



**Use Case Title: Collaborative Community Cancer Care**

**Overview:**

Tracey, a 53 year-old, has discovered a lump in her left breast. Her recent mammography screening results were normal. We follow her coordinated care as she visits her gynecologist, obtains additional imaging test and receives a cancer diagnosis. Information sharing between her gynecologist and radiologist enables a speedy referral, while Tracey herself shares valuable pre-registration information from home. At her first appointment, Tracey and her oncologist incorporate data from all sources to create a customized treatment plan.

**Value:** Collaborative Community Cancer Care: Information sharing between providers enables coordinated care through IHE Profiles. The use of standards and access to information for shared decision making furthers patient engagement. Interoperability drives STEPS to value through developing an expanded community for data sharing.

Story/Scenario	Vendor	Product	Standards
Tracey is seen by her gynecologist, Dr Schumer, after discovering a lump in her left breast. Her recent mammogram indicated the possibility of inconclusive results due to her dense breast tissue. Dr. Schumer, reviews her patient record with her and displays the Mammogram Images. Dr. Schumer suspects cancer and creates an imaging referral for Ultrasound Breast Screening at the Women’s Imaging Center. In addition to the imaging referral, a nurse draws blood. The specimens are sent to an external laboratory for Tumor Marker testing.	GE	Centricity Practice Solutions	XDS
The Women’s Imaging Center retrieves the imaging referral from the Dr Schumer’s office via the Community Clinical Data Repository. The retrieved referral is received securely by the Imaging Center’s edge server and converted to an imaging study order for processing by the Radiology Information System. The study is scheduled for	Qvera	Qvera Interface Engine	XDS XDS-I.b FHIR

<p>Tracey. Tracey reports to the Imaging Center for her scheduled exam. The exam is performed and read. The Radiologist suspects cancer, and immediately orders and performs an ultrasound-guided biopsy. The images and report results are published to the Community Clinical Document Repository for access by her care team.</p>			
<p>The radiology image(s)/report, provenance is signed and stored so that the patient or other clinicians can be confident of the original data's integrity and authorship. The Provenance records are populated with contextual information about the treatment and has an encrypted signature verifying the original documents.</p>	RAIN	FHIRelate	FHIR
<p>The Community Clinical Data Repository enables cross-enterprise and cross community access to the patient's Electronic Health Record. Tracey's EHR is updated with the Laboratory and Imaging records. Dr. Schumer reads the updated records and immediately tele-consults with Dr. Kemo, an Oncologist Specialist from the Cancer Treatment Center. The patient imaging and laboratory results are collaboratively retrieved and reviewed in a joint session. They confirm the cancer diagnosis and referral for treatment. The Dr. Schumer notifies Tracey of the confirmed diagnosis, based on positive findings and refers her to the Community Cancer Treatment Services.</p>	Cerner	Cerner HIE	XDS XDS-I XCA XCA-I XCPD
<p>The cancer clinic schedules an appointment with Tracey and assigns a pre-registration packet for her to complete via her patient portal. The pre-registration packet is prepopulated with information retrieved by the various EMRs and Clinical Data Repositories which hold her data. Tracey receives an email/text to securely access the forms from her mobile device. Tracey verifies the prefilled data and enters registration information, including Social Determinants of Health. Once completed, the data is sent to Cancer Services Clinical Data Repository as well as her Gynecologist.</p>	Formfast	FormFast Connect	FHIR HL7-ORU HL7-MDM
<p>Community Cancer Treatment Service is provided with the Pre-registration information. The cancer specialist accesses this, along with the comprehensive patient's health record through the physician's portal for the Cancer Care Community's Clinical Data Repository. The information is reviewed and the patient's case file is presented at a tumor board to decide on a treatment plan. The treatment plan is distributed to the patient's extended care team, including her Gynecologist and the Cancer Care team.</p>	Siemens	Siemens eHealth Solution	XCPD XDS-i XDS.b XCA-I HL7-ORU HL7-MDM

HIMSS18 Interoperability Showcase Use Case

Data exchange standards:

Vendor	Product	Category	Protocol	Interop Body	Interop Profile	Interop Actor	Interop Message	Send or Receive	Transaction Description
Qvera	QIE (Qvera Interface Engine)	Edge Server		IHE	XDS XDS-I FHIR	IDS	RAD-68		Receive Referral Provide and Register Images and Report FHIR Client
Cerner	Cerner HIE	Clinical Data Repository		IHE/HL7	XDS XCA /XCPD), HL7, HL7 ORU			Receive/Query	XDS.b registry/repository, XCA-I image exchange
GE	Centricity Practice Solutions	EMR		IHE	XDS				Referral  FHIR Server
FormFast	FormFast Connect	Patient Portal		HL7	HL7/ FHIR			Send/ Receive/Query	Receive ORU Query via FHIR Send Form data via HL7 MDM
Siemens	eHealth Solutions	Clinical Data Repository		IHE/HL7	XDS.b XCA XCA-i XCPD) HL7			Receive and Send	Query via XCPD Retrieve via XCA-i and XDS.b Send via HL7 MDM
RAIN	FHIRelate	Data provenance		HL7	FHIR			Receive /Internal Query	Store documents & provenance

**HIMSS Value STEPS Framework:**

Step	Description	Point of View	Point of View
S: Satisfaction	<p>This type of value focuses on people, process and technology use cases that increases stakeholders' satisfaction with the delivery of care. Satisfaction includes types of value such as:</p> <ul style="list-style-type: none"> <li>Patient satisfaction</li> <li>Provider satisfaction</li> <li>Staff satisfaction</li> <li>Other satisfaction</li> </ul>	<p>Allows for easier accessibility for each person/group to have updated information.</p>	<p>Patient Portals embrace and engage the patient by providing the ability for an individual to look at their own data, comment, ask questions and see results. When the patient is involved in their own health care, we see improved patient outcomes because the patient is truly a stakeholder with DECISION making authority.</p>
T: Treatment/Clinical	<p>This type of value focuses on effective and improved treatment of patients, reduction in medical errors, inappropriate/duplicate care, increase in safety, quality of care and overall clinical efficiencies. Treatment/Clinical includes types of value such as:</p> <ul style="list-style-type: none"> <li>Efficiencies</li> <li>Quality of Care</li> <li>Safety</li> <li>Other treatment/clinical</li> </ul>		<p>Modern electronic charting can provide decision support to aid in the reduction of medical errors.</p>

<p>E: Electronic Secure Data</p>	<p>This type of value focuses on improved data capture, data sharing, reporting, use of evidence-based medicine, and improved communication by and between physicians, staff and patients. Electronic Secure Data includes types of value such as:</p> <ul style="list-style-type: none"> <li>Privacy &amp; Security</li> <li>Data sharing</li> <li>Data reporting</li> <li>Enhanced communication</li> </ul>	<p>Patient/Physician satisfaction: allows for information from different systems to be collected in one common repository to review; allows for all participants to see information at a glance instead of combing through paper records which may or may not be a complete/accurate listing of patient's history</p> <p>Privacy/Security: Increase in security/network/communication as information is leaving secure networks to join with other networks for collaborative sharing</p>	<p>Provenance reporting ensures data integrity and boosts confidence that the information received is trustworthy and accurate.</p>
<p>P: Patient Engagement &amp; Population Management</p>	<p>This type of value focuses on improved population health and reduction in disease due to improved surveillance/screening, immunizations and increased patient engagement due to improved patient education and access to information. Patient Engagement &amp; Population Management includes type of value such as:</p> <ul style="list-style-type: none"> <li>Patient education</li> <li>Patient engagement</li> <li>Prevention</li> <li>Population Health</li> </ul>	<p>This sets the groundwork for an expanded community for data sharing. As the patient enlarges her care team, the use of standards and access to education materials and shared decision making will help her in her progress and engagement.</p>	<p>Patient Portals allow patients to research and find information on their current situation, diagnosis, home treatments, remedies, suggested lifestyle changes, new diets, exercise routines, etc.</p>

S: Savings	This type of value focuses on documented financial, operational and efficiency savings resulting from factors such as improved charge capture, use of staff resources and workflow and increased patient volume and more efficient use of space .	Can help provide understandings of where savings can occur	Insurance aside, patients will see reduced costs as repeated tests and imaging are no longer needed. However, it could be argued that the medical facility may lose revenue by not doing these tests.
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