Project Challenge

To ensure the success of the industry’s *shift to Value Based Care*

**Transform out of Controlled Chaos:**
Develop *rapid multi-stakeholder* process to identify, exercise and implement initial use cases.

**Collaboration:**
Minimize the development and deployment of *unique solutions.*
*Promote* industry wide *standards* and adoption.

**Success Measures:**
Use of FHIR®, implementation guides and pilot projects.
# Da Vinci 2020 Multi-Stakeholder Membership

## PROVIDERS

<table>
<thead>
<tr>
<th>Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA</td>
</tr>
<tr>
<td>Cigna</td>
</tr>
<tr>
<td>Cedars-Sinai</td>
</tr>
<tr>
<td>Rush</td>
</tr>
<tr>
<td>Sutter Health</td>
</tr>
<tr>
<td>MultiCare Connected Care</td>
</tr>
<tr>
<td>Providence St. Joseph Health</td>
</tr>
<tr>
<td>Texas Health Resources</td>
</tr>
<tr>
<td>UNC Health Care</td>
</tr>
<tr>
<td>Weill Cornell Medicine</td>
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## EHRs

<table>
<thead>
<tr>
<th>EHR</th>
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<tbody>
<tr>
<td>Pulse8</td>
</tr>
<tr>
<td>athenahealth</td>
</tr>
<tr>
<td>Cerner</td>
</tr>
<tr>
<td>Epic</td>
</tr>
<tr>
<td>Healow</td>
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## PAYERS

<table>
<thead>
<tr>
<th>Payer</th>
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<tbody>
<tr>
<td>Anthem</td>
</tr>
<tr>
<td>Blue Cross Blue Shield</td>
</tr>
<tr>
<td>Blue Cross of Idaho</td>
</tr>
<tr>
<td>Cigna Health</td>
</tr>
<tr>
<td>CVS Health</td>
</tr>
<tr>
<td>Centene Corporation</td>
</tr>
<tr>
<td>GuideWell</td>
</tr>
<tr>
<td>HCSC</td>
</tr>
<tr>
<td>Independence Blue Cross</td>
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<tr>
<td>UnitedHealthcare</td>
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## VENDORS

<table>
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<tbody>
<tr>
<td>casenet</td>
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<tr>
<td>cognosante</td>
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<tr>
<td>edifecs</td>
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<tr>
<td>Infor</td>
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<tr>
<td>InterSystems</td>
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<tr>
<td>juxly</td>
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<tr>
<td>mcg</td>
</tr>
<tr>
<td>OPTUM</td>
</tr>
<tr>
<td>surescripts</td>
</tr>
<tr>
<td>ZeOmega</td>
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</table>

## DEPLOYMENT

- Availity
- MiHIN

For current membership: [http://www.hl7.org/about/davinci/members.cfm](http://www.hl7.org/about/davinci/members.cfm)

*Indicates a founding member of the Da Vinci Project. Organization shown in primary Da Vinci role. Many members participate across categories.
Sample Project Timeline

IG Development

- Assemble Team
- FHIR Gap Analysis
- Build Initial RI
- Specify profiles, ...
- IG Framework
- Create Draft IG
- Revise and Finalize IG
- RI Tech Approach
- Work with appropriate HL7 workgroup for IG sponsorship and input

RI Development

- Requirements
- Build Data Set
- Build Test Set
- Build Initial RI
- Test RI
- Update Final RI

Week 0 2 4 6 8 10 12 14 16

Represents 4 weeks
2 - 4 sprints

Project start
Reference/Pilot Implementation
REST Architecture Model

Provider EHR Implementation Scope
- EHR Backend Services
- EHR Database
- Translation Services

Da Vinci’s Deliverable Scope
- EHR
- FHIR Endpoint & APIs
- Request Resource
- Response Resource

Payer Implementation Scope
- Payer Backend Services
- Payer Database
- FHIR Translation Services

Implementations conforming to the DaVinci FHIR Profiles following the Implementation Guides
Industry standard DaVinci Use Case FHIR Profiles with respective Implementation Guides
Implementations conforming to the DaVinci FHIR Profiles following the Implementation Guides
Use Case Focus Areas

Quality Improvement
- Data Exchange for Quality Measures
- Gaps in Care & Information

Coverage / Burden Reduction
- Coverage Requirements Discovery
- Documentation Templates and Rules
- Prior-Authorization Support

Clinical Data Exchange
- Clinical Data Exchange
- Payer Data Exchange
- Payer Data Exchange: Formulary
- Payer Data Exchange: Directory
- Payer Coverage Decision Exchange
- Patient Cost Transparency
- Risk Based Contract Member Identification
- Chronic Illness Documentation for Risk Adjustment

Process Improvement

Clinical Data Exchange
- Payer Data Exchange
- Clinical Data Exchange
- Notifications
- Patient Data Exchange
- Performing Laboratory Reporting

Use Case HL7 Standards Progress
- Published
- Balloting
- Build
- Future

Aligned with specific ONC or CMS rule
can you help me come up with a prettier call out for rule highlight
Jocelyn Keegan, 4/8/2020

[@Kathy Moncelsi]
Jocelyn Keegan, 4/8/2020
### Use Case Maturity

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Maturity</th>
<th>Progress</th>
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</thead>
<tbody>
<tr>
<td>Connectathon</td>
<td>&lt;1</td>
<td>2-4</td>
</tr>
<tr>
<td>Live</td>
<td>&lt;1</td>
<td>1-3</td>
</tr>
<tr>
<td>Standard Phase</td>
<td>Future</td>
<td>Build</td>
</tr>
</tbody>
</table>

#### Quality Improvement
- Data Exchange for Quality Measures
- Gaps in Care & Information

#### Coverage/Burden Reduction
- Coverage Requirements Discovery
- Documentation Templates and Rules
- Prior-Authorization Support

#### Member Access
- Clinical Data Exchange
- Payer Data Exchange
- Directory
- Formulary
- Coverage Decision Exchange
- Price Cost Transparency

#### Clinical Data Exchange
- Payer Data Exchange
- Clinical Data Exchange
- Notifications
- Patient Data Exchange
- Performing Laboratory Reporting

#### Process Improvement
- Risk Based Contract Member Identification
- Risk Adjustment for Chronic Illness Documentation

Aligned with specific ONC or CMS rule
ditto
Jocelyn Keegan, 4/8/2020

[@Kathy Moncelsi]
Jocelyn Keegan, 4/8/2020
**Program Timeline**

- **Da Vinci Founded**
- **Concept Proposed**
- **Initial Working Session @ Optum Labs**
- **Q1 2018**
- **Q2 2018**
- **Q3 2018**
- **Q4 2018**
- **Q1 2019**
- **Q2 2019**
- **Q3 2019**
- **Q4 2019**
- **Q1 2020**
- **Q2 2020**
- **Q3 2020**
- **Q4 2020**

**Progress To Date**

- **By Sept 2019**
- **HL7 12 IGs Progressing Balloting**
- **HIMSS19 Demonstrations**
- **Initial Production Deployments**

**Future**

- **HIMSS20 Demonstrations**
- **Expect Initial Published IGs**

**1st Da Vinci Focused Connectathon @ Guidewell**
Da Vinci Demonstration
Lara’s Patient Journey

Benefits of Implementing Da Vinci

- Create transparency and reduce burden for patients, providers and payers across all sets of patient experience
- Saves money and time by minimizing the development of one-off solutions
- Leverage the collective expertise and efforts of industry experts and HL7 FHIR
- Reduce burden and waste by focusing on known high volume, manual activities that can be automated,
- Allow efficient, effective real-time data exchange to effect patient outcomes and support VBC

Booth Activities Stats

<table>
<thead>
<tr>
<th>Booth Activities</th>
<th>Stats</th>
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</thead>
<tbody>
<tr>
<td>Number of Members</td>
<td>46</td>
</tr>
<tr>
<td>Members Demonstrating</td>
<td>22+</td>
</tr>
<tr>
<td>Number of Demos</td>
<td>30+</td>
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<tr>
<td>Panel Discussions</td>
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</tr>
<tr>
<td>Use Cases in Flight</td>
<td>14</td>
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</table>

https://confluence.hl7.org/display/DVP/DaVinci2020Calendar
improve link, call out
Jocelyn Keegan, 4/8/2020
Power to Reduce, Inform and Delegate Prior Authorization Support

- Coverage Requirements Discovery
- Documentation Templates and Coverage Rules
- Prior Authorization Support

CDS Hooks

FHIR APIs

Transformation Layer

X12 278

X12 275 if required

Transformation Layer Optional

Prior Authorization Support

Improve transparency

Reduce effort for prior authorization

Leverage available clinical content and increase automation
Coverage Requirements Discovery (CRD)/Documentation Templates & Rules (DTR)

- DME Ordered “order-review” hook triggers query
- CDS Service searches repository leveraging FHIR data
- Invokes service & sends pre-fetch FHIR data including order information
- Library of coverage rules/templates
- SMART on FHIR App
- Displays Gaps/Template/Rule
- Collects Missing Data and Store as Part of Medical Record
- Retrieve rules, if necessary. Parse rule from CQL, identify gaps in data available in EHR and populate template
- Send CDS Hooks Response with link to SMART on FHIR App
### Cross Functional Flow Chart (DTR/Order Version)

<table>
<thead>
<tr>
<th>Office/Hospital EHR</th>
<th>Payer / Contractor / Benefit Manager</th>
<th>Payer/Plan Systems</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) DME Ordered ‘order-review’ hook triggers query</td>
<td>(2) Invokes service &amp; sends pre-fetch FHIR data including order information</td>
<td>(3) CDS Service searches repository leveraging FHIR data, evaluates coverage criteria</td>
<td>(4b) Eligibility, Provider/Supplier Enrollment, Claims</td>
</tr>
<tr>
<td>(7) Display gaps and collect missing data and store as part of the medical record</td>
<td>(6) Retrieve rules if appropriate, Using CQL identify gaps in data available in EHR</td>
<td>(5) Send CDS Hooks Response with optional link to SMART App</td>
<td></td>
</tr>
<tr>
<td>(8) Order placed to supplier</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

**CDS Hooks**

SMART on FHIR App

**CQL / FHIR / SMART**

- Direct, FHIR, HL7 V2, eHealth Exchange, Fax

**CDS Integration into Payer Systems**

- CRD/DTR

**Existing EMR Order Process**

- (9) Receives Order, Fulfills Order
CRD/ DTR Benefits

Benefits
• Takes guesswork out of patient specific coverage by sharing authorization or process requirements in workflow
• Improves transparency of patient and procedure specific rules to provider and patient
• Exposes information about patient benefits when care team is most likely with or near patient, so options can be discussed and decided upon
Prior Authorization Support
Abstraction/Transform for HIPAA Compliance

Clearinghouse or Integration Required to Meet HIPAA Regulations
Prior Authorization Support Benefits

Benefits
• Reduces re-keying, duplicate entry of prior authorization data for provider team
• Creates possibility for automation of prior authorization if clinical data is present
• Improves quality of information shared by using FHIR standard
• Bridges emerging clinical data standards to existing HIPAA administrative standards
Burden Reduction Supplemental Guides

• Provide additional, detailed examples for implementers
  • Workflow
  • Example FHIR resources
  • Reference Implementation details
• Clarification of implementation guides
• Best practices learned from implementation
• Potential content for future IG updates

Categories and Examples of Prior Authorization
• Durable Medical Equipment – Oxygen
• Diagnostic Imaging – Head MRI
• Referrals – Orthopedic referral for joint replacement
• Surgery – Total Joint Replacement
• Laboratory – Genetic testing
• Specialty Medication (not under PBM) – Immunotherapy for RA or Oncology Example?
Example Process

- Identify a service or item that frequently requires PA and documentation
- Define workflow and clinical/business data requirement
- FHIR Gap analysis (Based on IGs)
  - FHIR Resources
  - FHIR Operations
- Create Example FHIR resources
- Load resources into reference implementation
- Develop UX to exemplify the process
**See Progress, Test, Implement**

**VIEW**
- Live Demos
- Member Panels
- End to End Clinical Scenario

View Full Schedule

**FIND**
- Listserv Sign Up
- Background collateral
- Active Use Case content
- Implementation Guides
- Reference Implementations
- Calendar of Activities & Updates

**KEY RESOURCES**
- HL7 Confluence Site - https://confluence.hl7.org/display/DVP/
- Where to find Da Vinci in Industry - https://confluence.hl7.org/display/DVP/Da+Vinci+2020+Calendar
- Use Case Summary and Links to Call In & Artifacts - https://confluence.hl7.org/display/DVP/Da+Vinci+Use+Cases
- Reference Implementation Code Repository - https://github.com/HL7-DaVinci
<table>
<thead>
<tr>
<th>IG</th>
<th>Status</th>
<th># Times Tested</th>
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<tbody>
<tr>
<td><strong>Quality Improvement</strong></td>
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<tr>
<td>Data Exchange for Quality Measures (DEQM)</td>
<td>STU 2 Ballot 1 based on FHIR R4</td>
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<td>Gaps in Care</td>
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<tr>
<td><strong>Coverage/ Burden Reduction</strong></td>
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<tr>
<td>Coverage Requirements Discovery (CRD)</td>
<td>STU 1 Ballot 2 based on FHIR R4</td>
<td>7</td>
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<tr>
<td>Documentation Templates &amp; Rules (DTR)</td>
<td>STU 1 Ballot 2 based on FHIR R4</td>
<td>6</td>
</tr>
<tr>
<td>Prior Authorization Support (PAS)</td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
<td>4</td>
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<tr>
<td><strong>Member Access</strong></td>
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<td>Health Record Exchange Framework (HRex)</td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
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<td>Clinical Data Exchange (CDef)</td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
<td>5</td>
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<td>Payer Data Exchange (PDef)</td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
<td>5</td>
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<tr>
<td>Payer Data Exchange (PDef): Formulary</td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
<td>4</td>
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<table>
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<th>IG</th>
<th>Status</th>
<th># Times Tested</th>
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<td>STU 1 Ballot 1 based on FHIR R4</td>
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<td><strong>Payer-Payer Coverage Decision Exchange</strong></td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
<td>4</td>
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<tr>
<td><strong>Patient Cost Transparency</strong></td>
<td>Planning</td>
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<tr>
<td><strong>Clinical Data Exchange</strong></td>
<td>STU 1 Ballot 1 based on FHIR R4</td>
<td>4</td>
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<tr>
<td><strong>Notifications</strong></td>
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<tr>
<td><strong>Patient Data Exchange</strong></td>
<td>Planning</td>
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<td><strong>Performing Laboratory Reporting</strong></td>
<td>Planning</td>
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<td><strong>Process Improvement</strong></td>
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<td>Chronic Illness Documentation Risk Adjustment</td>
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</table>
JK36    make this look better? cleaner?
Jocelyn Keegan, 4/8/2020

JK39    [@Kathy Moncelsi]
Jocelyn Keegan, 4/8/2020

KM6    [@Jocelyn Keegan] Let me know if this works. I think it's a little cleaner with everything on one line. I made the URLs a little less harsh with a brown instead of red.
Kathy Moncelsi, 4/8/2020
Da Vinci

Objective
Da Vinci is a private sector initiative that addresses the needs of the Value Based Care Community by leveraging the HL7 FHIR platform. Learn more.

Quick Links
Presentations & Status
Latest Da Vinci Overview Slides
Latest Project Update
HIMSS19 Da Vinci Booth Panel
Da Vinci HIMSS19 Update
Da Vinci HIMSS Interoperability Showcase Vignette
Da Vinci Progress Update 11-2018.pdf

Project Resources
Use Case Summary
Calendar - Meetings and Events

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