NCPDP-HL7 Pharmacy/Pharmacist Provider Functional
Profile Work Group

Pharmacy/Pharmacist Provider Functional Profile

Informative Level Ballot, Release 1
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Chapter One:
Overview

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Preface

i. Notes to Readers

Release 1 of the Pharmacist/Pharmacy Provider Electronic Health Record system (EHR-S) Functional Profile, based on the HL7 EHR-S Functional Model Release 1.1, June 2010, has been balloted through the HL7 EHR Work Group and will be registered with the EHR Technical Committee and submitted for balloting at the committee level. Additionally the profile will be balloted under the auspices of the National Council for Prescription Drug Programs. The intention is for this functional profile to become an ANSI approved normative standard.

The HL7 EHR-S Functional Model, which was approved in July, 2004 as a Draft Standard for Trial Use (DSTU), has undergone a series of enhancements as it made its way to a fully approved American National Standards Institute (ANSI) standard. A broad constituency - including intensive outreach to industry, care providers, and healthcare organizations - has worked to refine the initial EHR-S Functional Model. This version reflects the changes made as part of the reconciliation process in the successful membership level balloting.

ii. Acknowledgements

The NCPDP – HL7 Pharmacist/Pharmacy Provider Functional Profile Task Group was sponsored and facilitated by the National Council for Prescription Drug Programs (NCPDP) and HL7.

The HL7 EHR Work Group and these organizations are indebted to the following workgroup facilitators and members for their contributions to the electronic health record and the materials presented in this profile.

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iii. Changes from Previous Release

Not Applicable

Chapter 1 Introduction and Overview

For several years prescribers, pharmacists and pharmacies have been communicating electronic prescription information using the National Council for Prescription Drug Programs (NCPDP) SCRIPT standard. In July of 2004, sixteen participants from HL7 and NCPDP launched the NCPDP-HL7 Electronic Prescribing (eRx) Mapping Project. The goal of the project was to demonstrate the transmission of an electronic prescription from inpatient to outpatient setting and to develop a Mapping Guidance Document. The aspects of the mapping project are available from NCPDP and HL7 and may be used by the industry for mapping the electronic exchange of prescription information.

According to information provided by the Pharmacist Service Technical Advisory Coalition (PSTAC) and seven other associations, (Academy of Managed Care Pharmacy, American College of Clinical Pharmacy, American Pharmacists Association, American Society of Consultant Pharmacists, American Society of Health System Pharmacists, National Association of Chain Drug Store, and National Community Pharmacists Association),

- *"There are about 243,000 pharmacists in the United States. About 62 percent work in community pharmacies that were either independently owned or part of a drugstore chain, grocery store, department store, or mass merchandiser. About 23 percent of pharmacists work in hospitals. Many pharmacists distribute prescription drugs to individuals. They also advise their patients, as well as physicians and other health practitioners, on the selection, dosages, interactions, and side effects of medications.*
- *Pharmacists monitor the health and progress of patients to ensure the safe and effective use of medication. Pharmacists in community pharmacies dispense medications, counsel patients on the use of prescription and over-the-counter medications, and advise physicians about patients' medication therapy. They also advise patients about general health topics such as diet, exercise, and stress management, and provide information on products such as durable medical equipment or home health care supplies.*
- *Pharmacists in health care facilities dispense medications and advise the medical staff on the selection and effects of drugs. They may make sterile solutions to be administered intravenously. They also plan, monitor and evaluate drug programs or regimens. They may counsel hospitalized patients on the use of drugs before the patients are discharged.*
- *Some pharmacists specialize in specific drug therapy areas, such as intravenous nutrition support, oncology (cancer), nuclear pharmacy (used for chemotherapy), geriatric pharmacy, and psychiatric pharmacy (the use of drugs to treat mental disorders) [from the Bureau of Labor and Statistics]."*

The HL7 EHR-S Functional Model defines a standardized model of the functions that may be present in EHR systems. A Functional Profile is a specification which uses the functional model to indicate which functions are required, desired or implemented for certain EHR systems, healthcare delivery settings, or for other purposes. The Pharmacist/Pharmacy Provider Functional Profile will facilitate EHR systems capturing clinical medication related data at the point of contact or point of care. The Pharmacist/Pharmacy Provider Functional Profile specifies the functional requirements needed to support messaging among prescribers, pharmacist/pharmacy providers and other healthcare entities needing medication related information. The profile is initially U.S. focused; however it may be expanded to include international affiliates.

Building on existing HL7 and NCPDP work, this is an excellent opportunity to create HL7 - NCPDP Pharmacist/Pharmacy Provider EHR-S Functional Profile. The Pharmacist/Pharmacy

Provider Functional Profile will facilitate EHR systems capture of medication and clinical related data at the point of contact or point of care by specifying the functional requirements needed to support messaging among prescribers, pharmacist and pharmacy providers and other health care entities needing medication-related information.

1 Background: What is HL7?

Established in 1987, Health Level Seven (HL7) is an American National Standards Institute (ANSI) accredited, not-for-profit standards-development organization, whose mission is to provide standards for the exchange, integration, sharing, and retrieval of electronic health information; support clinical practice; and support the management, delivery and evaluation of health services. ANSI accreditation, coupled with HL7's own procedures, dictates that any standard published by HL7 and submitted to ANSI for approval, be developed and ratified by a process that adheres to ANSI's procedures for open consensus and meets a balance of interest requirement by attaining near equal participation in the voting process by the various constituencies that are materially affected by the standard (e.g., vendors, providers, government agencies, consultants, non-profit organizations).   This balance of interest goal ensures that a particular constituency is neither refused participation nor is it allowed to dominate the development and ratification of a proposed standard. More information and background on ANSI is available on their website at: http://www.ANSI.org

The HL7 Electronic Health Records Special Interest Group (EHR SIG) was established in the spring of 2002. In the spring of 2003 the HL7 group began efforts to develop a standardized functional specification for Electronic Health Records Systems (EHR-S). In May 2004 the SIG was promoted to a full HL7 Technical Committee, becoming the EHR TC. The EHR TC is intended primarily to serve as a body which promotes the uptake of Electronic Health Record (EHR) implementation by standardizing the functions that may be present, based on user selection, in an EHR-S.

2 Process and Project Plan

Volunteer support has been provided by a broad array of industry and stakeholder representatives who have participated in weekly virtual meetings to define the content of this profile and to harmonize this profile with the "Clinical Pharmacy Information Systems (CPIS) Functional Profile" created for the Netherlands.

The following principles were used in defining the functional requirements for the Pharmacist – Pharmacy to enable support of system certification criteria.

- There should be a single framework for managing data collection and exchange that can be used by all the key stakeholders to provide consistent and sharable electronic solutions.

- The processes and formats used for sharing data should support the development of easier and more timely communication among the local data sources that provide the data, state and territorial agencies that receive and process the data, and the internal and external organizations that make use of the data.

- The solutions developed should be easy to install at a wide range of sites involved with the collection of clinical medication related data. It is equally important to be able to maintain and upgrade the data exchange capabilities of the state and other public/private systems.

This document will be registered with the HL7 EHR Technical Committee as a conformant profile in xxx 2010. It will also be made available to appropriate EHR certification organizations e.g. CCHIT and committees at that time. In addition, the profile will be submitted to the HL7 EHR Technical Committee for the first cycle of balloting as a normative standard. This HL7 balloting will occur in the xxx 200x ballot cycle.

The intent of this profile is to improve the facilitation of EHR systems to capture clinical medication related data at point of care and serve as a source of reference for the certification organization for future certification of EHR systems that include functionality to better support the efficient exchange of clinical medication-related data to accelerate the adoption of health information technology.

3 Organization of this Document (Reference)

This document is composed of three sections the first of which provides the background and overview for the Pharmacist/Pharmacy Provider Functional Profile, the second which defines the Conformance Clause and the third which defines the Functional Profile. The Pharmacist/Pharmacy Provider Functional Profile is divided into three sections: *Direct Care*, *Supportive* Functions and *Information Infrastructure*. Each section defines a broad category of functions applicable to a Pharmacist/Pharmacy Provider EHR System. Because of this organization, concepts and tasks typical of managing clinical medication data can be found interspersed throughout the document, depending upon whether aspects constitute patient tracking, administrative functions, workflow, tasks/orders, clinical documentation, or clinical decision support, etc.

Direct Care	Functions employed in the provision of care to individual patients. Direct care functions are the subset of functions that enable delivery of healthcare or offer clinical decision support.
DC.1	Care Management
DC.2	Clinical Decision Support
DC.3	Operations Management and Communication
Supportive	Functions that support the delivery and optimization of care, but generally do not impact the direct care of an individual patient. These functions assist with the administrative and financial requirements associated with the delivery of healthcare, provide support for medical research and public health, and improve the global quality of healthcare.
S.1	Clinical Support
S.2	Measurement, Analysis, Research and Reports
S.3	Administrative and Financial
Information Infrastructure	Functions that define the heuristics of a system necessary for reliable, secure and interoperable computing. These functions are not involved in the provision of healthcare, but are necessary to ensure that the EDIS provides safeguards for patient safety, privacy and information security, as well as operational efficiencies and minimum standards for interoperability. Functions may be provided by the EDIS itself, by the supporting infrastructure, or a combination of both.
IN.1	Security
IN.2	Health Record Information and Management
IN.3	Registry and Directory Services
IN.4	Standard Terminologies and Terminology Services

	IN.5	Standards-based Interoperability
	IN.6	Business Rules Management
	IN.7	Workflow Management
	IN.8	Application Performance

Each function in the HL7 EHR-S Functional Model is identified and described using a set of elements or components as detailed below.

ID	Type	Name	Statement /Description	See Also	Conformance Criteria	Row #
		Normative	**Normative/Reference**	**Reference**	**Normative**	

Function ID:

This is the unique outline identification of a function in the outline. The Direct Care functions are identified by 'DC' followed by a number (Example DC.1.1.3.1; DC.1.1.3.2). Supportive functions are identified by an 'S' followed by a number (Example S.2.1; S.2.1.1). Information Infrastructure functions are identified by an 'IN' followed by a number (Example IN.1.1; IN.1.2). Numbering for all sections begins at n.1.

Function Type:

Indication that the line item is a header (H) or function (F).

Function Name:

The name of the Function, for example: Manage Medication List

Function Statement:

Brief statement of the purpose of this function, for example: Create and maintain patient-specific medication lists.

Description:

Detailed description of the function, including examples if needed, for example: Medication lists are managed over time, whether over the course of a visit or stay, or the lifetime of a patient. All pertinent dates, including medication start, modification, and end dates are stored. The entire medication history for any medication, including alternative supplements and herbal medications, is viewable. Medication lists are not limited to medication orders recorded by providers, but may include, for example, pharmacy dispense/supply records, patient-reported medications and additional information such as age specific dosage.

See Also:

This element is intended to identify relationships between functions.

Conformance Criteria:

The specific functionality and attributes a system possesses in order to be certified as conforming

to the functional profile. Review Electronic Health Record - System Functional Model Chapter Two: Conformance Clause, Sections 4 and 5, for further information on conformance criterion and their uses.

4 Anticipated Uses

A "functional profile" is a selected set of functions that are applicable for a particular purpose, user, care setting, domain, etcetera. Functional profiles are the expression of usable subsets of functions from the EHR-S Functional Model. In this EHR-S Functional Model the reader will see a long list of Function Names and Function Statements, which serve as reasonable representations of functions needed for the clinical pharmacist/pharmacy provider environment.

This functional profile was created to support the business case for clinical pharmacist/pharmacy provider EHR-S use by selecting an applicable subset of functions from the EHR-S Functional Model list of functions, in effect constraining the model to meet specific requirements.

The act of creating a functional profile is to support a business case for EHR-S use by selecting an applicable subset of functions from the EHR-S Functional Model list of functions, in effect constraining the model to meet specific requirements. For example, a functional profile may be created by a purchaser, to indicate requirements; by a vendor, to indicate the capability of specific products; or by any person/entity wishing to stipulate a desired subset of functions for a particular purpose, including a care setting within a specific realm. Once an applicable subset of functions has been selected, the person/entity creating the profile gives each function a priority of essential now, essential future or optional. For more information about the steps to creating a functional profile, see the *How-to Guide for Creating Functional Profiles.*

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