IHE Work Item Proposal (Detailed)

# Proposed Work Item: Dynamic Care Planning Definition

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Domain: PCC

# Summary

This profile should be a Patient Care Coordination workflow profile that supports the ability to dynamically create and update patient care plan information in a comprehensive way. IHE would be a good venue to solve this problem because it involves developing a profile across several existing standards. IHE has the necessary expertise in PCC to address content issues as well as functional workflows. This profile differs from XDW in that it is not limited to sharing of documents although sharing of documents will be supported. This profile is a workflow profile that streamlines the ability to create and share information that will enhance clinical workflow by focusing on the data that is created and shared and how it’s shared and updated.

# The Problem

<Summarize the integration problem. What doesn’t work, or what needs to work?>

Patients are suffering from an increasing number of complex or chronic health conditions which require frequent episodes of care involving multiple providers. With this complexity, it is difficult to plan care for patients that isn’t derived directly from clinical relevant order sets, protocols, clinical practice guidelines, etc. This is needed to inform providers and patients of the care needed in real time which would assist in care provision. There need to be a means of defining how care planning interventions can be derived from clinical relevant order sets, protocols, clinical practice guidelines, etc. as part of the clinical workflow.

FHIR may provide a solution to the solution. However, there is not enough guidance provided by HL7 FHIR resources on the use of FHIR PlanDefinition resource to create CarePlan activities.

<Describe the Value Statement: What is the underlying cost incurred by the problem and what is to be gained by solving it? If possible provide quantifiable costs, or data to demonstrate the scale of the problem.>

The World Health Organization (WHO) stipulates approximately 63% of all annual deaths are due to non-communicable or chronic diseases. US Medicare claims data reports $17.4 billion dollars was spent on re-admissions to hospital within 30 days of discharge in 2004. Effective collaboration and communication is needed to support the provision of patient-centered care. This would enable the provision of efficient health information needed for effective care planning and collaboration between applicable providers, participants and the patient.

The purpose of this workflow profile: Provide a mechanism to facilitate programmatic exchange and aggregate information needed to create care plans for patients from applicable order sets, protocols and/or clinical practice guidelines to support dynamic, evolving and ongoing care.

# Key Use Case

<Describe a short use case scenario from the user perspective. The use case should demonstrate the integration/workflow problem. Feel free to add a second use case scenario demonstrating how it “should” work. Try to indicate the people/systems, the tasks they are doing, the information they need, and where the information should come from.>

A 78 year old patient is admitted to hospital for planned right hip arthroscopic surgery. Upon discharge from the hospital, patient is transitioned to specialist care (orthopedic surgeon) and home health for skilled nursing and rehab services. The patient is also diabetic and suffers from rheumatoid arthritis. Her diabetes and rheumatoid arthritis are being managed by her primary care physician.

Her discharge from the hospital results in the need to create care planning information that supports the following interactions:

1. Acute care hospital discharge planning and transfer of care information with the surgeon’s post hip arthroscopic surgery order set.
2. Acute care hospital discharge planning and transfer of care information with the Home Health Agency admission protocol.

After the patient is referred for home health services, the specialist and the PCP is contacted for approval of the initial assessment and plan of care orders. These transactions results in sharing of care planning information that supports the following interactions:

1. Home Health Agency initial assessment with plan of care orders with the surgeon’s hip arthroscopic surgery protocol
2. Home Health Agency with the PCP diabetes and rheumatoid arthritis care protocol

<Focus on the end user requirements, and not just the solution mechanism. Give concrete examples to help people trying to understand the problem and the nature of the solution required. Remember that other committee members reviewing the proposal may or may not have a detailed familiarity with this problem. Where appropriate, define terms.>

In the process of creating the discharge orders and/or the home health plan of care orders, the end user should be able to access and select orders that are specific for the patient’s condition (e.g. the surgeon’s post hip arthroscopic surgery order set and/or protocol). When the applicable orders are selected, this would enable the ability for the creation or update of a care plan for the patient. The care plan can then be used to generate actionable items (i.e. interventions) that can be acted upon (e.g. medications prescription, labs ordered, patient education planned, etc).

# Standards & Systems

<List existing systems that are/could be involved in the problem/solution.>

<List relevant standards, where possible giving current version numbers, level of support by system vendors, and references for obtaining detailed information.>

Standards

* FHIR Constructs (STU 3)
* Audit Logging
* Error Handling
* Secure Transport

Systems

* EHR
* PHR
* Patient Portal
* HIE
* CPOE

# Technical Approach

<This section can be very short. Feel free to include as much or as little detail as you like. The Technical Committee will flesh it out when doing the effort estimation.>

<Outline how the standards could be used and refined to solve the problems in the Use Cases. The Technical Committee will be responsible for the full design and may choose to take a different approach, but a sample design is a good indication of feasibility.>

This profile will extend the Dynamic Care Planning profile by providing the ability to use the PlanDefinition resource as a means of creating/updating care plans dynamically.

New actors

<List possible new actors>

* Care Planning Guidance Service (provides PlanDefinitions and ActivityDefinitions)

Existing actors

<Indicate what existing actors might be affected by the profile.>

[From DCP]

* Care Plan Contributer - reads, creates and updates Care Plans

New transactions (standards used)

<Describe possible new transactions (indicating what standards would likely be used for each. Transaction diagrams are very helpful here. Feel free to go into as much detail as seems useful.>

* Create/Update Plan Definition; Activity Definition – provides the planDefinition resource that groups the applicable activityDefinition resources
* Search for Plan Definition
* Retrieve Plan Definition
* Create Care Plan from Plan Definition
* Create Request Resources (provides the request resources that need to be acted on)

<Point out any key issues or design problems. This will be helpful for estimating the amount of work.>

<If a phased approach would make sense indicate some logical phases. This may be because standards are evolving, because the problem is too big to solve at once, or because there are unknowns that won’t be resolved soon.>

<Indicate how existing / /transactions might need to be modified.>

Impact on existing integration profiles

<Indicate how existing profiles might need to be modified.>

Extends the Dynamic Care Planning profile by providing the ability to use PlanDefinitions as a means of creating/updating care plans dynamically and automatically execute pre-defined order sets.

New integration profiles needed

<Indicate how existing profiles might need to be modified.>

Breakdown of tasks that need to be accomplished

<A list of tasks would be helpful for the technical committee who will have to estimate the effort required to design, review and implement the profile.>

# Risks

<List technical or political risks that will need to be considered to successfully field the profile.>

May need possible alignment with ITI Workflow definition profile. ITI may want to add their orchestration part of their workflow to this profile.

# Open Issues

Arsenal, Italy is working on defining generic workflows by profiling FHIR task resource. Need to determine if this profile can gain from that work.

# Effort Estimates

<The technical committee will use this area to record details of the effort estimation.>