



## **IHE Work Item Proposal (Short)**

### **1. Proposed Work Item: EHCP Evolution**

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Domain: Patient Care Coordination

### **2. The Problem**

The Early Hearing Care Plan (EHCP) is used to coordinate pediatric care for routine well-child care and for the special care required by children with hearing loss. In the United States, the EHCP is administered by the State Early Hearing Detection and Intervention (EHDI) Programs - a mandatory state-level program that operates based on jurisdiction-specific regulation regarding hearing care for young children. In 2012, the QRPH Committee developed the EHCP Content Profile to specify the CDA structure for the EHCP content as part of a broader Early Hearing-loss Detection and Intervention (EHDI) project. As a result of the ongoing developments in the larger EHDI project, content modeling for the EHCP needs to be revamped to incorporate advances in the data modeling to support hearing screening test results, care plan guidance, treatment documentation and other quality measure generation.

There is a need to re-evaluate the EHCP document modeling. Structures previously developed to hold hearing screening test results generated from the screening devices need to be aligned with recent changes in device messaging. The content of the EHCP needs to be reassessed in the context of the developing EHDI workflow. EHCP sections and entries need to be aligned with patient-level QRDA document specifications used for representation of the Early Hearing Screening quality measures.

### **3. Key Use Case**

We propose to focus on the following two use cases:

#### **1. EHCP Data Structures for Hearing Screening Test Results**

A device is used to perform hearing tests on newborns. The device (through an internal or external communication mechanism) sends to the Computing Entity the result using HL7 v2 message format each time a test on a particular ear (right or left) is performed, one result message per test. The test may include multiple result messages. The Computing Entity

aggregates the result messages for the ear and generates the CDA document for the test result outcome for the ear. The hearing screening test is conducted for another ear following the process above with the Computing Entity generating the CDA document for the test result outcome for the second ear. The CDA test result reports on both ears are sent to the Receiving System (an EHR, an intermediary system or the Public Health Information System (PH-IS) as a CDA Hearing Screening Outcome Report.

## 2. EHCP Data Structures for Calculating Quality Measures

Information used to generate the Early Hearing Care Plan can also be used to generate patient-level quality documents that support research on quality measures for the detection of hearing loss and the interventions to provide valuable care. Data elements and structures, required to generate the patient-level QRDA documents needed to compute and assess established quality measures, need to be aligned and harmonized in order for downstream measure and assessment to be possible.

## 4. Standards & Systems

This effort will re-evaluate the unique sections within the IHE CDA template repository which were developed within the context of use in the QRPH EHCP Content Profile:

## 5. Discussion

The IHE PCC domain has strong CDA modeling knowledge within its membership. It is the group most experienced with the repository of CDA content modules for care delivery and coordination. We are seeking the PCC CDA expertise for enhancing EHCP content modeling in CDA.

We propose to conduct the re-evaluation of the QRPH EHCP Content profile with the PCC Committee because the EHCP represents a narrow or more constrained instance of a more general and generic care plan encompassing larger care coordination issues. We are seeking the broader PCC care plan expertise to inform our CDA modeling for sections and entries of the EHCP. We believe this will enable the EHCP to be better aligned with the modeling of other care plans in CDA.

We seek PCC expertise in re-evaluating our early hearing care plan to help harmonizing the data structures and design of the Early Hearing Care Plan to align with both upstream (device generated) and downstream (quality measure) data. We believe this will enable more effective information interchange and support more meaningful use of the data in support of patient care coordination. We believe that these up-stream and down-stream interoperability alignment issues may be of interest to the broader patient care coordination community.

Furthermore, aligning the structure of the Hearing Screening Result Section may open the door to defining a simple Hearing Screening Result CDA document which could be modeled in the Open Health Tools Model Driven health Tool (MDHT). The proposed effort may contribute to the IHE's efforts to use MDHT to generate CDA templates and implementation guides for their content profiles.