
Eric Puster, DO

Task 4
Final Report
Laura Marcial, PhD, FAMIA

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eCare Plan V2 Patient and Clinician Recruitment Plan

Estimate (Actual)

Timeline	Activity	Providers	Patients
December 2022:	Soft Go Live recruitment, one primary care site NOTE: Read only test and limited production environment, scope research data store	Providers: 1-2 (1)	Patients: 1-2
February 2023:	Further recruitment, one primary care site NOTE: Read-only production environment w/ one to two endpoints via PM-HIE*	Providers: 2-5 (+1-3)	Patients: 10-20 (+8-15)
March 2023:	Full rollout, at least two sites (family med, internal med) NOTE: Read/some write using FHIR middleware and research data store	Providers: 5-8 (+3-5)	Patients: 30-50 (+20-30)
April 2023:	Further recruitment to add sites, 3-4 sites (specialty) NOTE: Production environment + write using FHIR middleware and research data store	Providers: 8-12 (+3-4)	Patients: 60-120 (+10-70)
Q4 2023:	**Recruitment complete, 5 sites, LTC and some dialysis included**	**Providers: 10-12**	**Patients: 100-120**

eCare Plan V2 Testing Timeline Projection

- 0 **Start** — Contract Period Begins
- 1 **Read** — Read some Epic data
- 2 **Scope** — Scope Research Data Store
- 3 **Deploy** — Begin Patient v2 and Provider v1a app testing
- 4 **Test** — Begin Patient v2 and Provider v1a app testing
- 5 **Refine** — Release updated provider app
- 6 **Write** — Collect and write PROs to Data Store
- 7 **Recruit** — Request data from other FHIR endpoints
- 8 **Reconcile** — Compare, prioritize, curate data
- 9 **Expand** — Further recruitment, including specialty sites
- 10 **Interview** — Final evaluation of data exchange
- 11 **MedStar** — Pilot data transfer in MedStar sandbox

←2022 | Soft Go Live | Phase I | Phase II | Phase III | 2024 →

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Phase I: Patient-mediated health information exchange (PM-HIE)

eCare Plan App (clinician)

Demographics
Goals.
Care Team
Lab Results
PROMs
Health Concerns

Care Coordination Visit

eCare Plan App (patient & caregiver)

Demographics
Goals
Health Concerns
Lab Results
PROMs
Care Team

READ
Connect to OHSU Epic System

READ
Connect to Other Epic Systems

WRITE
PROs
Connect to OHSU Research Data Store

READ
Connect to Other FHIR Endpoints (TBD)

Part of the OHSU developed FHIR Middleware Solution

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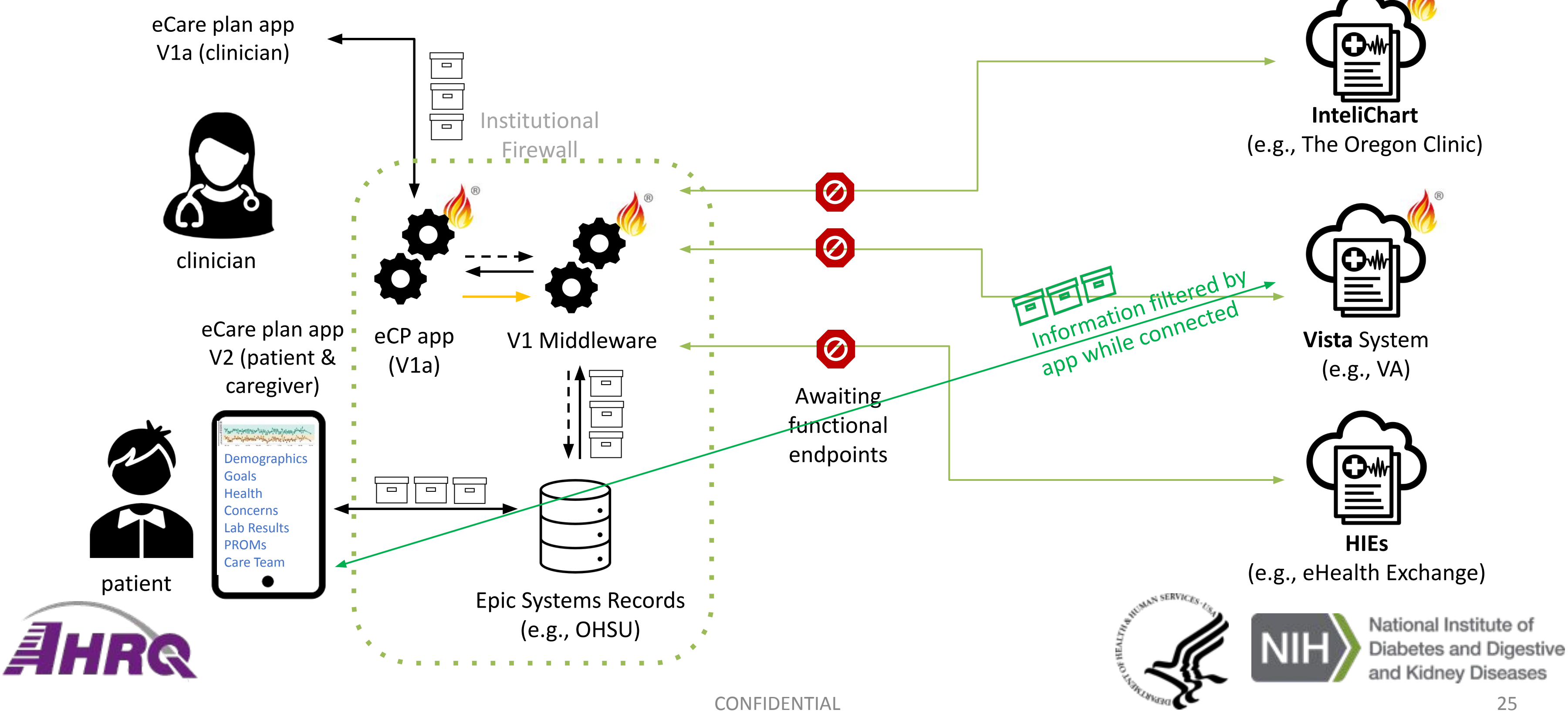
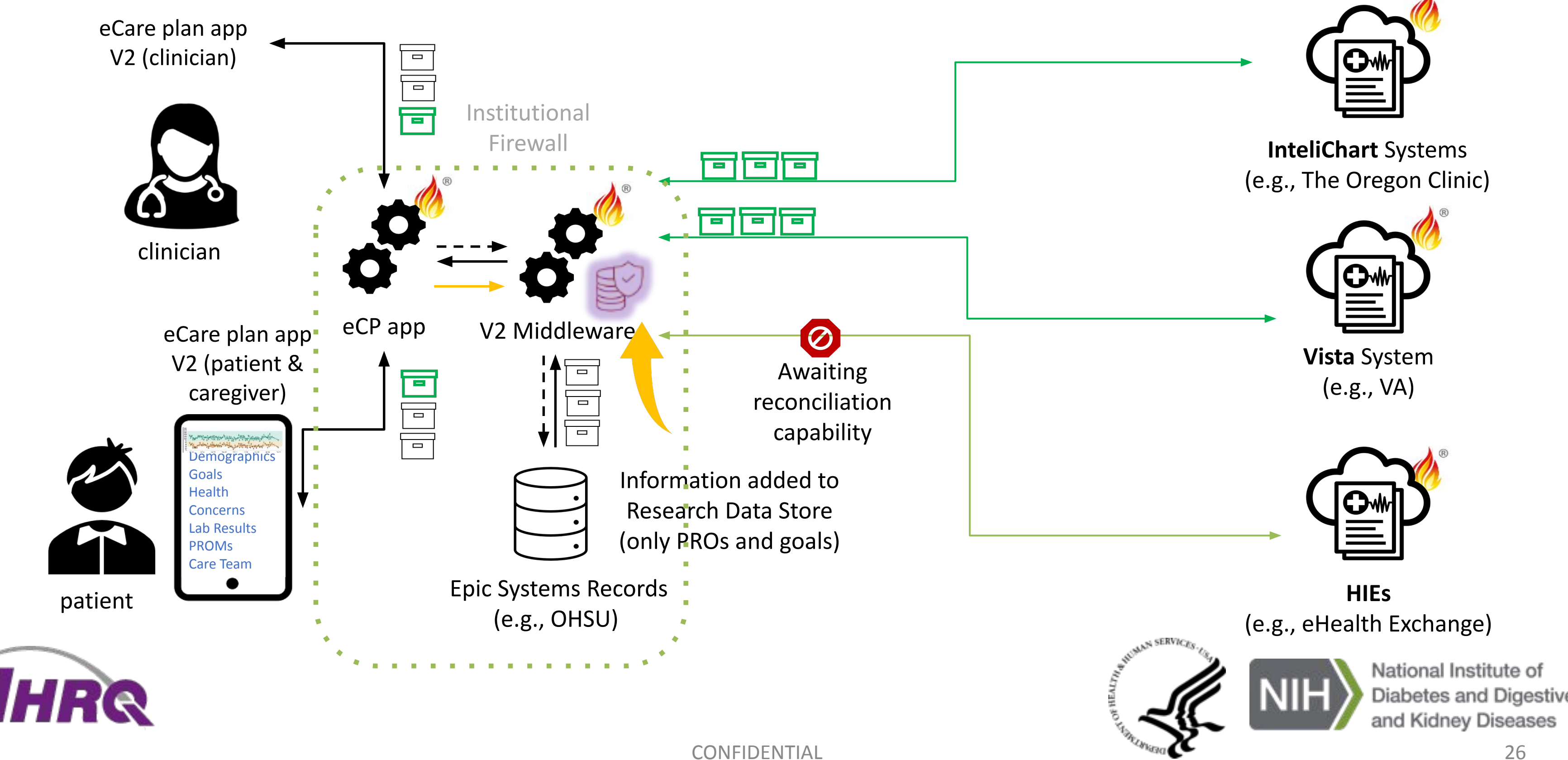
eCare Plan V2 Phase I: Aggregation



eCare Plan V2 Phase II: Filtering



AHRQ

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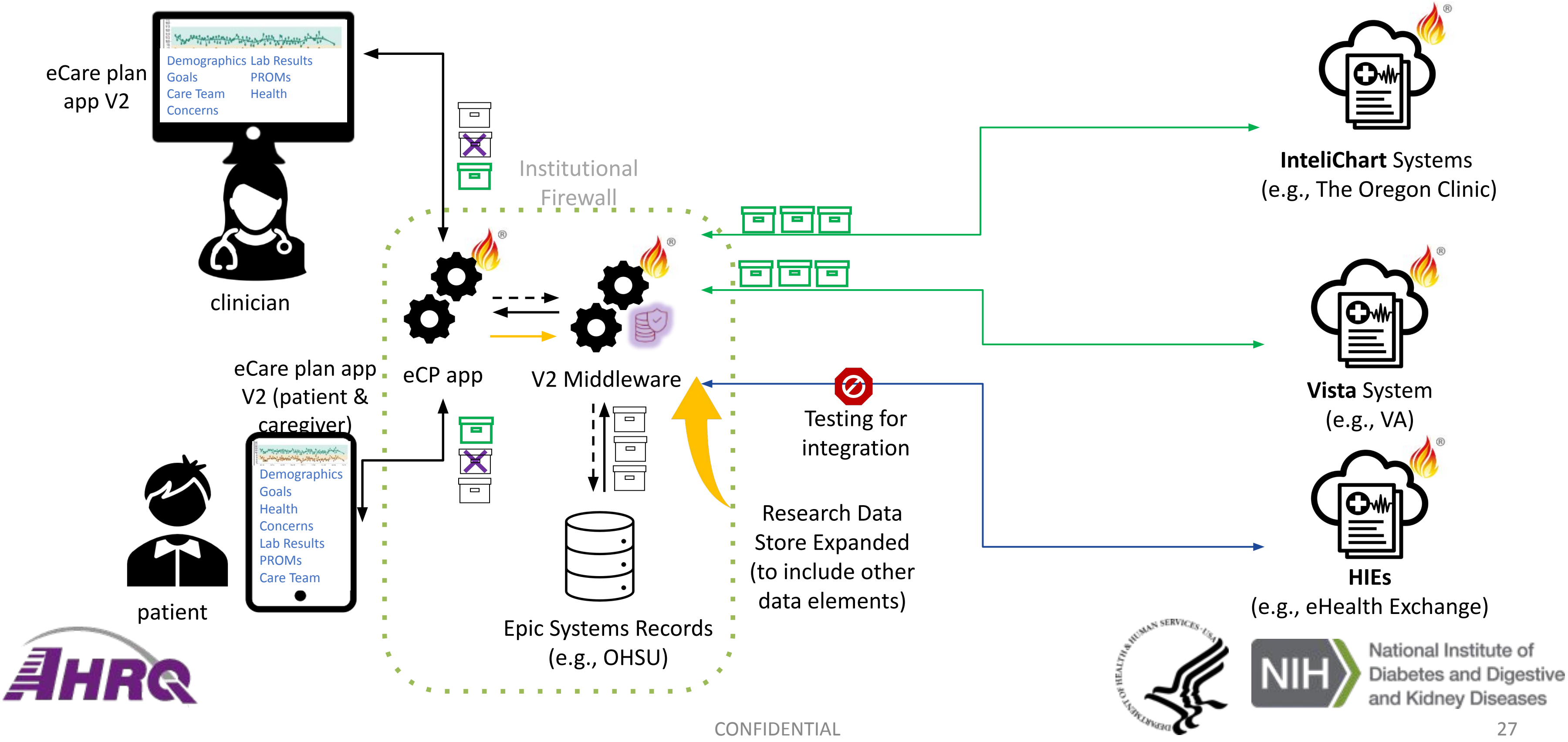
eCare Plan V2 Phase III: Reconciliation



eCare Plan V2: Intended End Points

eCare plan
app (clinician)

Demographics
Goals
Care Team
Concerns
Lab Results
PROMs
Health

clinician

Prioritize and
Display

eCarePlan

Middle Layer

patient

Demographics
Goals
Health
Concerns
Lab Results
PROMs
Care Team

EHR 1 (Primary)

EHR System 1 (Providence
endpoint: 10086572)

EHR System 2 (Legacy:
lhspdxfhirprd)

PointClickCare (Skilled
Nursing Facilities)

HIEs
(eHealth Exchange)

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Diabetes and Digestive
and Kidney Diseases

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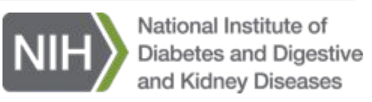
Task 2: Execute and Evaluate the Pilot Test

OHSU Soft-Go-Live	OHSU Full Pilot	MedStar Pilot
• Q1 2023 (1/18/23) • Limited roll out with few patients/caregivers and clinicians • Clinical champions	• Est: Q2-Q4 2023 • > 100 patients,10 providers, various sites • **Phase 1:** Launch of rebuilt eCP apps (Q2) • **Phase 2:** Integration of research data store (Q3) • **Phase 3:** Connection with PCC (Q4)	• Est: Q1 2024 • Read-only implementation in a sandbox environment



Project Work Plan (1 of 2)

Task	Purpose and Expected Content	Intended Audience	Delivery Date
PM	Schedule Kickoff Meeting	AHRQ, NIDDK	October 4, 2022
PM	Kickoff Meeting Summary. Summarizes kickoff meeting and key decisions	AHRQ, NIDDK	October 11, 2022
PM	Draft Work Plan. Includes initial plan for tracking project resources, hours, specific deliverables, and Connectathon participation details, such as establishing a track, reviewing available materials, and monitoring emerging issues	AHRQ, NIDDK	November 15, 2022
PM	Receive Feedback from AHRQ.	RTI	November 22, 2022
1.3	Draft Pilot Design. Includes training materials, site expectations, and readiness assessments	AHRQ, NIDDK	November 27, 2022
1.3	Receive Feedback from AHRQ.	RTI	December 16, 2022
PM	Final Work Plan. Approved version includes plans for tracking project resources, hours, specific deliverables, and Connectathon participation details	AHRQ, NIDDK	November 30, 2022
1.3	Final Pilot Design. Approved version includes training materials, site expectations, and readiness assessments	AHRQ, NIDDK	January 5, 2022
2.1	Soft Go-Live Pilot Kickoff Meeting Summary. Summarizes soft go-live pilot kickoff meeting conducted at OHSU, list meeting participants, and note key considerations	AHRQ, NIDDK	January 25, 2023
PM	Project Meeting Notes. Document project status, decisions made, and discussions	AHRQ, NIDDK	5 business days after the biweekly calls throughout project

and Kidney Diseases

Project Work Plan (2 of 2)

Task	Purpose and Expected Content	Intended Audience	Delivery Date
PM	Monthly Project Summaries. Summarize project progress, status and metrics based on project phase, and future plans	AHRQ, NIDDK	By the 20th of each month for the duration of the project
3	Draft Standards Development Support Plan. Describes standards modifications necessary for exchange of data and describes the implementation plan	AHRQ, NIDDK	January 31, 2023
2.1	Pilot Kickoff Meeting Summary. Summarizes the pilot kickoff meeting conducted at OHSU, lists meeting participants, and notes key considerations	AHRQ, NIDDK	April 10, 2023
3	Final Standards Development Support Plan. Approved version describes standards modifications necessary for exchange of data and describes the implementation plan	AHRQ, NIDDK	April 25, 2023
4	Outline of Final Report. Detailed outline of final report includes app and IG enhancements throughout the project, pilot findings, and recommendations	AHRQ, NIDDK	May 10, 2024
4	Draft of Final Report. Includes app and IG enhancements throughout the project, pilot findings, and recommendations for future development	AHRQ, NIDDK	June 11, 2024
4	Final Report. Includes app and IG enhancements throughout the project, pilot findings, and recommendations for future development	AHRQ, NIDDK	August 5, 2024
4	AHRQ Debriefing. Debriefs AHRQ and invited leads in the Washington, DC, area	AHRQ, NIDDK	September 17, 2024
4	Deliver 508 Compliant Final Report	AHRQ, NIDDK	September 25, 2024

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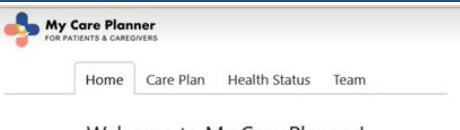
Sample Screenshots



Welcome to My Care Planner!

My Care Planner is a tool to help you and your care team work together to keep you healthy. It is a completely personalized way to see what steps you've already taken and what else you can do to check for and prevent illnesses.

Andrew Fhir (age 41)

My Tasks

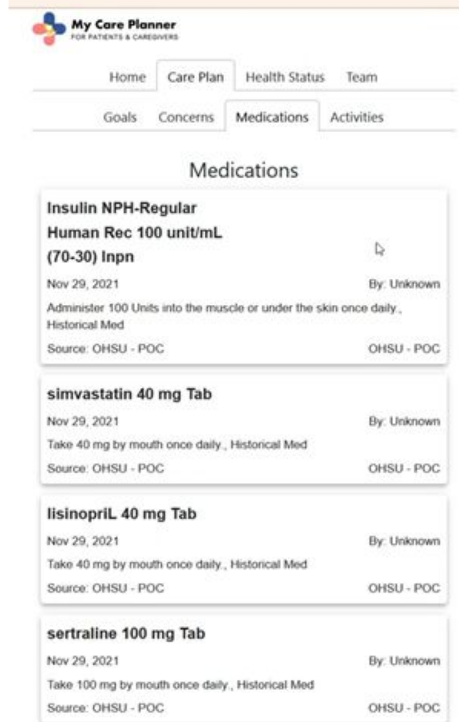
General Health Assessment
Social Support Assessment
Caregiver Strain Assessment

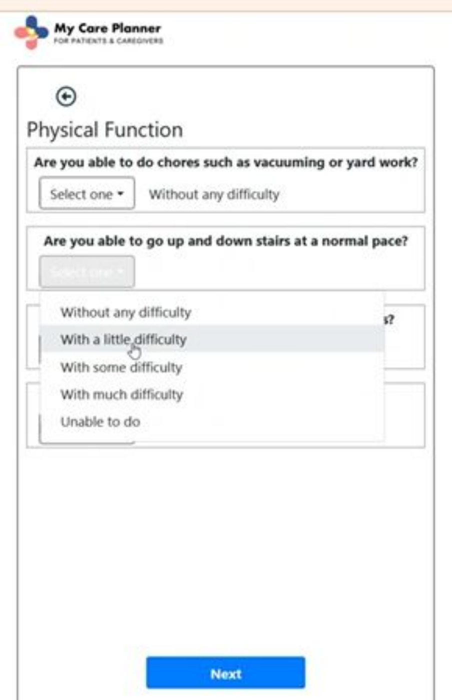
Preventive Care

You have no screenings due.

Shared Health Records

Retrieve records from other healthcare providers
Share your health data
Summary of shared health data





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Sample Screenshots

This is a non-production environment. If you are a patient, contact the system administrator immediately.

OHSU Health

MyChart by Epic | Log out

Menu | Visits | Messages | Test Results | Medications | Patricia

Welcome!

You have an upcoming BASIC METABOLIC SET from your visit with David Dorr. View details to learn how to prepare for this visit, including what documents you might need to bring.

View details

View all (4)

Osteoporosis Screening is overdue.

View details

View all (5)

You can access your records from all your healthcare organizations. Organizations where you receive care may have been recently added. To link accounts, try searching for clinics or hospitals you have visited.

Learn more

Dismiss

Share Everywhere

Give one-time access to your medical record to any clinician in the world with internet access.

Learn more

Dismiss

Explore More

Share Everywhere

Give one-time access to your medical record to any clinician in the world with internet access.

Share now

Learning Library

Learn how you can get th
MyChart experience by

Care Team and Recent Providers

David Dorr, MD
Primary Care Provider
Internal Medicine

See provider details and manage

National Institute of Diabetes and Digestive and Kidney Diseases

MCC eCare Plan Implementation Guide

Walkthrough of Updates

Gay Dolin, MSN, RN, Namaste Informatics & EMI Advisors

Summary of Updates to the FHIR IG

The following updates were made to the MCC eCare Plan IG for comment only ballot in January 2023:

- **IG Home** was updated with language tweaks, acknowledgements, and IG contributors.
- **Use Cases** now reflect current coverage and are more implementer focused.
- **Images** for Structure and Design and Questionnaire Response have been updated to reflect the revised structure of the IG.
- **_include and _revinclude** notes were incorporated.
- **MCC Care Plan SDOH guidance** was included.
- **MCC Questionnaire Response** technical requirements were included.
- **MCC must-support documentation** was included under Conformance.
- **Value set tables** were developed and populated. The value sets are not bound directly into profiles. Within each value set library, there is a link back to the profile for which the value sets have been created or vocabulary guidance in lieu of a value set.

Link: HL7® MCC eCare Plan FHIR Implementation Guide (IG).

MCC eCare Plan FHIR IG Timeline

Balloting is a formal process used by HL7 to get feedback and comments on specifications prior to publication. There are different ballot levels: For Comment, Informative, Standard for Trial Use (STU), and Normative. Over the course of this project, the MCC eCare Plan IG will be matured through the For Comment ballot and the STU ballot. Below is a timeline for the development of the IG:

For Comment Ballot (Jan 2023)	Comment Reconciliation (Feb-Jun 2023)	STU Ballot (Sep 2023)	Comment Reconciliation (Sep-Oct 2023)	Publish IG (Sep 2024)
New additions include finalized value sets, updated Use Cases, capability statements.	Triage comments received during the For Comment ballot and begin comment reconciliation.	Update FHIR IG based on latest version of US Core IG and comments from the January 2023 For Comment ballot.	Triage comments received during the STU ballot and perform comment reconciliation to update the FHIR IG.	Prepare the IG for publication as an STU meaning that the IG is substantially complete and ready for implementation.

Summary of January 2023 Ballot Comments

- 36 actual voters
  - 35 Affirmative
  - 1 Negative
- 26* line-item comments
  - Negative:
    - From CDC to use Occupational Data for Health (ODH) Templates for work related information.
  - Other comments:
    - Streamline and clarify MCC CareTeam and MCC Caregiver on Care Team.
    - Outcomes representation may be more complex than systems can support.
    - Possible circular references.
    - Technical (typos, link error).
- Ballot Comment Dashboard
  - You will need a free HL7 Jira/Confluence account to view. If you don't have one, you can request an account here.

*Note: Affirmatives can be just an affirmative vote without a comment.

National Institute of Diabetes and Digestive and Kidney Diseases

Optional IG Deep Dive Session

- Please email Karen Bertodatti at karen.bertodatti@emiadvisors.net if you are interested in a 30-minute deep dive with Gay Dolin and Bret Heale on the MCC eCare FHIR IG.

Agency Questions & Feedback

Agenda

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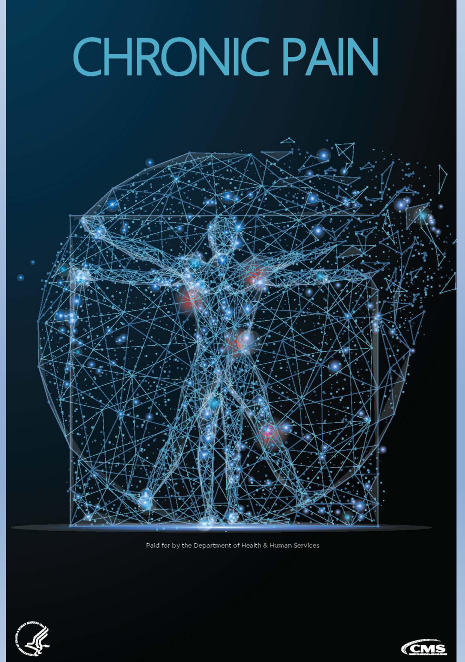
Concluding Remarks	5 min	Jenna Norton, NIDDK Arlene Bierman, AHRQ

PFS 2023 Chronic Pain Management Codes



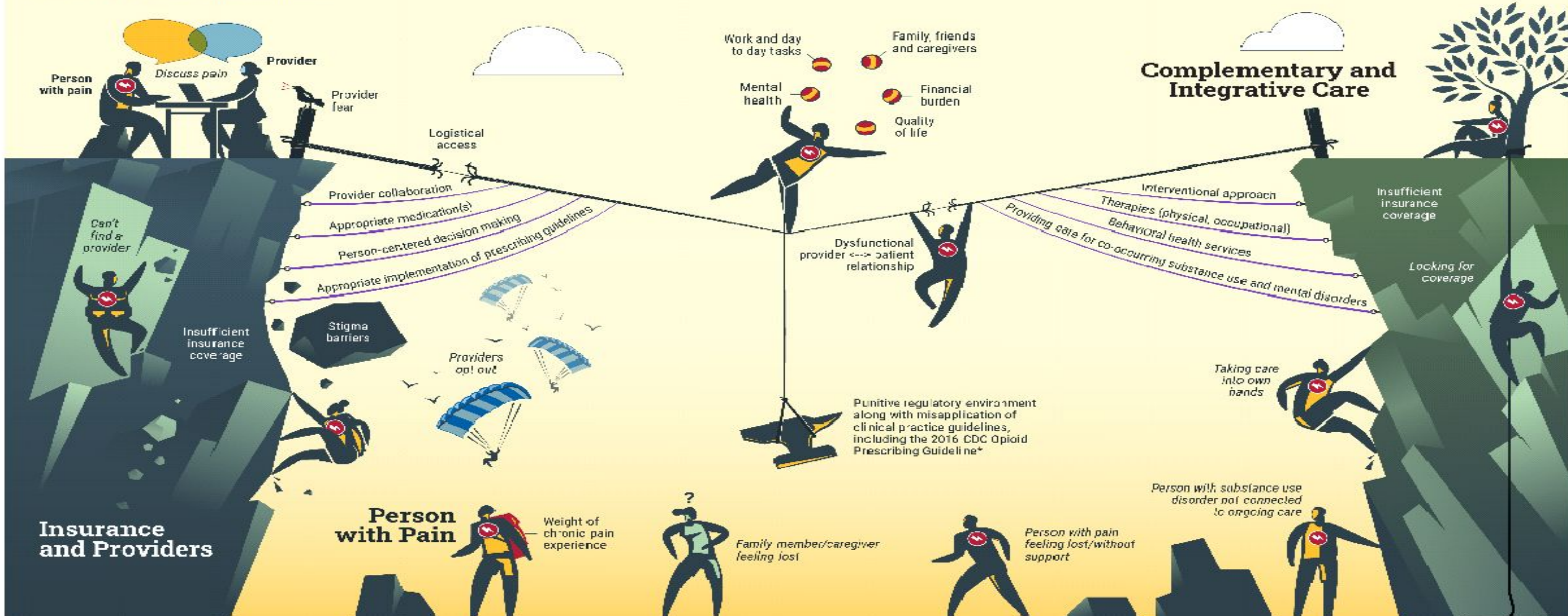
Multiple Chronic Condition (MCC) eCare Federal Partner Meeting

January 23, 2023

Chronic Pain and Medicare

- Nearly 80 percent of all Medicare beneficiaries report experiencing chronic pain that interferes with function the prevalence of pain increases with age, and “baby boomer” adults, who represent significant numbers of Medicare beneficiaries, will continue to enroll in the program until 2030
- Physician shortages have implications for people living with pain across medical and surgical specialties, geography, underserved populations, and care settings including shortages in the behavioral health workforce
- Adverse impacts of pain include physical disability, impairment, loss of function, social activities, relationships, sleep, mental health, employment, finances, and quality of life – addressing pain is the 3rd goal of CMS’s Behavioral Health Strategy
- As described in the HHS Pain Management Best Practices Inter-Agency Task Force Report, there are multiple approaches and treatment modalities to pain management including medications, restorative therapies, interventional approaches, behavioral approaches, and complementary and integrative health

CMS Chronic Pain Journey Map



* CDC is in the process of updating the 2016 CDC Guideline for Prescribing Opioids for Chronic Pain. The goal of the revised clinical practice guideline is to help advance effective, individualized, patient-centered care.

Medicare Physician Fee Schedule

- Each year CMS publishes proposed and final Revisions to Payment Policies under the Medicare Physician Fee Schedule (PFS), used by Medicare to pay doctors and other providers/suppliers on a fee-for service basis
- In the 2022 PFS, CMS solicited comment from the public to determine interest in separate coding and payment for chronic pain management and treatment (CPM); 1900 commenters were overwhelmingly supportive
- CMS proposed and finalized two CPM codes in the 2023 PFS

Overview of CPM codes

Bundle elements (billing authorized beginning 1/1/23):

Diagnosis; assessment/monitoring; administration of validated pain rating scale/tool; development, implementation, revision, maintenance of person-centered care plan that includes strengths, goals, clinical needs, desired outcomes; overall treatment management; facilitation/coordination of any behavioral health treatment; medication management; pain and health literacy counseling; related crisis care; ongoing communication/coordination between relevant practitioners

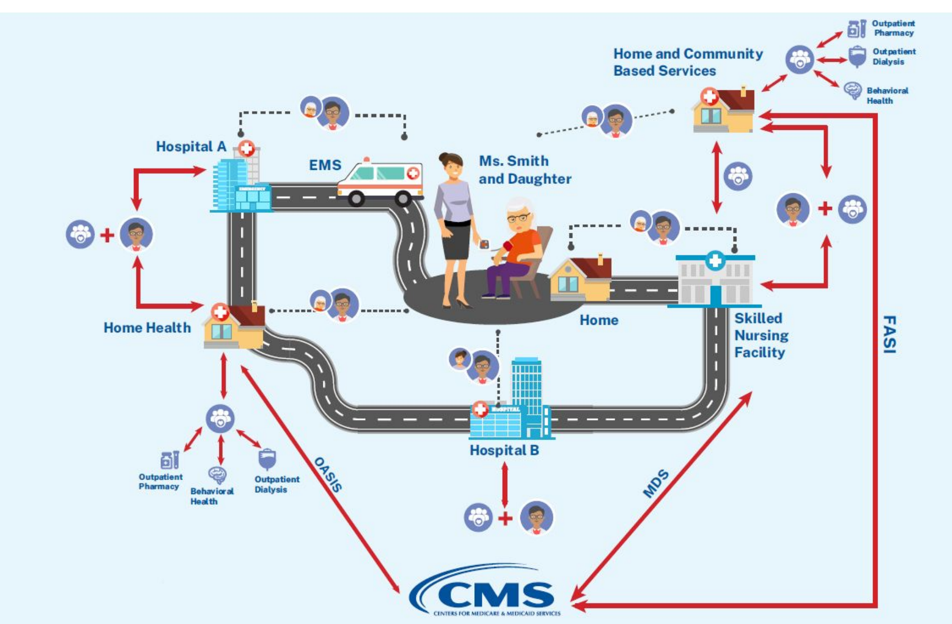
- HCPCS code **G3002**: chronic pain management and treatment by a physician or other qualified health professional
  - Required initial face-to-face visit of at least 30 minutes
  - Billable per calendar month
- HCPCS code **G3003**: each additional 15 minutes, per calendar month

Some Highlights

- Defines for the purposes of the regulation, chronic pain as, "persistent or recurrent pain lasting longer than 3 months"
- Includes:
  - requirement for health literacy counseling
  - development and maintenance of a person-centered plan
- Requirement for initial visit to be face-to-face, subsequent visits or follow-up can be non-face to face
- Not all bundle elements must be provided every month
- Not limiting the number/type of providers who can furnish
- Includes a new Resources for Pain Assessment for clinicians designed by our NIH partners, listing brief validated measures

PACIO Project

PACIO Project – The Patient Story



- **Poor communication across care providers**
  - Medication discrepancies such as drug omissions during transitions of care and multiple modes of information transmission result in delays in PAC services and can lead to adverse events and preventable readmissions
  - Redundant information collection creates inefficiencies and burden
- **Reliance on patient recall during periods of high stress**
  - Recall of information can be unreliable
  - Patients may be unconscious, incapacitated, or otherwise unresponsive / unable to communicate information
  - Increased patient / family stress
- **Increased Cost and Provider Burden**
  - Additional costs related to hospital stays from adverse events, readmissions
  - Additional administrative costs to locate, reconcile, and coordinate information

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PACIO

PACIO Project: Background

Established February 2019, the PACIO Project is a collaborative effort between industry, government and other stakeholders, with the goal of establishing a framework for the development FHIR implementation guides to facilitate health information exchange.

The Office of the National Coordinator for
Health Information Technology

http://pacioproject.org

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PACIO Project Use Cases

Legend

- In HL7 Ballot
- In Development
- Published (STU1)

Functional Status

SPLASCH

Advance Directives

Cognitive Status

Re-assessment Timepoints

Quality Measures

Existing PACIO use cases exchange patient data as a patient transitions through multiple care settings:

- Home and community-based services
- Acute care
- Post-acute care
- Patient/family access to healthcare

- Personal Functioning and Engagement

Icon made by Freepik from www.flaticon.com

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PACIO Use Cases and Timelines

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PACIO Project Status

https://confluence.hl7.org/display/PC/PACIO+Project+Use+Cases
https://confluence.hl7.org/display/PC/Meeting+Index

Personal Functioning and Engagement

- Went through the September 2022 HL7 ballot, with 33 Affirmative Votes and only 4 Negative Votes
- Framework will allow many different assessments and observations to be exchanged
- Tested by multiple pieces of software at January and May 2022 Connectathons, including integration testing with 7 other independently developed implementation guides

Advanced Directive Interoperability (ADI)

- ADI was demonstrated successfully at multiple Connectathons, including the January 2023 HL7 Connectathon
- STU1 ballot reconciliation continues addressing 86 comments. 9 left to be resolved
- Completed scan of individual state Portable Order for Life Sustaining Treatment (POLST) forms, which will inform STU2
- STU2 to enter into HL7 ballot later this year

Re-Assessment Timepoints

- Divides long-term care encounters into smaller timepoints for easier access
- Published September 2022 as an HL7 Standard for Trial Use 1 implementation guide

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PACIO Project Resources

- Website:
  - http://pacioproject.org
- HL7 Confluence Page:
  - https://confluence.hl7.org/display/PC/PACIO+Project
- GitHub:
  - https://github.com/paciowg
- YouTube:
  - https://www.youtube.com/channel/UCcltfkAo_58B5-gf2luiybg

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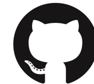
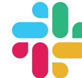
The PACIO Project is a collaborative effort to advance interoperable health data exchange between post-acute care (PAC) and other providers, patients, and key stakeholders across health care and to promote health data exchange in collaboration with policy makers, standards organizations, and industry through a consensus-based approach.

Learn and share more about the PACIO Project at www.PACIOproject.org





ACL Social Care Referrals Challenge

MCC eCare Plan
Federal Partners Meeting
January 24, 2022

ACL Progress Updates

Recent Accomplishments:

- Facilitated Challenge webinars and 26 individual office hours sessions, each webinar with an 88% attendance rate.
- Concluded ACL's Social Care Referrals Challenge, engaged 12 geographically dispersed teams across the nation.
- FHIR FLI Challenge Team Bright Spot was published on the Gravity Project detailing their transformation of health and social care assessments and referrals.
- Presented ACL Challenge during Gravity Pilots Affinity Group to gain visibility within the health and social care ecosystem.
- Supported the October 2022 Virtual Testing Event for FHIR IG for Human Services Directories that focused on aligning social care directories.

Current & Upcoming Efforts:

- Collaborating with ONC on ISA updates: 211 LA Taxonomy in the latest ISA currently seeking public feedback. More info here.
- Developing a strategic action plan toward an open access human services taxonomy in alignment with HHS interoperability initiatives and partners.
- Maintaining active engagement and partnerships with Challenge teams and industry stakeholders, EMI Advisors, FEI Systems, HL7 Human and Social Services WorkGroup, Gravity Project and others, to ensure alignment of referrals in the human and social care referrals landscape.

ACL Challenge Use Cases

Use Cases	User Groups	Population	Target Systems	Standard(s)
• Social Care Referral from Clinical to Social Service Provider • Document and Track SDOH Related Interventions to Completion	• Clinical Provider, Health Plan, State Agency, CBO Provider	• Older and intellectual or developmental disability (IDD) / developmental disability (DD) Adults • At-risk pediatric Medicaid recipients	• EHRs, HIEs, SDOH Vendors (FindHelp, Unite Us, etc.), CBO IR&A Systems	**Terminology/Taxonomy:** • Gravity Coded Terminology for referrals (SNOMED-CT) • 211 LA Taxonomy • Open Eligibility Taxonomy • NUCC **Content/Transport:** • HL7 Gravity FHIR IG • **HL7 FHIR IG for Human Services Directories*** • HSDS/Human Service Data API Suite (HSDA) • HL7 eLTSS FHIR IG • HL7 C-CDA • IHE 360x *New

Fast Healthcare Interoperability Resource (FHIR) Implementation Guide (IG) for Human Services Directories

- The FHIR IG for Human Services Directories is a US Realm published standard, and an intended companion guide to the PDEX Plan-Net Provider Directory.
- Focuses on requirements of real-world implementers of social services directories and leverages analysis of a recognized (US, now International) standard in the human services field that describes social services directories: Open Referral Human Services Data Specification (HSDS) and associated APIs (HSDA).
  - The directory can easily be adapted internationally from the US Realm guide by changes to terminology bindings, as the HSDS standard reflects current international as well as US requirements.
  - It also allows healthcare providers to search a human and social services directory from within a FHIR-enabled EHR-system, for community-based resources/services during a referral process workflow.
  - The IG provides a standard for describing information collected by disparate human and social service organizations so the information can be universally understood across entities, including by FHIR-enabled systems used by healthcare providers, healthcare payers, social navigators, other community-based organizations, and consumer-facing applications to locate community-based resources and programs.

Confluence link: https://confluence.hl7.org/display/HSS/FHIR+IG+for+Human+Services+Directories

Supplemental Information on the ACL Social Care Referrals Challenge

Administration for Community Living

ACL Challenge Overview

- Launched in March 2020 as a competition for state and community stakeholders in the aging and disability network, leaders worked collaboratively on technical solutions to share standards-based social needs data and person-centered plans between health systems and social service providers.
- The Challenge promoted the use of open-source standards for service directories from **Open Referral** and for social referrals from the **Gravity Project**.
- The Challenge included three competitive phases and a bonus phase:
  - Phase 1: Concept & Design Submission (6 winners announced May 2021)
  - Phase 2: Proof of Concept & Demonstration (4 winners announced December 2021)
  - Phase 3: Implementation & Testing (3 winners announced October 2022)
  - Bonus Phase Mapping Taxonomies (2 winner announced October 2022)

ACL Final Winners Announcement is here.

Phase 1 Objectives

- Demonstrate innovation and value to stakeholders.
- Propose partnerships and collaborations.
- Identify product functionality and usability.
- Demonstrate scalability and feasibility.
- Assess business technical risk.

Phase 1 Awardees

- St. Louis Regional Coalition
- Data Standards for Missouri AAAs
- MOKAN Bi-State Networks
- SHIN-NY-2-1-1 New York
- Northwell Health
- Healthy Together
- United Way of Salt Lake
- United Way of Southeastern Michigan
- South Carolina Referral System
- FHIR-FLI
- FHIR Wire
- Service Net

Phase 2 Objectives

- Adopt Human Services Data Specification (HSDS) for standardized, open resource directories that allow for look up and retrieval of community resources by any state, CBO, referral vendor, etc. that need to be maintained overtime.
- Identify plans for updating resource directories.
- Demonstrate use of Gravity Project identified terminology (LOINC, SNOMED-CT, and ICD-10) and technical standards (HL7 FHIR) to represent and exchange SDOH data.
- Establish closed loop referral functionalities that are inclusive of referral management across key stakeholders such as CBOs, health care providers, health plans, and others with relevant expertise in social care referrals.
- Present data analytics and dashboard visuals that track service delivery and outcomes.

Phase 2 Awardees

- Missouri Data Standards
- United Way for Southeastern Michigan
- South Carolina Referral System (SC Thrive)
- FHIR-FLI

Phase 3 Objectives

- Establish closed-loop referral functionalities that are inclusive of referral management across key stakeholders such as CBOs, health care providers, and health plans.
- Demonstrate use of HSDS and related mapping to HL7 FHIR profiles for standardized, open resource directories that allow for lookup and retrieval of community resources by any state, CBO, or referral vendor.
- Demonstrate use of Gravity Project identified coded terminology (LOINC, SNOMED-CT, and ICD-10-CM Z codes) and technical standards (HL7 FHIR) to represent and exchange SDOH data.
- Present data analytics and dashboard visuals that track service delivery and outcomes.

Phase 3 Awardees

- Missouri Aging Services Data Collaborative
- FHIR-FLI
- Thrive Hub

Bonus Phase: Mapping Taxonomies Objective

- To map different terminology codes to standardized codes (e.g., homegrown codes to standardized codes, medical terminology to social codes) for specific social domains and risk factors enabling standardized data within referral management. Incorporates:
  - Service Taxonomy Mapping. Mapping of business rules organizing community service organization details such as service type, supported benefits, specific population eligibility requirements.
  - Coded Terminology Mapping. Mapping standardized core clinical terminologies in EHRs and use of high-quality terminology maps that are accepted and used by payers, providers, and CBOs.

Bonus Phase: Mapping Taxonomy Awardees

- Missouri Aging Services Data Collaborative
- FHIR-FLI

Office of the National Coordinator for Health Information Technology

Gravity Pilots

Office of the National Coordinator for Health Information Technology

eLTSS IG and data exchange in Missouri

Office of the National Coordinator for Health Information Technology

SDOH Interoperability Framework

Centers for Disease Control and Prevention

MedMorph

Making Electronic Data More Available for Research and Public Health (MedMorph)

- MedMorph Reference Architecture IG to be published imminently
- Three Content IGs will be submitted for publication approval soon (Central Cancer Registry Reporting, Healthcare Surveys, Research Data Exchange)
- Completed first real-world pilot testing & short-term evaluation for Hepatitis C use case (both public health and research uses) – uses Electronic Case Reporting (eCR) FHIR IG for content – testing FHIR end-to-end, using FHIR R4 and Bulk FHIR APIs.
- CDC is setting up FHIR infrastructure (e.g., enterprise FHIR server) to support programs that receive data at CDC
- Starting up Health Care Surveys and Cancer Registry Reporting real-world pilots
- Additional use case at CDC: FluSurvNET – developing a content IG and then will pilot
- Continue working with partners interested in using the MedMorph RA for additional purposes ("MedMorph+"), such as:
    - CMS – FHIR-based quality reporting (as stated in dQM Strategic Roadmap)
    - HRSA – FHIR-based quality reporting in UDS+
    - Vulcan/FDA – Real-world data

Office of the National Coordinator for Health Information Technology

COVID Machine Learning

Other Relevant Projects

Agenda

Topic	Time	Presenter(s)
Welcome and Introductions	5 min	Jenna Norton, NIDDK Arlene Bierman, AHRQ
MCC eCare Plan Project Overview and Progress Update	10 min	Karen Bertodatti, EMI
MCC eCare Plan Topics and Agency Partner Feedback ● Patient/Caregiver App Demonstration and Discussion ● Update on Pilot Process ● MCC eCare Implementation Guide Walkthrough	55 min	EMI Advisors RTI International
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Concluding Remarks	5 min	Jenna Norton, NIDDK Arlene Bierman, AHRQ

Thank You

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Additional MCC eCare Plan Project Links

- AHRQ and NIDDK Confluence Page for MCC eCare: https://cmext.ahrq.gov/confluence/display/EC//

- HL7 Patient Care Work Group – MCC eCare Project Page: https://confluence.hl7.org/display/PC/Multiple+Chronic+Conditions+%28MCC%29+eCare+Plan