

Presentation of Current Approaches and Solutions

Expanding eConsent: Advance Care Planning in the 21st Century

Lightning Round - What to Expect

This will be a fast- moving session. Fasten your seatbelts!

1. Introduction (Ken Rubin)
2. BPM+ Presentation (Ben Cushing)
3. IOI/Trisotech Presentation (Denis Gagne)
4. Transition (Matt Rose)
5. Lightning Round presentations (about 5 minutes each)

Lightning Round

Rapid Review of eConsent and Advance Care Planning Case Studies



Ken Rubin

Executive Director

BPM+ Health



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Obtaining consent prior to surgery using business models

An Trisotech/IOI Collaboration



Dr. John Svirbely, MD

Chief Medical Informatics Officer (CMIO),
jsvirbely@Trisotech.com

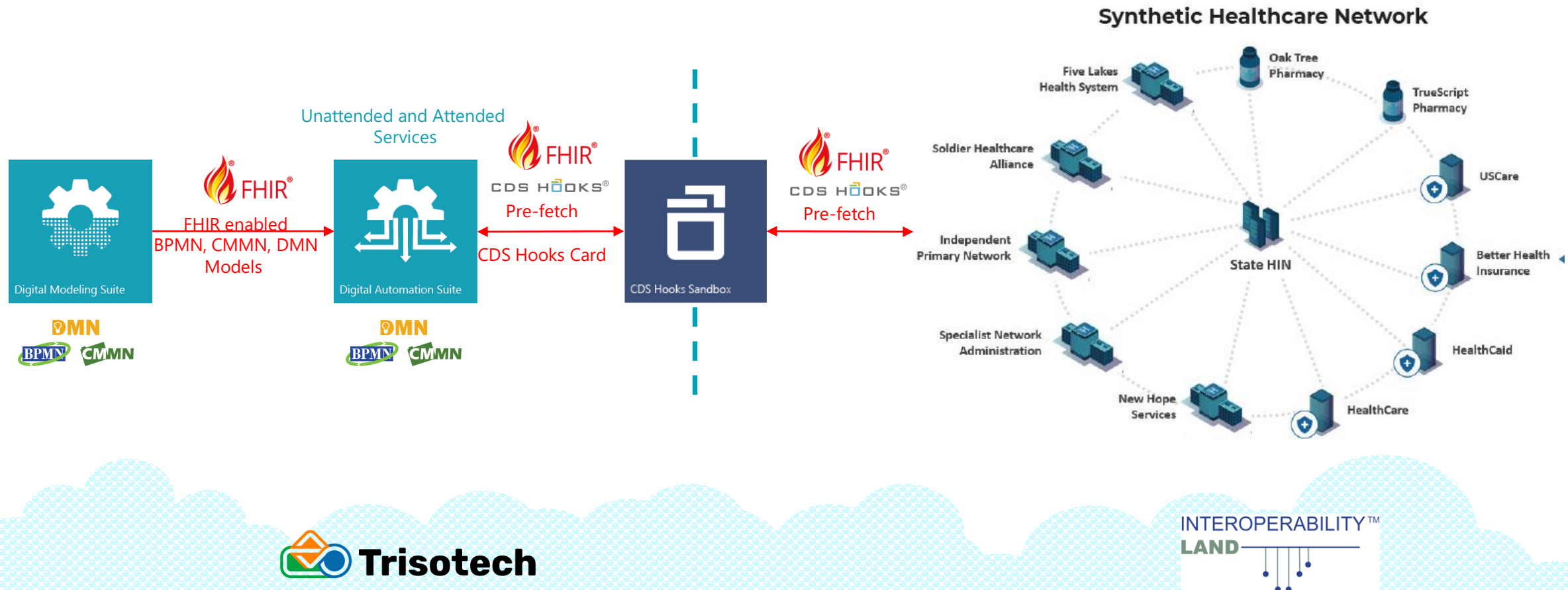
Denis Gagne

Chief Executive Officer (CEO),
dgagne@Trisotech.com

Our Goals today is to Showcase :

- 1 Usage of the **FHIR Consent Resource** (more specifically: the Medical Treatment Consent Directive use case, not yet developed).
- 2 BPM+ Health **Visual Process and Decision Models** as a way to capture guideline knowledge via the Trisotech Digital Enterprise Suite (DES)
- 3 A synthetic but realistic **Healthcare Ecosystem** via the Interoperability Land (IOL) from the Interoperability Institute (IOI)

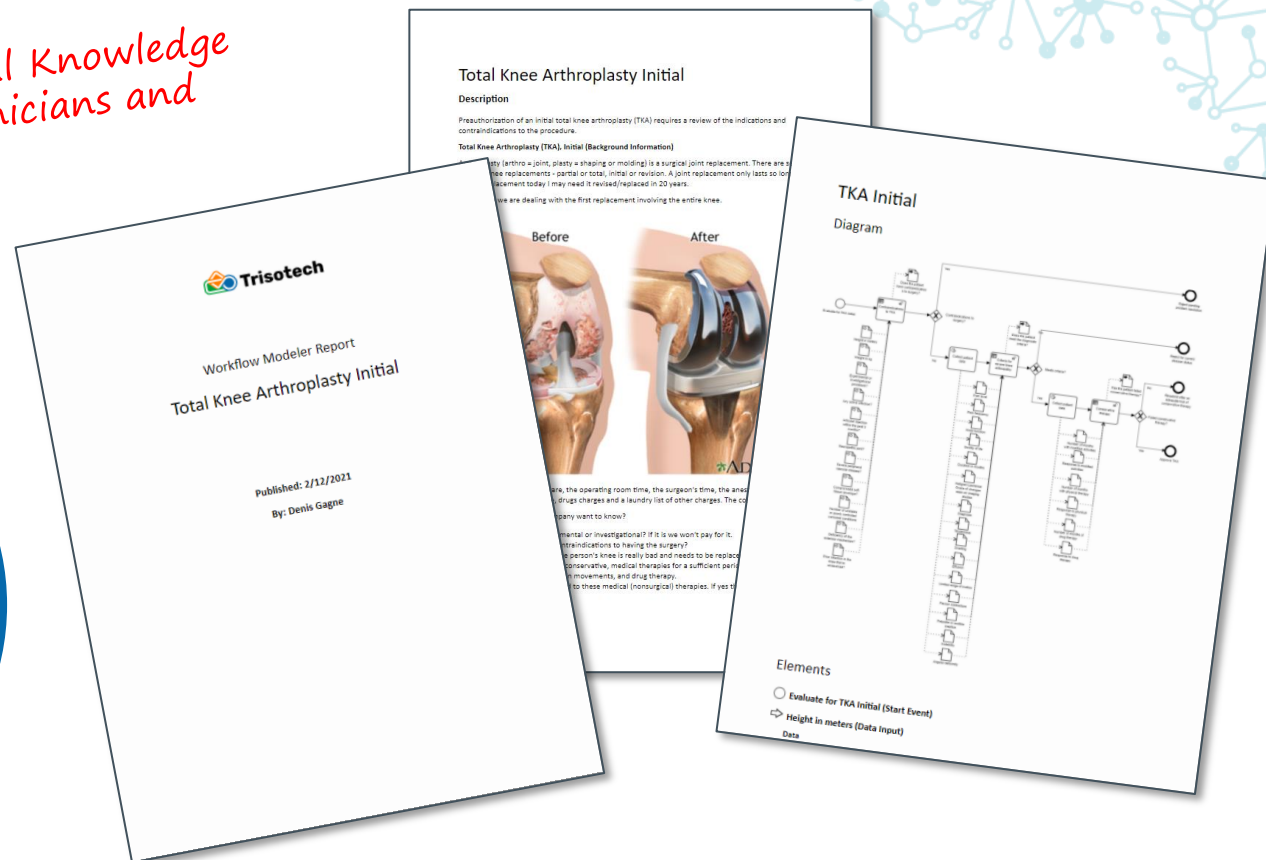
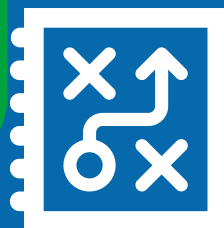
“Cloudpletely” based on International Open Standards



*** A single visual Knowledge Artefact for clinicians and for automation*

BPM+ Guideline Models

Created by
clinicians for
clinicians



- The model is the guideline specification
- The model is the guideline logic
- The model is the guideline documentation
- The model is the guideline automation code

 **DMN**

 **BPMN**

 **CMMN**

Demo Scenario



Evaluation of patient for a Total Knee Arthroplasty (TKA)

Unattended Service

Obtain preauthorization

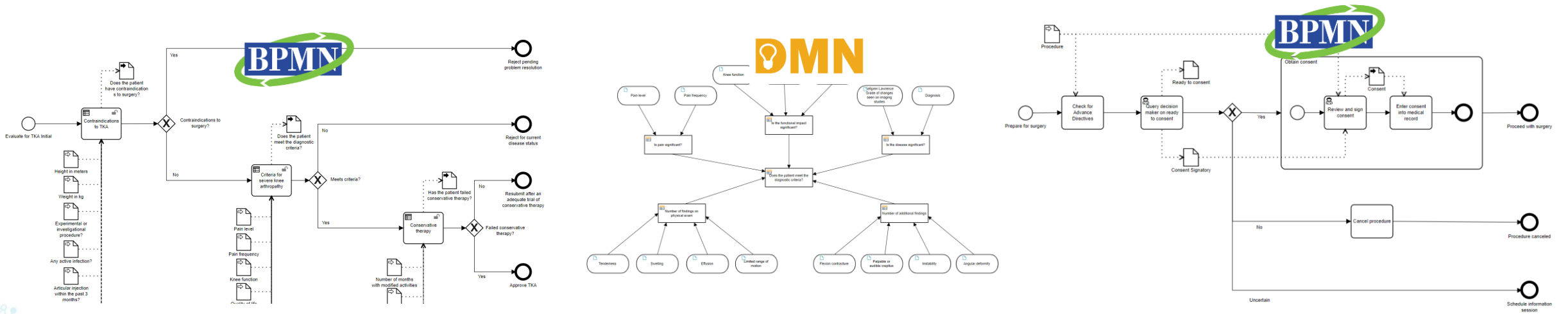
Unattended Service

Obtain consent for surgery

Attended Service

Prehabilitation

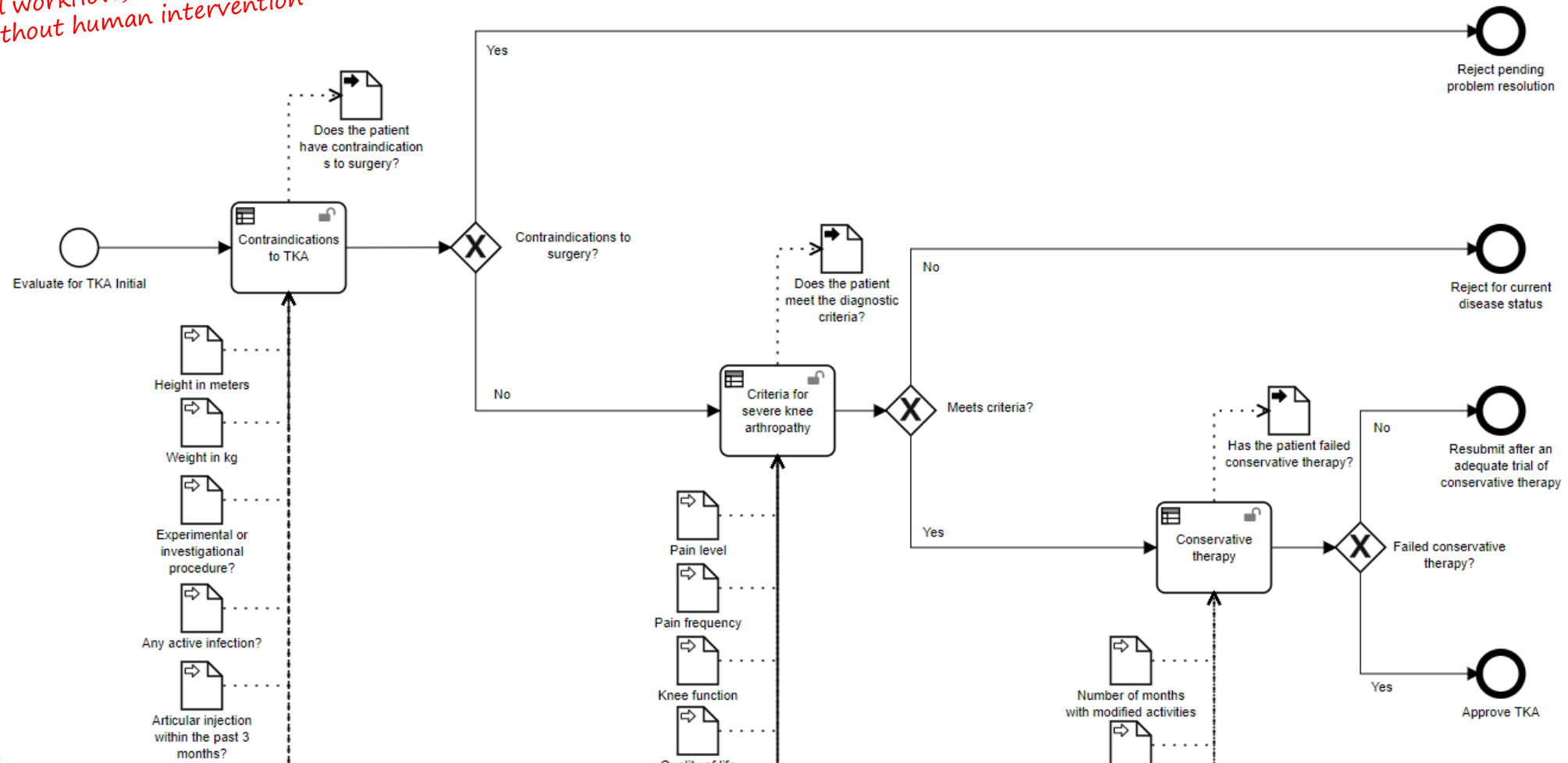
Prep for the surgery



TKA Preauthorization



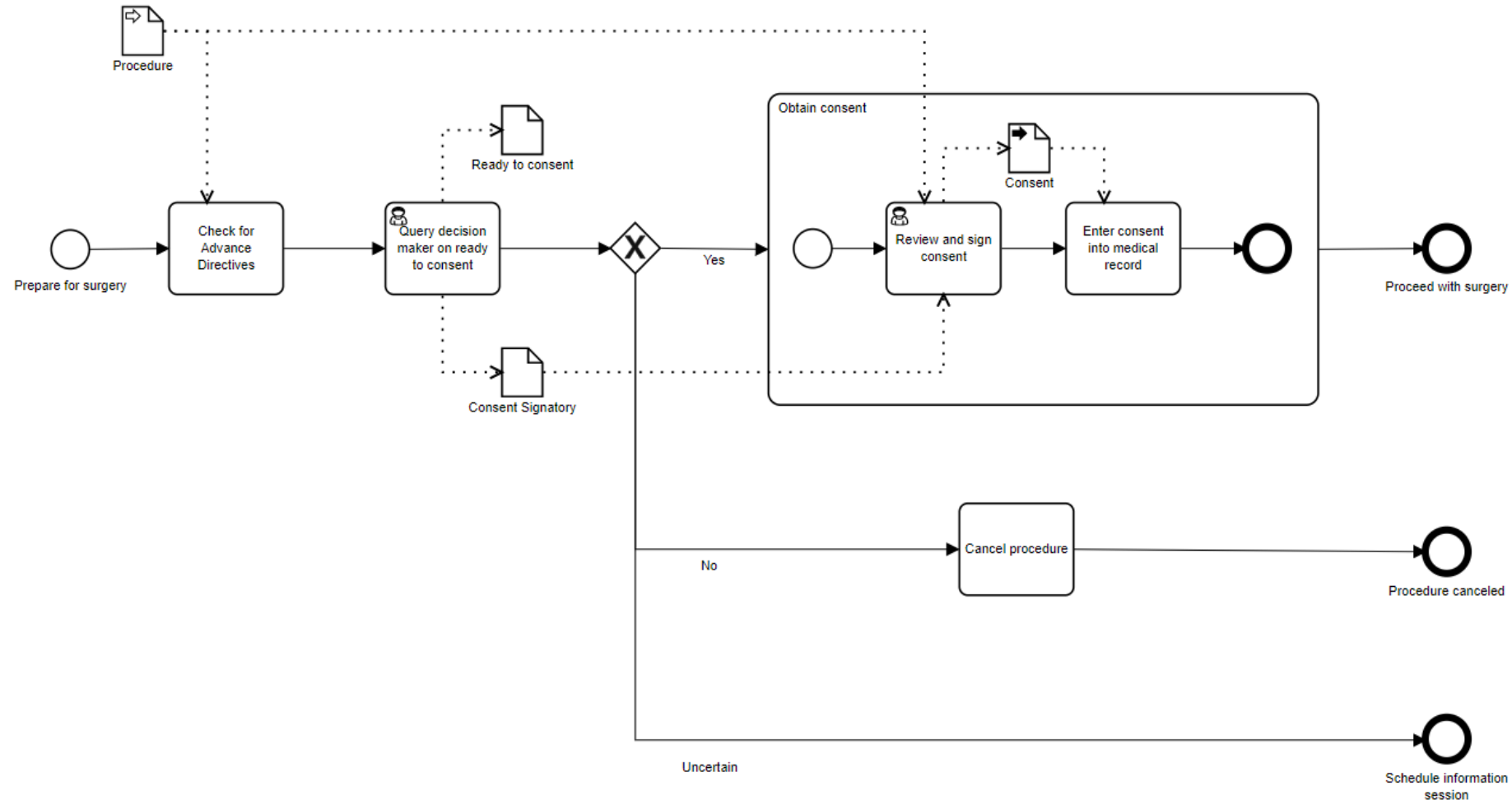
*** TKA preauthorization is an unattended workflow, it will straight through without human intervention*



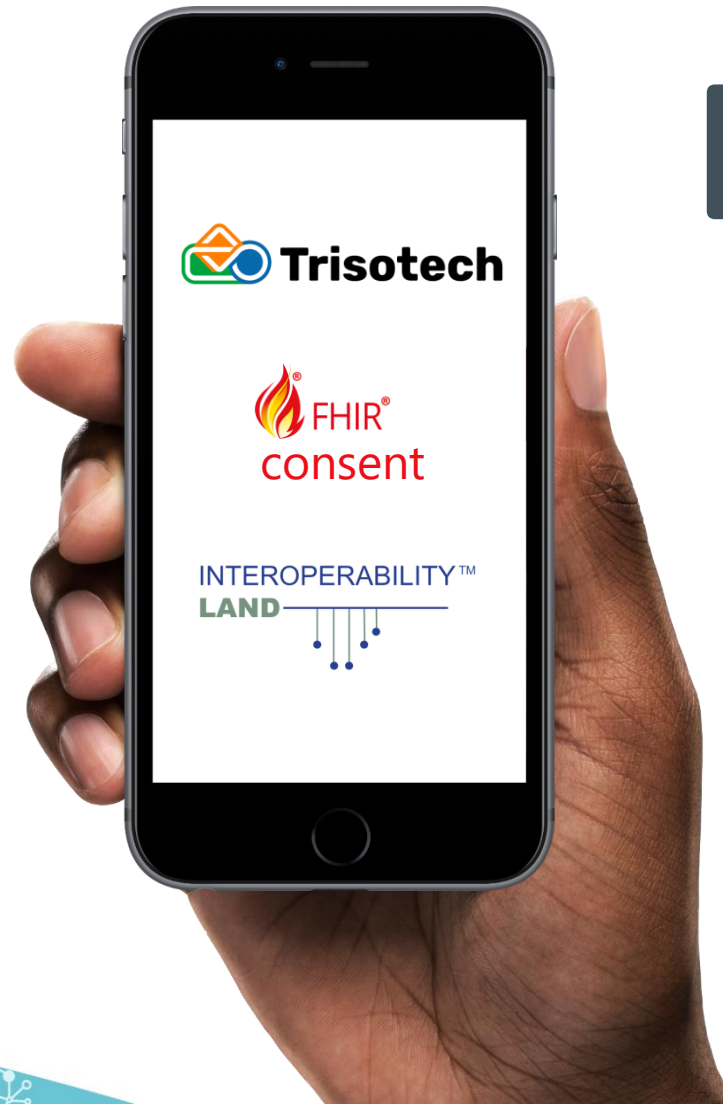
Consent Process




*** Consent is an attended workflow,
it will require human entries to move
forward*





Demo



TRISOTECH DEMO SANDBOX EMULATES AN EHR

 **Trisotech** CDS Hooks Sandbox

Patient ViewRx ViewPAMA Imaging



Patient View

George Blankenship

ID: tka-2 Birthdate: 1955-01-22

No Cards

DemographicsConditionsAdvanced









Name: Search by name...

Any Gender

Any Age

Sort: ID Name Gender DOB

Search

<input type="checkbox"/>		Rose Reynolds 43 year old female DOB: 1978-01-07ID: tka-1MRN: Unknown	>
<input checked="" type="checkbox"/>		George Blankenship 66 year old male DOB: 1955-01-22ID: tka-2MRN: Unknown	>
<input type="checkbox"/>		Ayesha Leon 63 year old female DOB: 1958-01-22ID: tka-3MRN: Unknown	>
<input type="checkbox"/>		Michelle Holland 71 year old female DOB: 1950-01-23ID: tka-4MRN: Unknown	>
<input type="checkbox"/>		Suzu Test 65 year old female DOB: 1955-12-29ID: c1684daa-7c90-4cd6-b368-f36fe1332f6eMRN: Unknown	>
<input type="checkbox"/>		Bill J Test 66 year old male DOB: 1955-01-12ID: c08ee1bd-b295-44d5-b406-e59a03ff4828MRN: Unknown	>
<input type="checkbox"/>		Debby A Test 65 year old female DOB: 1955-10-29ID: a3242672-ffc4-4fe5-908d-7a2eae82767fMRN: Unknown	>
<input type="checkbox"/>		Robert R Test 65 year old male DOB: 1956-01-30ID: eec238a8-0894-4e84-aea4-d055916fea65MRN: Unknown	>

← Prevpatient 26 to 42 of 42Next →

Patient Selector

BPM+ MODELS CAN BE PUBLISHED AS SERVICES USING A SINGLE CLICK

The screenshot displays the 'Service Library' interface. A modal window titled 'TKA Consent (FHIR IOI)' is open, showing details for a published service. The modal includes a 'Published by' section with the name 'Denis Gagne' and date '2/23/2021', a 'Group Artifact Version' section with the value 'bpmn:total-knee-arthroplasty-with-consent-fhir:LATEST', and a 'Feedback' link. It also shows 'Version: Latest' and 'Service: Whole model'. A 'Model view' section displays a BPMN diagram. At the bottom of the modal, there are buttons for 'Try it', 'Rest API', 'Open API', 'Run Test', 'Promote', 'Advanced Options', and 'Delete'. The background shows a list of services in the library, including 'Total Knee Arthroplasty (TKA) (FHIR)' and 'Treat Patient at Risk of CKD (FHIR)'.

VARIOUS SERVICE ENDPOINTS ARE GENERATED INCLUDING CDS HOOKS

The screenshot displays the Trisotech Service Library interface. A modal window titled "TKA Consent (FHIR IOI)" is open, showing various service endpoints. The background interface includes a "Service Library" header, filters for "Environment: prod", "Language: All languages", and "Group: All groups", along with a "Search Service" bar. The modal window contains the following sections:

- Form**: <https://demo.trisotech.com/execution/bpmn/form/prod/bpmn/total-knee-arthroplasty-with-consent-fhir>
- Rest API**: <https://demo.trisotech.com/execution/bpmn/api/run/prod/bpmn/total-knee-arthroplasty-with-consent-fhir>
- Open API**: <https://demo.trisotech.com/execution/bpmn/api/openapi/prod/bpmn/total-knee-arthroplasty-with-consent-fhir>
- Test**: <https://demo.trisotech.com/execution/bpmn/api/test/prod/bpmn/total-knee-arthroplasty-with-consent-fhir>
- CDS Hooks Discovery**: <https://demo.trisotech.com/execution/bpmn/cds-services/prod/bpmn/total-knee-arthroplasty-with-consent-fhir/cds-services>


At the bottom of the modal, there is a row of action buttons: "Try it", "Rest API", "Open API", "Run Test", "Promote", "Basic Options", and "Delete".

CDS HOOKS END POINT CAN BE ADDED TO THE DEMO SANDBOX


The screenshot displays the Trisotech CDS Hooks Sandbox interface. The top navigation bar includes the Trisotech logo, 'CDS Hooks Sandbox', and tabs for 'Patient View', 'Rx View', and 'PAMA Imaging'. The 'Patient View' tab is active, showing patient information for George Blankenship (ID: tka-2, Birthdate: 1955-01-22). A modal dialog titled 'Add CDS Services' is open, prompting the user to 'Enter discovery endpoint url'. The URL 'https://demo.trisotech.com/execution/bpmn/cds-services/prod/bpmn/total-kr' is entered in the text field. Below the input field, a note states: 'Note: See [documentation](#) for more details regarding the Discovery endpoint.' The dialog has 'Save' and 'Cancel' buttons at the bottom. In the background, a table lists several patients with their IDs and MRNs. A 'CDS Developer Panel' is visible on the right side of the interface.

ID	MRN
tka-1	Unknown
tka-2	Unknown
tka-3	Unknown
tka-4	Unknown
c1684daa-7c90-4cd6-b368-f36fe1332f6e	Unknown
c08ee1bd-b295-44d5-b406-e59a03ff4828	Unknown
a3242672-ffc4-4fe5-908d-7a2eae82767f	Unknown
eec238a8-0894-4e84-aea4-d055916fea65	Unknown

CDS HOOKS INFO CARD RESULTING FROM BPM+ MODEL APPEARS INSTANTANEOUSLY

 **Trisotech** CDS Hooks Sandbox

Patient ViewRx ViewPAMA Imaging



Patient View

George Blankenship

ID: tka-2 Birthdate: 1955-01-22

TKA Consent (FHIR IOI)

Source: [TKA Consent \(FHIR IOI\)](#)

Does the patient have contraindications to surgery? : Yes
Result : Reject pending problem resolution

Patient Selector

Demographics

Conditions

Advanced










Name: Search by name...

Any Gender

Any Age

Sort: ID Name Gender DOB

Q Search

<input type="checkbox"/>		Rose Reynolds 43 year old female DOB: 1978-01-07	ID: tka-1	MRN: Unknown	>
<input checked="" type="checkbox"/>		George Blankenship 66 year old male DOB: 1955-01-22	ID: tka-2	MRN: Unknown	>
<input type="checkbox"/>		Ayesha Leon 63 year old female DOB: 1958-01-22	ID: tka-3	MRN: Unknown	>
<input type="checkbox"/>		Michelle Holland 71 year old female DOB: 1950-01-23	ID: tka-4	MRN: Unknown	>
<input type="checkbox"/>		Suzy Test 65 year old female DOB: 1955-12-29	ID: c1684daa-7c90-4cd6-b368-f36fe1332f6e	MRN: Unknown	>
<input type="checkbox"/>		Bill J Test 66 year old male DOB: 1955-01-12	ID: c08ee1bd-b295-44d5-b406-e59a03ff4828	MRN: Unknown	>
<input type="checkbox"/>		Debby A Test 65 year old female DOB: 1955-10-29	ID: a3242672-ffc4-4fe5-908d-7a2eae82767f	MRN: Unknown	>
<input type="checkbox"/>		Robert R Test 65 year old male DOB: 1956-01-30	ID: eec238a8-0894-4e84-aea4-d055916fea65	MRN: Unknown	>
<input type="checkbox"/>		Rachel L Test 66 year old female			>

< Prev


patient 26 to 42 of 42

Next >



** TKA preauthorization is an unattended workflow, so its run automatically

** Patient not approved for TKA surgery, so consent workflow not triggered

SWITCH TO A PATIENT APPROVED FOR TKA LEADS TO CONSENT WORKFLOW

 **Trisotech** CDS Hooks Sandbox

Patient ViewRx ViewPAMA Imaging



Patient View

Rose Reynolds

ID: tka-1 Birthdate: 1978-01-07

TKA Consent (FHIR IOI)

Source: TKA Consent (FHIR IOI)










Does the patient have contraindications to surgery? : No
Does the patient meet the diagnostic criteria? : Yes
Has the patient failed conservative therapy? : Yes
Result : Approve TKA

Query decision maker on ready to consent

Patient Selector

DemographicsConditionsAdvanced

Sort: ID Name Gender DOB

<input checked="" type="checkbox"/>		Rose Reynolds 43 year old female DOB: 1978-01-07 ID: tka-1 MRN: Unknown	>
<input type="checkbox"/>		George Blankenship 66 year old male DOB: 1955-01-22 ID: tka-2 MRN: Unknown	>
<input type="checkbox"/>		Ayesha Leon 63 year old female DOB: 1958-01-22 ID: tka-3 MRN: Unknown	>
<input type="checkbox"/>		Michelle Holland 71 year old female DOB: 1950-01-23 ID: tka-4 MRN: Unknown	>
<input type="checkbox"/>		Suzy Test 65 year old female DOB: 1955-12-29 ID: c1684daa-7c90-4cd6-b368-f36fe1332f6e MRN: Unknown	>
<input type="checkbox"/>		Bill J Test 66 year old male DOB: 1955-01-12 ID: c08ee1bd-b295-44d5-b406-e59a03ff4828 MRN: Unknown	>
<input type="checkbox"/>		Debby A Test 65 year old female DOB: 1955-10-29 ID: a3242672-ffc4-4fe5-908d-7a2eae82767f MRN: Unknown	>
<input type="checkbox"/>		Robert R Test 65 year old male DOB: 1956-01-30 ID: eec238a8-0894-4e84-aea4-d055916fea65 MRN: Unknown	>
<input type="checkbox"/>		Rachel L Test 66 year old female DOB: 1954-01-21 ID: tka-5 MRN: Unknown	>

patient 26 to 42 of 42

** TKA surgery approved so Consent workflow is triggered

STEP TO THROUGH CONSENT WORKFLOW

Query decision maker on ready to consent

Ready to consent
Yes

Consent Signatory
Patient

Run Load

Continue service

Review and sign consent

*** Consent is an attended workflow,
so entries are required*

Review and sign consent

Information

Procedure Consent Signatory


Procedure Name	Total Knee Arthroplasty (TKA)
Patient Name	Rose Reynolds

Document Ref



Choose file General Consent For Surgery.pdf

Run Load

CONSENT DOCUMENT NOW ADDED TO PATIENT AS A FHIR RESOURCE

 **Trisotech** CDS Hooks Sandbox

Patient View Rx View PAMA Imaging

Patient View


Rose Reynolds

ID: tka-1 Birthdate: 1978-01-07

TKA Consent (FHIR IOI)
Source: [TKA Consent \(FHIR IOI\)](#)
Does the patient have contraindications to surgery? : No
Does the patient meet the diagnostic criteria? : Yes
Has the patient failed conservative therapy? : Yes
Result : Approve TKA

Query decision maker on ready to consent

Patient Selector

 **Rose Reynolds** Selected


Reload

Gender: female
DOB: 1978-01-07
Age: 43 year
Email: Unknown
Phone: Unknown
Address: 1587 Anthony Avenue 79601 Abilene USA
ID: tka-1
MRN: Unknown

Consent 1


Observation - Exam 20

Patient 1

 Patient

Identifier	Name	Gender	Birth Date
ID: tka-1	Rose Reynolds	female	01/07/1978

Trisotech.com

 **Trisotech**

Any questions?

THANKS!



SAAVHA Inc.



Dr. Mathew Rose
***SAAVHA Inc. Founder &
CEO***

S A A V # A

Patient Consent; Making Hard Discussions Easy

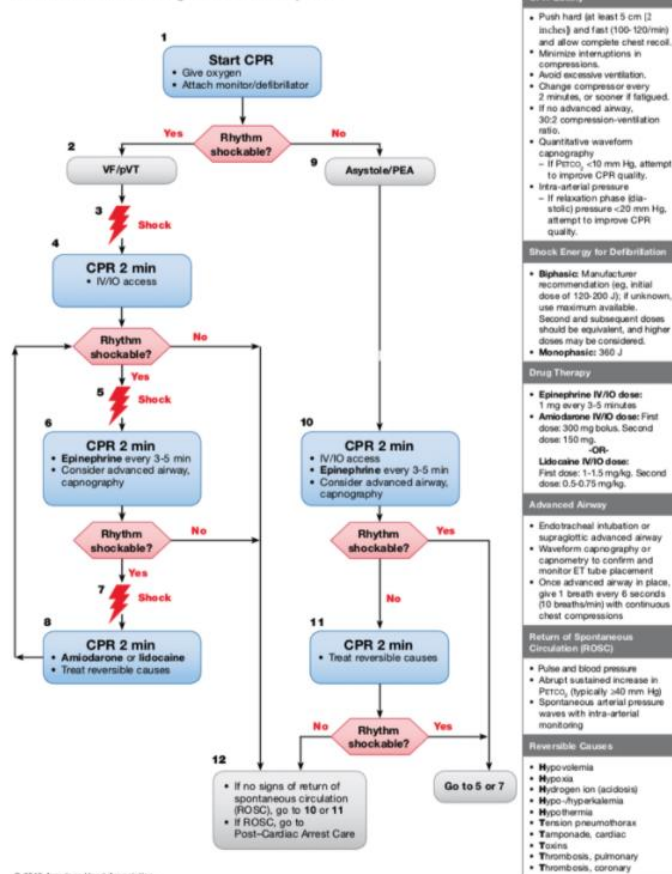
New Technology = Future Promise

BUT

Realization Requires
Needs of

Regulation
&
Implementation

Adult Cardiac Arrest Algorithm – 2018 Update



© 2018 American Heart Association

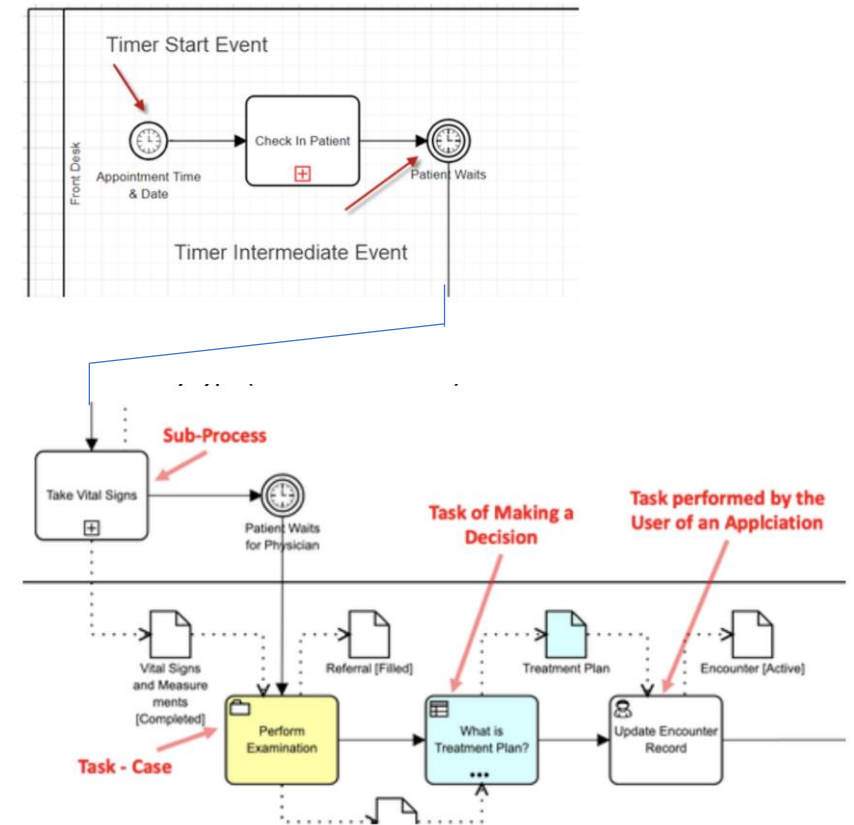


Figure 4 – BPMN Tasks is a Rule or Decision Task

PACIO Project



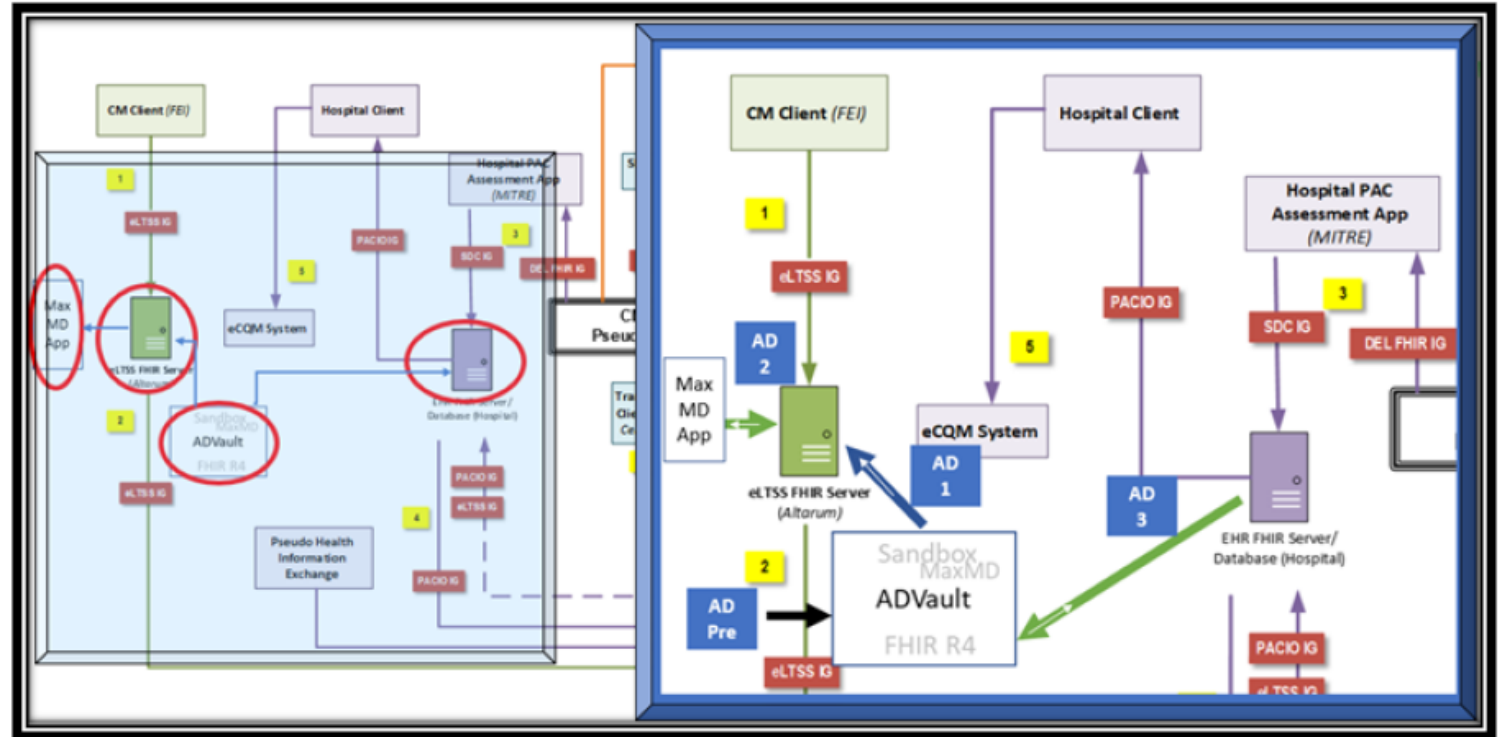
Maria Moen
Use Case Lead



HL7 PACIO Project: Advance Directive Information (ADI) Interoperability w/FHIR

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

- PACIO Leadership is made up of CMS, ONC, and MITRE.
- The PACIO Community is comprised of industry experts, trade associations, EMR developers, innovators, and thought leaders.



**January 2021 HL7 Connectathon:
PACIO Systems Design Related to the Interoperable
Exchange of ADI w/FHIR**

Touchstone Life Care



Dr. Merran Cooper
CEO



70% ¹ of Australians don't have an ACP

Doubt



Delay



Inefficiency

1. [Prevalence report](#)
2. [Incidence, duration and cost of futile treatment in end-of-life hospital admissions to three Australian public-sector tertiary hospitals: a retrospective multicentre cohort study 2017.](#)



PATIENTS & FAMILIES

9

- Treatment is delayed.
- Patients suffer more and for longer.
- Families forced into difficult decisions.



GOVERNMENT & INSURERS

- Waste of resources
- > \$A 153.1 million pa ²



AGED CARE PROVIDERS

- Lack systems and products

FHIR econsent



David Pyke

Director, Strategic Consulting

Senior Standards and Interoperability Architect

- FHIR Consent is part of the core Fast Health Interoperability Resources specification created and managed by HL7.
- The FHIR Consent Resource was added to the FHIR Specification for STU3 to manage interoperability of patient consent for information sharing.
 - Expanded in R4 for treatment, research and DNR or other treatment based directives
- Uses a complex model that allows for indicating all related parties, overarching policy and nested exceptions
- A project within the HL7 Patient Engagement Workgroup to handle Directives beyond treatment, such as: personal advance care plan, portable medical order (POLST, MOLST, etc.), living wills, etc.
- The largest issue has been to get an appropriate model that can be used internationally and adapted to local systems. For the draft R5 version, see <http://build.fhir.org/consent.html>

eHealth Exchange

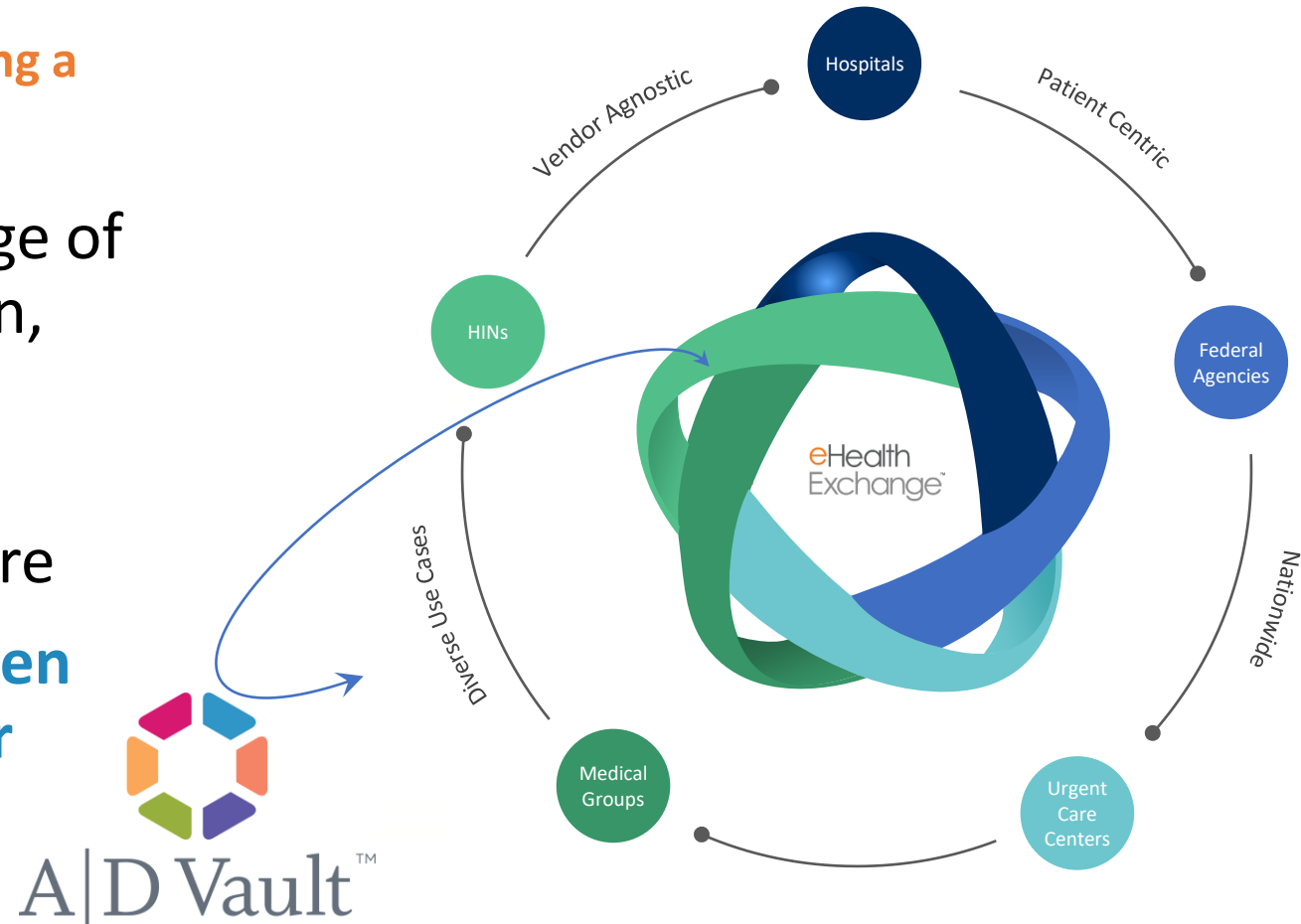


Pat Russell, MSN, RN, PMP
eHealth Exchange Director

What is eHealth Exchange?

A health data-sharing network providing a single connection to the country!

- Facilitates electronic exchange of patients' medical information, including advance care plans
- Improves the speed, quality, safety, and cost of patient care
- Informs clinical decisions **when seconds and minutes matter**



ADVault



Mike Munoz
Director of Product Management

Consumer HCA Consent and Document Sharing

MyDirectives My Dashboard My Decisions My Circle My Documents Help SIGN OUT

Name Your Second Alternate Healthcare Agent

Who do you want to speak for you if you can't? [Guide](#)

Second Alternate Healthcare Agent: Select an existing contact, or [Add someone new](#)

Title: Relationship:

First Name: Email Address:

Middle Name: Home Number:

Last Name: Mobile Number:

Suffix: [Add Address](#)

☒ Notify this person that you have chosen him or her to be your healthcare agent.

ACTION REQUIRED



Hello Janet Gonzalez,

Michael Munoz has asked you to be an alternate healthcare agent.

Michael Munoz has asked you to serve as an alternate healthcare agent in an emergency. Doctors might contact you to act as a communicator with doctors providing care. To learn more, [click here](#).

Please click the button below to accept or decline.

I have named you as one of my healthcare agents. You will have the authority to make decisions for me.

Respond to Request

Healthcare Agent Registration

Do you understand the responsibilities of a healthcare agent?

☒ Yes ☐ No

Great! Thank you. Understanding the role is important.

Have you discussed end-of-life options with Michael Munoz?

☒ Yes ☐ No

Great! Thank you. Knowing Michael Munoz's medical treatment goals, preferences, and values is important.

Do you accept Michael Munoz's request that you be his healthcare agent?

☐ Yes ☐ No

MyDirectives My Dashboard My Decisions My Circle My Documents Help SIGN OUT

Family and Friends

[Click here to change contact type](#)

Title:

First Name:

Last Name:

Phone: Type:

☒ My healthcare agent is authorized by me to make decisions if I'm unable to do so.

What type of document access would you like to give Janet Gonzalez?

uADD:

Mike's COVID-19 Statement:

[I prefer to assign one access level for all documents](#)

CANCEL **SAVE** **SAVE AND CONTINUE**



Notify Only - If you select this permission level, we will send your contact a notification that you have listed them as a contact in your MyDirectives document storage along with details on where the information is located. They cannot view any of your information.

View Only - If you select this permission level, your contact can view the documents you have in your account. They do not have the ability to edit, delete, copy, download or share any information from the web site.

Share - If you select this permission level, your contact can view the documents you have in your account. In addition, they have the ability to download and print any information from the site.

No Access - If you select this permission level, your contact will not be notified or have the ability to access your documents.

CLOSE



ACTION REQUIRED

Hello Janet Gonzalez,

You have been selected by your family member, Michael Munoz, as a contact with access and/or notification privileges to his advance care plans and documents. In order to grant you access to his information we will need to verify your credentials. Please follow the instructions below.

In order to continue, please click on the button below to verify your information and view Michael's information.

Access Michael's documents

If clicking the button doesn't work, please copy the following URL and paste it into your browser.

<https://secure.mysdirectives.com/PaperDocumentUpload/ConfirmContact/7c0757378cb34503aabb15e8akcd6b67a?ClientSiteId=MyD>

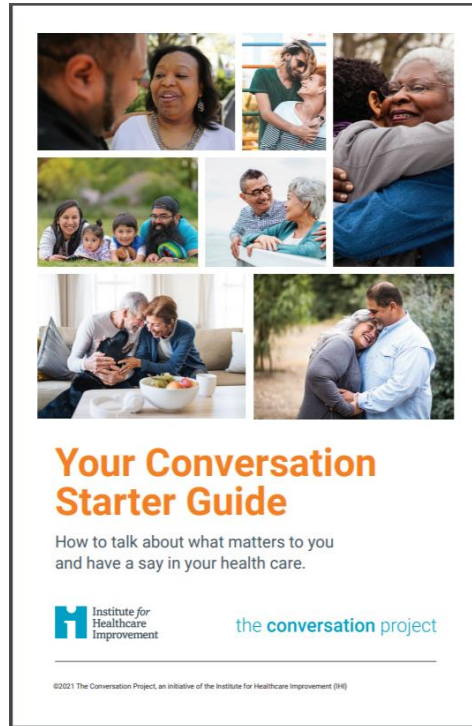
Thank you for using MyDirectives!

The Conversation Project



Kate DeBartolo

Helping people share their wishes for care through the end of life.



STEP 1
Think About What Matters to You

To get ready to talk about what matters to you and your wishes for care through the end of life, it's helpful to gather your thoughts as a first step. You don't need to have the conversation just yet. Here are some helpful ways to think about what matters to you and prepare for your conversation.

1 What does a good day look like for you?

SOME IDEAS Is it time with family or friends? Enjoying favorite everyday activities? What do you need to enjoy a good life — through the end of life?

What or who supports you during difficult times?

SOME IDEAS Your faith, culture, family, friends, pets

Try finishing this sentence:
What matters to me through the end of my life is...


SOME IDEAS Being able to recognize my children; being independent; being able to spend time with the ones I love

That's your "what matters to me" statement.

Sharing it with people you trust could be a big help if they need to communicate with your health care team one day. They may need to share what's important to you and what you need to be able to have a good day. They also may need to decide what type of treatment you'd want to receive. Completing this guide will help you refine what you want them to know about what matters to you.

The Conversation Project theconversationproject.org • Institute for Healthcare Improvement IHI.org 3

STEP 3
Start Talking



How much do the people who matter to you know about what matters most to you? There may be some things they already know, and other things that you need to tell them. Sometimes we might think others know how we feel, but they don't. Conversations help make what we think and how we feel as clear as possible.

1 Who needs to know what matters to you in your health care?

Check all that apply:

<input type="checkbox"/> Parent(s)	<input type="checkbox"/> Trusted friend(s)
<input type="checkbox"/> Spouse/partner(s)	<input type="checkbox"/> Doctor(s)
<input type="checkbox"/> Chosen family member(s)	<input type="checkbox"/> Nurse practitioner/nurse(s)
<input type="checkbox"/> Adult child/children	<input type="checkbox"/> Social worker
<input type="checkbox"/> Faith leader (minister, priest, rabbi, imam, etc.)	<input type="checkbox"/> Other: <input type="text"/>



US Living Will Registry



Joseph T. Barmakian, MD
Founder and C.O.O.



USACPR

usacpr.net



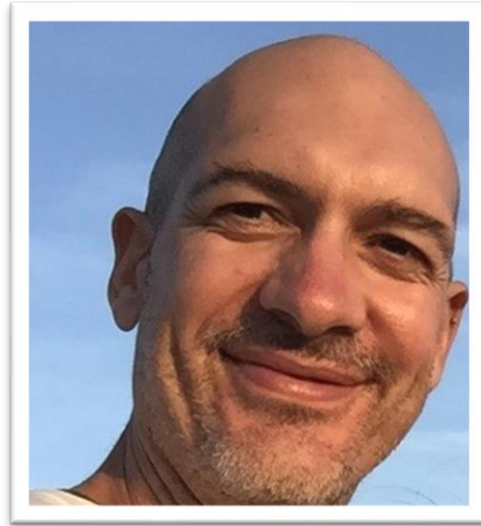
U.S. Advance Care Plan Registry®

Powered by U.S. Living Will Registry®

JOSEPH T. BARMAKIAN, MD

Founder and C.O.O.

Vynca



Michael Kersten
Director of Client Success

Vynca's Impact on Hospital Utilization and Place of Death

BACKGROUND

- Oregon death data
 - Acute and ambulatory

STUDY

- Reviewed one year of data (2018)
- 3,029 decedents 65 years and older
 - 1,754 (57.2%) had a POLST in Vynca
 - 1,275 (42.8%) had no POLST
- Natural deaths only
- Patients affiliated with health system (per ADT feed)
- POLSTs created by health system or uploaded at Oregon POLST Registry (>98% confidence match)

Impact on Place of Death: Scanned vs Digitally Created POLST



Impact on Place of Death: POLST vs no POLST



Impact on Hospital Utilization: Last 30 Days of Life

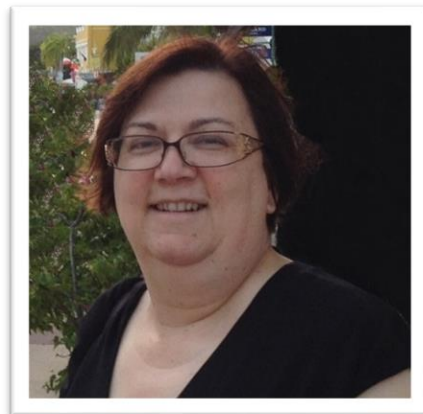


HL7 econsent



Jerry Goodnough

Engineering, Platform Architecture and Product Solutions



Lorraine Constable

Standards Architect

HL7 Consent Management Service Functional Model

- Sponsored by HL7 Service Oriented Architecture Group
 - Develop Conceptual and Logical Service Model for Consent Management
 - Integrate Consent Decision support into an orchestrated process that encompasses multiple content types over a broad set of use cases
- Participation by
 - ONC Leap Grant Consent Pilot, Telstra Health in Australia, Other US and international participants
- In Scope
 - Consent Decision, Consent Discovery, Consent Enforcement
- Current Status
 - Balloted as STU in January Cycle; Reconciliation underway

Project at: <https://confluence.hl7.org/display/SOA/Consent+Management+Service+Project>