Interoperability and Patient Centred Care Coordination

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Agenda

The data of care coordination

Interoperability

Clinical information models and FHIR profiles

The path ahead
Coordination of care for a single individual

The same information and plan shared between, health professionals, social and support services, and the family and patient
What’s in a Care Plan: S&I framework model

- **Health Conditions/Concerns**: Active Problems
- **Risks/Concerns**: Wellness, Barriers, Injury (e.g. falls), Illness (e.g. ulcers, cancer, stroke, hypoglycemia, hepatitis, diarrhea, depression, etc.)
- **Risk Factors**: Age, gender, Significant Past Medical/Surgical Hx, Family Hx, Race/Ethnicity, Genetics, Historical exposures/lifestyle (e.g. alcohol, smoke, radiation, diet, exercise, workplace, sexual...)
- **Goals**: Desired outcomes and milestones, Readiness, Prognosis, Related Conditions, Related Interventions, Progress
- **Patient Status**: Functional, Cognitive, Physical, Environmental
- **Interventions/Actions**: (e.g. medications, services, procedures, education, etc.) Start/stop date, interval, Authorizing/responsible parties/roles/contact info, Setting of care, Instructions/parameters, Supplies/Vendors, Planned assessments, Expected outcomes, Related Conditions, Status of intervention

Source: ONC S&I Framework Longitudinal Coordination of Care Initiative, 2012
IMPACT: Improving Massachusetts Post Acute Care Transfers
IMPACT Project: “Receiver” data needs survey

- Survey of Receivers’ needs
- 46 Organizations completing evaluation
- 11 Types of healthcare organizations
- 12 Different types of user roles
- 1135 Transition surveys completed

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<tr>
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<th>From Acute Care Hospital</th>
<th>From Emergency Department</th>
<th>From Skilled Nursing Facility</th>
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<tr>
<td>72 Chief Complaint</td>
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<tr>
<td>73 Reason Patient is being referred</td>
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<tr>
<td>74 Reason for Transfer</td>
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<td>75 Sequence of events proceeding patient's disease/condition</td>
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<tr>
<td>76 History of Present Illness</td>
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Continuity of Care Document data element gaps

- Data Elements for Longitudinal Coordination of Care
- IMPACT Data Elements for basic Transition of Care needs
- Continuity of Care Document Data Elements

Massachusetts IMPACT Project, 2012.
HL7 Patient Care WG initiatives around patient-centred care planning

Care Plan Domain Analysis Model

Care Coordination Services Functional Model
Interoperability
Interoperability is the baton pass in an Olympic relay race
A zoology professor and a zookeeper may both describe a zebra it’s the same zebra but different descriptions
The ideal future state

Each individual has a dynamic care plan in one location, accessible to all care team members, creating a collaborative care community.
Clinical Information Modeling Initiative - CIMI
building reference model for clinical models
translate reference models to other formats
FHIR profiles to conform to clinical models
Profiles are FHIR implementation guides

A profile specifies an entire use case

Profile is extensions, Resources, value sets

A detailed clinical model is a profile
What’s the path from where we are?
Reality: Even for individuals with complex needs, care plan fragments exist in different settings where they receive care. Care plan fragments isolated in proprietary systems or on paper and lack interoperability. Care providers and caregivers are often not aware of details of these multiple care plans.
The ideal future state

Each individual has a dynamic care plan in one location, accessible to all care team members, creating a collaborative care community.
Structured care plan based on encoded data

Concerns:
- Impaired mobility
- Skin integrity risk

Interventions:
- Quadriplegia
- Hx pressure ulcer
- Diabetes mellitus
- Bradn scale = 13

Goal: Intact skin

Interventions Requested:
- Turn Q4 hours
- Assess skin Q8 hours

Performed:
- Turned 0600, 0800, 1200, 1600
- Assessed 0600, 1600

Outcome observation: Intact skin
Social and Support services

Patient portal

Provider electronic systems
In a RESTful environment multiple plans become interoperable.
The Care Plan is filtered, translated and transported to meet the needs of each participant/setting in the patient’s care.

Source: ONC S&I Framework
Longitudinal Coordination of Care Initiative, 2012
Questions?
Collaborative Care Plans:
Engaging patients & the entire care team