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HL7 Virtual Medical Record for Clinical Decision Support (vMR-CDS) Templates, Release 1

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U.S. Realm Informative Ballot

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Per guidance from the HL7 Technical Steering Committee, this specification is being balloted as an informative U.S. Realm specification. It is anticipated that future releases of the specification may be balloted in the normative track and/or in the Universal Realm.

Acknowledgements, Copyrights

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1.0 INTRODUCTION

A Virtual Medical Record (vMR) is a data model for representing the data that are analyzed and/or produced by clinical decision support (CDS) engines. The purpose of the vMR effort is to define a standard vMR that (i) can be used across CDS implementations and (ii) is simple and intuitive for a typical CDS knowledge engineer to understand, use, and implement.

This specification defines vMR templates that constrain the base vMR model to facilitate semantic interoperability, similar to how Consolidated Clinical Documentation Architecture (C-CDA) templates constrain the base CDA model. The vMR templates are informed by the templates defined for the C-CDA and Quality Reporting Document Architecture (QRDA) standards.

1.1 Purpose

The purpose of this specification is to define a set of templates for the vMR.

1.2 Methodology

This specification leverages a template development methodology that is being defined by the HL7 Templates Work Group. This project is informed by, and contributing to, the specification of this template development methodology by the HL7 Templates Work Group.

1.3 Intended Audience

The intended audience for this implementation guide is CDS implementers.

1.3.1 REQUISITE KNOWLEDGE

Knowledge of the HL7 vMR Logical Model, Release 2, Version 2.0 is a prerequisite.

1.3.2 REFERENCED STANDARDS

The templates are defined in the context of the following specification:

- HL7 vMR Logical Model Release 2, Version 2.0

1.4 Organization of this Specification

This specification defines a set of vMR templates and provides a narrative explanation of a sample template.

1.5 Definitions and Acronyms

Term	Definition
C-CDA	Consolidated Clinical Document Architecture
CDS	Clinical Decision Support
OID	Object Identifier
QRDA	Quality Reporting Document Architecture
vMR	Virtual Medical Record

2.0 vMR TEMPLATES

The vMR templates are defined in the accompanying Excel spreadsheets.

As a matter of explanation, each template contains the following information:

- Various meta-data about the template, including template name, OID, description, effective date, status, version, and expiration date
- Data expected to be included in the vMR if no constraints are specified
    - For example, the SimpleLabResult template specifies that if no constraints are specified, all lab results available up to the current time should be provided
- Constraints that may be specified to restrict the data that are provided using the template
    - For example, the SimpleLabResult template specifies that restricting the search back period is allowed using the observationEventTime. This would allow, for example, a CDS service provider to specify that only lab results from the past 1 year are needed.
    - Similarly, the SimpleLabResult template specifies that restricting the data according to the observationFocus is allowed. This would allow, for example, a CDS service provider to specify that only Hemoglobin A1c and LDL cholesterol lab results are needed.
    - The approach to these constraints is specified in the vMR Logical Model within the CDS Input Specification component of the model.
- For each included vMR data element, the following constraints are specified:
    - The data element's path in the vMR data model
    - The data element's cardinality
    - The data element's optionality
        - RE means the data element is required if available, but that its absence will not result in a structural error if not furnished
        - C means the data element is conditionally required based on other content within the template
    - The data element's data type
    - The data element's value restriction
    - Comments, including in particular any deviation from C-CDA or QRDA value restrictions