

# **EHR-Infusion Pump Integration Use Case**

## **Test Methods**

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# EHR-Infusion Pump Integration

## Test Methods

### Release 1

Version 1.0

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Signature		Date

### Revision History

Revision Number	Revision Date	Summary of Changes	Author
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# 1 Introduction

The Office of the National Coordinator for Health Information Technology (ONC) is at the forefront of HHS's health IT efforts and is a resource to the entire health system to support the adoption of health information technology and the promotion of nationwide health information exchange to improve health care.

The ConCert by HIMSS™ program is intended to compliment the ONC's efforts in this regard via the validation of HIT products against a set of standards, services and policies, aligned with the ONC CEHRT requirements whenever applicable, that helps enable secure health information exchange over the Internet. ConCert will provide a foundation for the exchange of health information across diverse entities, within communities and across the country, helping to achieve the goals of the HITECH Act. This critical part of the national health IT agenda will enable health information to follow the consumer, be available for clinical decision making, and support appropriate use of healthcare information beyond direct patient care so as to improve population health.

## 1.1 Purpose of this document

The purpose of this document is to provide specific guidance and clarifications to the conformity assessment testing procedures of the ConCert by HIMSS™ program. It must be used in conjunction with the ConCert by HIMSS™ program document which provides the overall requirements schemes for the program and sets the context and applicability of these testing methods.

## 1.2 Definitions<sup>1</sup>

- **Document types** are any clinical record(s) clinicians may choose to submit or retrieve for a specific patient such as: Continuity of Care Documents, Immunizations, Labs, Discharge Summary, etc.
- **Dual Factor Authentication** is a security constraint that requires two independent pieces of evidence to assert an entity's identification, easily summarized by "something one knows", "something one has", or "something one is". Examples of the three independent factors would be a password, an identification card, a fingerprint.
- **Statewide Master Patient Index (SMPI)** is master patient index stored at the state level.
- **Health Information Exchange (HIE)** is defined as the transfer of healthcare information electronically and securely across Health Information Organizations within a region such as a state, community, hospital system or a physician network.

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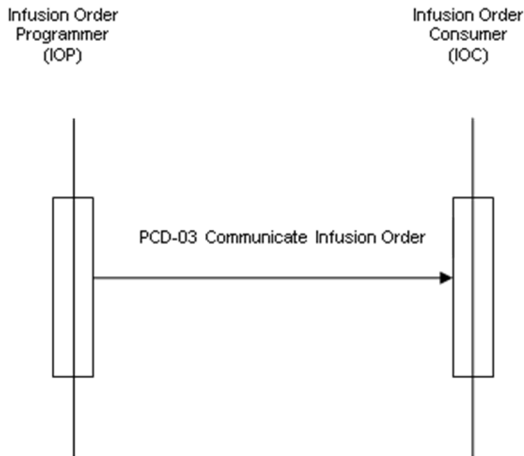
<sup>1</sup> Individual actors are defined within each test procedure.

- **Health Information Organization (HIO)** is an organization that oversees and governs the exchange of health-related information among organizations according to nationally recognized standards. As defined by the National Alliance for Health Information Technology Report.
- **HIE Portal** is a Health Information Exchange Portal offered by an HIE vendor for their stakeholders to access health information.
- **IHE Cross Community Access (XCA)** is a profile that supports the means to query and retrieve patient relevant medical data held by other communities

## 2 System Functions

### 2.1 System Functions

The following interaction diagram illustrates the implementation being tested.



All HL7 segments used in the PCD-03 transaction are defined within IHE PCD Technical Framework document Vol2 noted in Section 3.

## 3 Test Methods

The test methods specified in this section are based on the IHE Profile as specified in IHE PCD TF-1:3, section from Rev. 5.0 Final Text of this Technical Framework, issued October 14<sup>th</sup>,2015, without any additional Final Text Change Proposals.

The test methods are described in relation to the specific Test Actor designations called out in the above mentioned Technical Framework.

### 3.1 Infusion Order Programmer Actor

#### 3.1.1 List of test cases

Test Case ID	Test Case Name	Test Case Description	Test Case and Test Data with Version and Reference	Supporting Test Tool ID
PIV IOP Piggyback SUT	PIV_IOP_IOC_Piggyback_(IOP_SUT)	Evaluates the capability of a PIV IOP to transmit valid PCD-03 messages indicating piggyback to a IOC and consume the Accept Acknowledgement and Application Acknowledgement messages. This test requires one pump.	Version : CATS2016 Last modified : 2016-04-07 Permanent number : 12663	NIST PCD Tool
PIV IOP SUT	PIV_IOP_IOC_(IOP_SUT)	Evaluates the capability of a PIV IOP to transmit valid PCD-03 messages to a IOC and consume the Accept Acknowledgement and Application Acknowledgement messages. This test requires two pumps.	Version : CATS2016 Last modified : 2016-04-07 Permanent number : 12661	NIST PCD Tool

#### 3.1.2 List of related test tools

Test Tool ID	Test Tool Name	Test Tool Version	Developed by	Test Tool Info Page	Tool Category
NIST PCD Tool	NIST PCD Tool	1.6	NIST	<a href="http://ihe-pcd-precon.nist.gov/PCD-HL7WebPreCon/">http://ihe-pcd-precon.nist.gov/PCD-HL7WebPreCon/</a>	Simulator & Validator

## 3.2 Infusion Order Consumer Actor

### 3.2.1 List of test cases

Test Case ID	Test Case Name	Test Case Description	Test Case and Test Data with Version and Reference	Supporting Test Tool ID
PIV IOC Piggyback SUT	PIV_IOP_IOC_Piggyback_(IOC_SUT)	Evaluates the capability of a PIV IOC to receive valid PCD-03 messages indicating piggyback from an IOP and transmit the Accept Acknowledgement and Application Acknowledgement messages. This test requires one pump.	Version : CATS2016 Last modified : 2016-04-07 Permanent number : 12664	NIST PCD Tool
PIV IOC SUT	PIV_IOP_IOC_(IOC_SUT)	Evaluates the capability of a PIV IOC to receive valid PCD-03 messages from an IOP and transmit the Accept Acknowledgement and Application Acknowledgement messages. This test requires two pumps.	Version : CATS2016 Last modified : 2016-04-07 Permanent number : 12662	NIST PCD Tool

### 3.2.2 List of related test tools

Test Tool ID	Test Tool Name	Test Tool Version	Developed by	Test Tool Info Page	Tool Category
Gazelle HL7 Validator	Gazelle HL7 Validator	3.2.1	IHE-Europe	<a href="https://gazelle.ihe.net">https://gazelle.ihe.net</a>	Validator
NIST PCD Tool	NIST PCD Tool	1.6	NIST	<a href="http://ihe-pcd-precon.nist.gov/PCD-HL7WebPreCon/">http://ihe-pcd-precon.nist.gov/PCD-HL7WebPreCon/</a>	Simulator & Validator