

# Making EHR Data More Available for Research and Public Health (MedMorph) Technical Expert Panel (TEP)

Co-Chairs:

**Bill Lober**

**University of Washington**

**John Loonsk**

**Johns Hopkins University**



# MedMorph TEP Meeting Agenda – 11/17/2020

	TOPIC	LEAD(S)	TIME (ET)
1	Logistics & Welcome	Maria Michaels TEP Co-Chairs: Bill Lober, John Loonsk	3:00 - 3:05
2	HL7 Connectathon Outcomes	Nagesh Bashyam	3:05 - 3:25
3	HL7 Ballot Update	Nagesh Bashyam	3:25 - 3:30
4	HL7 Ballot Process	Jamie Parker	3:30 - 3:40
5	USCDI Update	Becky Angeles	3:40 - 3:45
6	Next Steps: RA, Use Cases, Evaluation Workgroups	Jamie Parker	3:45 - 3:55
7	Announcements, Next Meeting December 15 <sup>th</sup>	Bill Lober John Loonsk MedMorph Project Team	3:55 - 4:00

# HL7 MedMorph Connectathon Outcomes

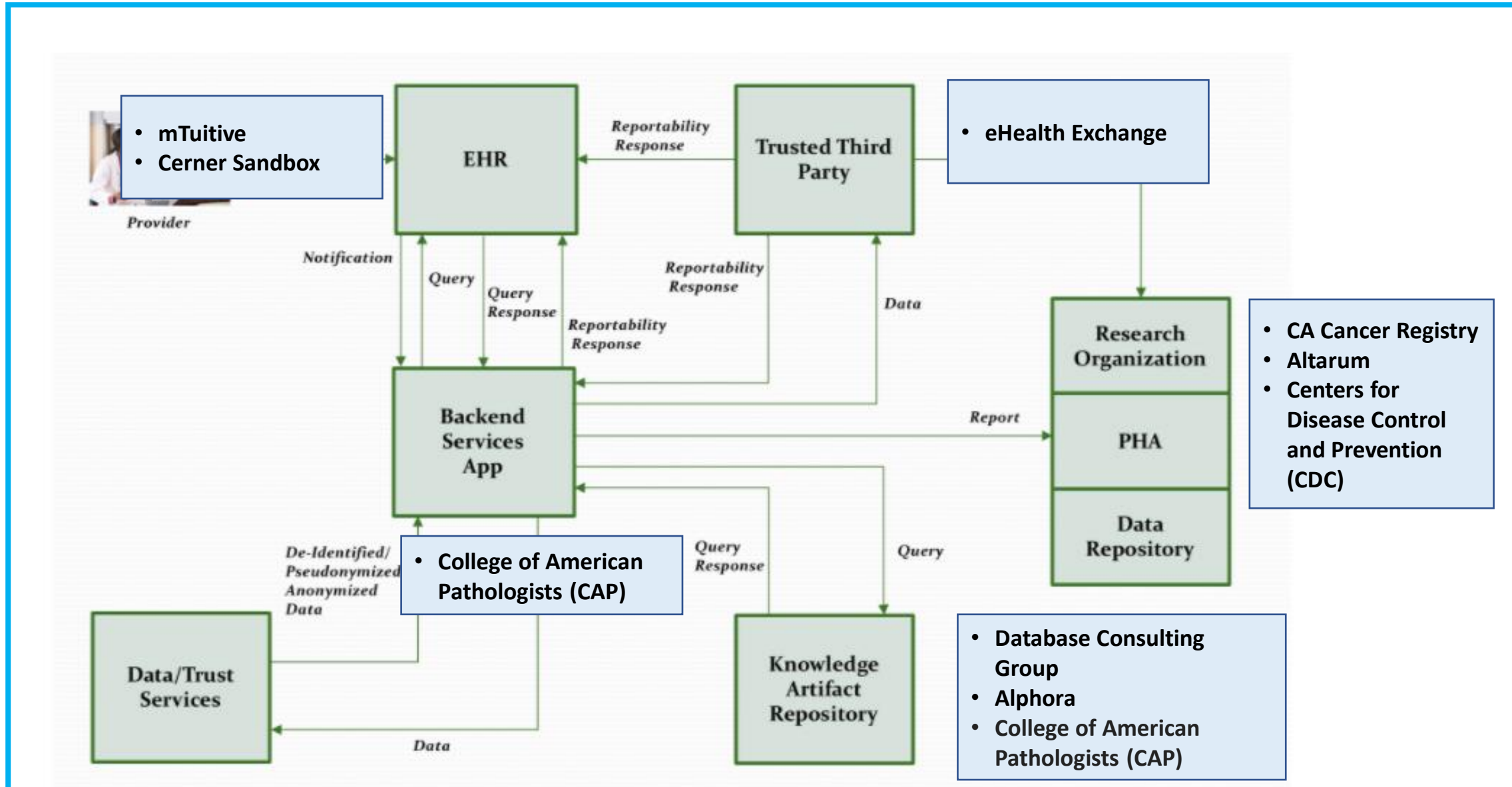
---

Nagesh Bashyam

# HL7 FHIR MedMorph Connectathon

- November 9, 2020 from 11 am – 5 pm ET
- <https://confluence.hl7.org/display/PHWG/MedMorph+November+2020+FHIR+Connectathon>
- 53 unique participants
  - 15 Testers
  - 12 MedMorph Staff (CDC, Support Team, SMEs)
  - 26 Observers
- 39 of the 53 participants stayed on for more than 1/2 of the call
  - More than 150 minutes
- 23 people stayed on for the entirety of the call

# Connectathon Testers



# Connectathon Outcomes

- Successfully demonstrated and tested Provisioning, Report Creation and Report Submission workflows.
  - Discussions around PlanDefinition and harmonization with eCR and other Public Health Use Cases were very helpful to shape the IG.
- Discussed areas that need to be added to the IG to help implementers
  - Including PlanDefinition state diagrams
  - APIs and Usage of PlanDefinition
- Created multiple examples that will be added to the IG
- Will be adding a Zulip channel for discussion for implementers
  - <https://chat.fhir.org/#narrow/stream/265512-medmorph>
- Ability to use EHR sandboxes with test data that has been entered will provide more robust testing during the Connectathons (Tested with Cerner Sandbox for eCR and Cancer reporting)
- Harmonization of Notifications with SubscriptionTopics across eCR/MedMorph and other use cases is paramount for implementation success

# Connectathon Next Steps

- Prepare for January Connectathon
  - Coordinate with Public Health Tracks
  - Harmonization with eCR
  - Allow time for implementers to build software based on IG
- Focus on the individual use cases and test data for each use case that can be exercised
- Focus on harmonization with eCR and other public health tracks to ensure compatibility

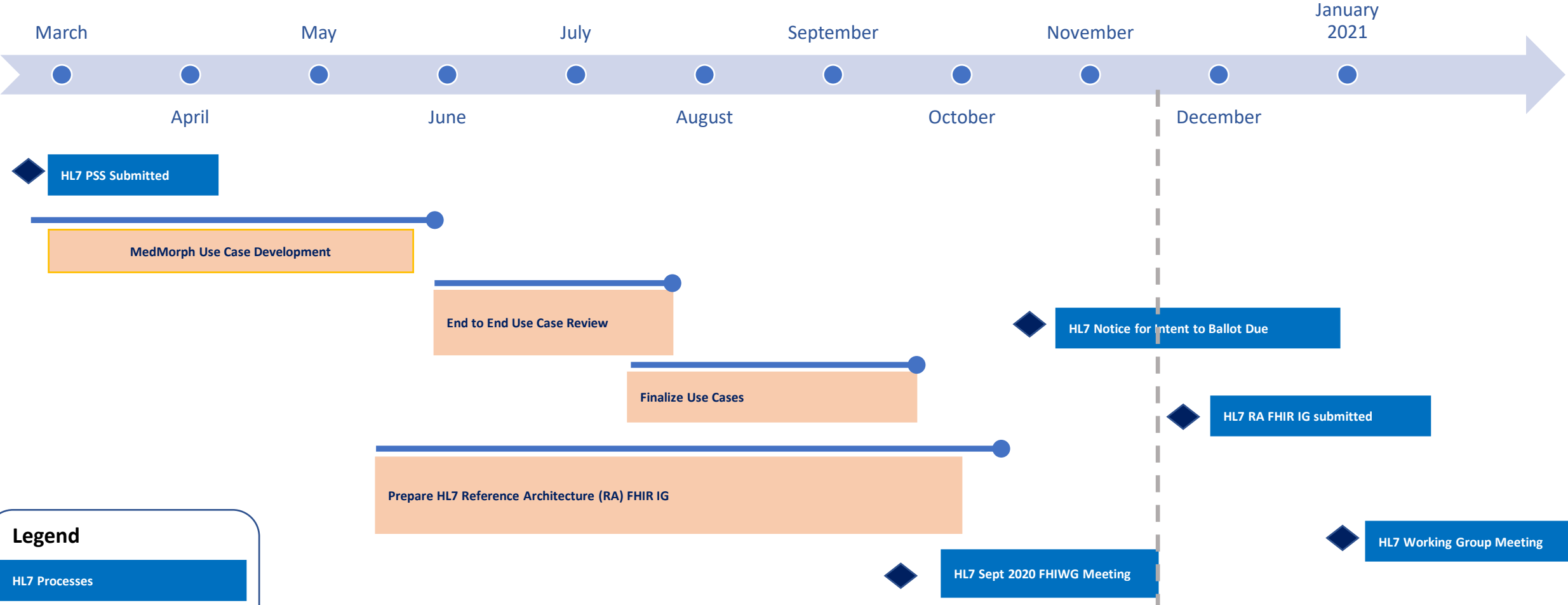
# HL7 MedMorph Reference Architecture Ballot Update

---

Nagesh Bashyam



# Timeline: MedMorph Activities & IG Balloting



**Legend**

- HL7 Processes (Blue box)
- MedMorph Project Activities (Orange box)

# Making EHR Data More available for Research and Public Health (MedMorph) Reference Architecture IG

- The RA on the MedMorph RA Confluence has been incorporated into the FHIR IG Build and can be found here:
  - <http://build.fhir.org/ig/HL7/fhir-medmorph/>
- Connectathon feedback is being incorporated in the IG
- The MedMorph FHIR IG must be finalized and complete by November 24<sup>th</sup>, 2020
- IG will be ready for the MedMorph community to review later this week
  - IG comment form will be sent to the TEP after the RA WG call (Nov 18)

# HL7 Ballot Process

---

Jamie Parker

# HL7: Deliverables and Artifacts

<https://confluence.hl7.org/display/HL7/HL7+Calendar+s#a024f57c-d5fc-4f39-8b26-bf9f1e280100-35717172>

Date	Artifact	Status
February 20, 2020	Draft PSS Presented to the HL7 Supporting WG	Complete
February 21, 2020	Submit PSS Scope Statement for September 2020 Ballot Cycle	Complete: <a href="https://confluence.hl7.org/display/PHWG/Making+EHR+Data+More+Available+for+Research+and+Public+Health+%28MedMorph%29+Reference+Architecture+HL7+FHIR+Implementation+Guide">https://confluence.hl7.org/display/PHWG/Making+EHR+Data+More+Available+for+Research+and+Public+Health+%28MedMorph%29+Reference+Architecture+HL7+FHIR+Implementation+Guide</a>
April 19, 2020	HL7 Steering Division Approval	Complete, PSS Approved
July 21, 2020	Connectathon Proposal	Complete
September 9-11, 2020	HL7 FHIR Connectathon – Virtual ( <a href="https://www.hl7.org/events/fhir/connectathon/2020/09/">https://www.hl7.org/events/fhir/connectathon/2020/09/</a> )	Complete (successful exchange achieved)
September 21-25, 2020	HL7 Workgroup Meeting – Virtual	Complete
October 18, 2020	Submit FHIR IG Proposal	Complete: <a href="https://confluence.hl7.org/display/FHIR/Making+EHR+Data+More+Available+for+Research+and+Public+Health+%28MedMorph%29+Reference+Architecture">https://confluence.hl7.org/display/FHIR/Making+EHR+Data+More+Available+for+Research+and+Public+Health+%28MedMorph%29+Reference+Architecture</a>
November 1, 2020	Submit Notice For Intent to Ballot (NIB)	Complete: <a href="http://www.hl7.org/Special/committees/tsc/ballotmanagement/reviewNIBs.cfm">http://www.hl7.org/Special/committees/tsc/ballotmanagement/reviewNIBs.cfm</a>
November 1, 2020	Substantive IG complete	Complete
November 24, 2020	Ballot Freeze	
December 13, 2020	Ballot Due	
December 18, 2020	Ballot opens for voting	
January 13-18, 2021	January HL7 Connectathon	
January 25-29, 2021	January HL7 WG Meeting	

# HL7 Ballot Checklist (1/2)

	Activity	Completed
✓	Present a Project Scope Statement for approval from sponsoring workgroup and HL7 Leadership	February –April 2020
✓	Attend HL7 WG meeting and participated in the WG meeting Connectathon	Sept 2020
✓	Presented Notice for Intent to Ballot (NIB)to HL7 sponsoring WG (Public Health) for approval	Oct 2020
✓	Submitted NIB	Nov 2020
✓	Conducted MedMorph specific connectathon to satisfy ballot requirements (3 different entities must test IG prior to ballot)	Nov 2020
✓	Review “Substantively Complete” IG with HL7 sponsoring WG (Public Health) for approval	Nov 2020
✓	Submitted “Substantively Complete” IG	Nov 2020
	Updating IG based on feedback from MedMorph Community and Connectathon	Nov 9-24, 2020
	Ballot Content Freeze	Nov 24, 2020
	Ballot is approved and reviewed by sponsoring WG (Public Health) and FHIR management	Nov 24- Dec 3, 2020
	<b>Final approved IG Ballot submitted</b>	<b>Dec 13, 2020</b>

## HL7 Ballot Checklist (2/2)

	Activity	Completed
	Sign up for the MedMorph IG Ballot	Nov 16 - Dec 17, 2020
	Vote and submit comments to the MedMorph IG Ballot	Dec 18, 2020 - Jan 18, 2021
	HL7 WG Meeting Connectathon	Jan 13 - 15, 2021
	Ballot voting closes	Jan 18, 2021
	Prepare comments for disposition	Jan 18 - 25, 2021
	Attend January 2021 HL7 WG Meeting (Virtual)	Jan 25 - 29, 2021
	Disposition ballot comments	Jan 18 - Apr 1, 2021

# Next Steps for the RA IG and the Ballot Process

- Prior to IG Content Freeze:
  - Seeking feedback from the MedMorph Community (18<sup>th</sup> Nov to 26<sup>th</sup> Nov)
    - Comment using the google doc we will send after the RA WG meeting Wednesday, Nov 18<sup>th</sup>
    - Comments will be due back as soon as possible (Nov 27<sup>th</sup> at the latest)
  - Good idea to make comments prior to the ballot content freeze if those comments are:
    - Administrative (typos, graphic issues, etc.)
    - Regarding content that might have been inadvertently missed when the RA Confluence content was migrated to the FHIR IG Build Site
    - Questions that can be addressed and updated in the IG prior to the formal HL7 ballot disposition process
- Sign up for the Ballot Pool by Dec 17<sup>th</sup>:
  - HL7 Members: <http://www.hl7.org/ctl.cfm?action=ballots.loginchoice> (you will need to login with your HL7 credentials)
  - Non-Members (fee assessed): <http://www.hl7.org/ctl.cfm?action=ballots.login>
- Vote and Comment:
  - If you are not an HL7 member and have comments, you can send them to the MedMorph project team to submit them “on behalf” of the MedMorph Community
    - [Jamie.parker@carradora.com](mailto:Jamie.parker@carradora.com)
    - [becky.angeles@carradora.com](mailto:becky.angeles@carradora.com)

# USCDI Updates

---

Becky Angeles



# MedMorph's Submission to USCDI ONDEC

- MedMorph analyzed data elements from the multiple MedMorph use cases. Identified elements that were used by 2 or more use cases that were not existing in USCDI
- Submitted 76 data elements to be considered added to USCDI
  - Proposed the addition of 5 New Classes
- Currently working through responses from the ONDEC system
  - 25 elements require no additional action from the MedMorph team. These elements have been reviewed and are approved for public viewing at varying levels of maturity (Comment, Level 1, Level 2). Note that we may provide additional comments to try to push these up to Level 1 or Level 2.
  - 4 elements need clarification or additional information before they are approved for public viewing. We have submitted clarification for 4 of those 4 elements.
  - 34 elements have been considered as duplicates to previously submitted elements. The MedMorph team is reviewing these and will 1). Provide the MedMorph-specific use case and supporting information to the existing element, or 2). Provide a rationale on why the MedMorph element is distinct from the existing element by attaching a use case and supporting information.

# USCDI ONDEC Timeline

- Step 1. Submit new data elements and classes – CLOSED October 23, 2020
- Step 2. ONC evaluates and assigns a level to each data element depending on the overall value, maturity and challenges to implementation
  - Comment
  - Level 1
  - Level 2
- Step 3. ONC posts submitted data elements on the USCDI page by level
  - Submitters will have an opportunity to add or change information which could change its level determination.
  - Other stakeholders can review these submissions and contribute to their development through comments and collaboration with original submitters.
- Step 4. Submissions achieving Level 2 by October of each year will be considered for inclusion in the draft of the next version of USCDI. ONC will present the draft to the Health IT Advisory Committee and the public for comment.
- Step 5. ONC finalizes the next version of USCDI in July.

# Next Steps for MedMorph Participants

- If you wish to comment on a data element being proposed for USCDI, please create an account and do so at your earliest convenience. We are under the impression that a draft of USCDI v2 should be done by the end of November.
  - <https://www.healthit.gov/isa/ONDEC>

# Next Steps: RA, Use Cases, Evaluation Workgroups

---

Jamie Parker

# MedMorph: Deliverables and Artifacts

Artifact	Location
Reference Architecture Confluence Page	<a href="https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/545914881/Reference+Architecture+Document">https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/545914881/Reference+Architecture+Document</a>
Health Care Survey Use Case Confluence Page	<a href="https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/692060180/Health+Care+Survey+Use+Case+-+DRAFT">https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/692060180/Health+Care+Survey+Use+Case+-+DRAFT</a>
Hepatitis C Use Case Confluence Page	<a href="https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/694452251/Hepatitis+C+Use+Case+-+DRAFT">https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/694452251/Hepatitis+C+Use+Case+-+DRAFT</a>
Cancer Use Case Confluence Page	<a href="https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/699990019/Cancer+Use+Case+-+DRAFT">https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/699990019/Cancer+Use+Case+-+DRAFT</a>
Research Use Case Confluence Page	<a href="https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/858980359/Research+Use+Case+-+DRAFT">https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/858980359/Research+Use+Case+-+DRAFT</a>

# Next Steps – 2020 and beyond

- Reference Architecture Workgroup
  - Will work to get the RA IG ready
  - Monitor incoming ballot comments
  - Work with the RA WG to review comments and draft formal dispositions
- Use Cases Workgroup
  - We will convene as needed until February
    - Update use cases with additional data elements or ballot comments
    - Monitor IG ballot comments that are Use Case specific
      - Draft dispositions will be done on the RA WG call - please join the RA WG meetings on Wednesdays to help in drafting dispositions
  - Starting in February 2021 - Develop the Use Case Content Implementation Guides
- Evaluation Workgroup
  - Continue working on Short Term Evaluation Plan
    - If interested in joining the RA WG calls for draft ballot dispositions, please let Jamie know

# Closing

---

Jamie Parker

# Upcoming MedMorph Meetings

- Next Full TEP Meeting
  - Tuesday December 15th, 3-4 pm ET / 2-3pm CT / 1-2 pm MT / 12-1 pm PT
- Reference Architecture Workgroup (Weekly)
  - Wednesdays @ 1-2pm ET / 12-1pm CT / 11am-12pm MT / 10-11am PT
- Consolidated Use Case Workgroups (Weekly)
  - Thursdays @ 12-1pm ET / 11-12 am CT / 10am-11 am MT / 9-10 am PT
- Evaluation Workgroup
  - Thursdays @ 10 -11 am ET/ 9-10 am CT/ 8-9 am MT/ 7-8 am PT



# Contacts

## CDC Team

- Maria Michaels: [ktx2@cdc.gov](mailto:ktx2@cdc.gov)
- Wendy Blumenthal: [wfb6@cdc.gov](mailto:wfb6@cdc.gov)
- Arun Srinivasan: [fos2@cdc.gov](mailto:fos2@cdc.gov)
- Syed Sameemuddin: [puv5@cdc.gov](mailto:puv5@cdc.gov)
- Aaron Harris: [ieo9@cdc.gov](mailto:ieo9@cdc.gov)
- Brian Gugerty: [vaz6@cdc.gov](mailto:vaz6@cdc.gov)
- Cynthia Bush: [pdz1@cdc.gov](mailto:pdz1@cdc.gov)
- Aaron Harris: [ieo9@cdc.gov](mailto:ieo9@cdc.gov)

## TEP Co-Chairs

- John Loonsk: [john.loonsk@jhu.edu](mailto:john.loonsk@jhu.edu)
- Bill Lober: [lober@uw.edu](mailto:lober@uw.edu)

## Technical Leads

- Nagesh “Dragon” Bashyam: [nagesh.bashyam@drajer.com](mailto:nagesh.bashyam@drajer.com)

## Support Team

- Becky Angeles: [becky.angeles@carradora.com](mailto:becky.angeles@carradora.com)
- Jamie Parker: [jamie.parker@carradora.com](mailto:jamie.parker@carradora.com)
- Kishore Bashyam: [kishore.bashyam@drajer.com](mailto:kishore.bashyam@drajer.com)
- Mike Flanigan: [mike.flanigan@carradora.com](mailto:mike.flanigan@carradora.com)

## Technical SME

- Brett Marquard: [brett@waveoneassociates.com](mailto:brett@waveoneassociates.com)

# Appendix A: MedMorph General Information

# Making EHR Data More Available for Research and Public Health

## Technical Expert Panel:

End Users, Data Recipients, Stakeholders – Including representatives of additional use cases

Foundation of standards supported by health IT certification (CCDS/USCDI, APIs, FHIR)

### Fully Modeled Use Cases

Hepatitis C, Cancer, Healthcare Surveys



### Implementation Guides

For general use and for each use case

### Technological Strategies

To develop scalable and extensible architecture

### Agile Development: Iterative Design-Build-Test Cycles (test case: Hepatitis C)



**CCDS:** Core Clinical Data Set  
**USCDI:** US Core Data for Interoperability  
**APIs:** Application Programming Interfaces  
**FHIR:** Fast Healthcare Interoperability Resources



Software



Clinical organization



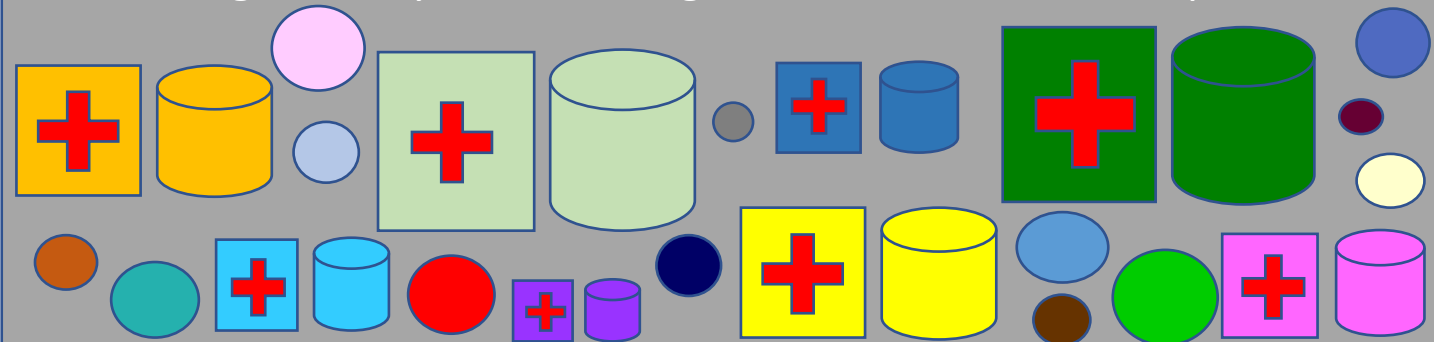
EHR platform



Other testing partners (e.g., public health departments, registries, health IT developers, etc.)

### National Test Collaborative

Including a variety of clinical organizations and their EHR platforms



Evaluation Planning

Measure and Evaluate

**PRODUCTS:** Reference Architecture, Reference Implementation  
(Open Source Software) & Balloted Implementation Guides,  
Roadmap for Scalability and Sustainability

# Evaluation WG

- **Short-term evaluation:** focused on Hep C pilot
- **Long-term evaluation:** focused on broader impacts to research and public health

# Appendix B: HL7 FHIR Resources

# Helpful FHIR Links

- FHIR Home Page & Summary:
  - <https://hl7.org/fhir/>
  - <https://hl7.org/fhir/summary.html>
- FHIR Overview by user type:
  - General: <https://www.hl7.org/fhir/overview.html>
  - Developer: <https://www.hl7.org/fhir/overview-dev.html>
  - Clinical: <https://www.hl7.org/fhir/overview-clinical.html>
  - Architects: <https://www.hl7.org/fhir/overview-arch.html>
- FHIR Implementation Guide Publishing:  
<https://confluence.hl7.org/display/FHIR/IG+Publisher+Documentation>
- FHIR Implementation Guide Process Flow:  
<https://confluence.hl7.org/display/FHIR/FHIR+Implementation+Guide+Process+Flow>