

## Interoperability Scenarios

### Care Theme: Chronic Care

### Act 5 - Hypertension Care with e-prescribing (eRx) and personal health record (PHR) Update

**Scenario Primary Goal:** To demonstrate the ability for providers to proactively and efficiently manage a patient's well being through the use of home care devices and electronic medication prescribing.

#### Key Points:

- The demonstration will use HITSP constructs to demonstrate interoperability between remote monitoring devices and provider offices, e-prescription and e-dispensing, and EMR PHR integration
- This scenario features a remote monitoring device providing patient updates to their PCP. The PCP uses the EMR to prescribe medications for the patient to pick up at pharmacy, as well as document within the patient's PHR
- Remote monitoring observed an abnormal result from patient; PCP is notified of the abnormal result and prescribes a medication for patient to use and document within patient's PHR

#### Meaningful Use Relevance

##### MU Objective 3: Engaging Patients & Families in Their Healthcare

#### Clinical Workflow:

J.M. is a 65 year old male with history of Type II Diabetes Mellitus and essential hypertension. He is enthusiastic about a new program that allows him to send finger stick blood sugar results and blood pressure measurements to his primary care physician (PCP) by using a remote monitoring set-up at home. He is concerned that his fasting blood sugar measurements have gradually increased over the last two weeks. His usual blood sugar results were in the 120-150 mg/dl range but recent measurements are all above 200 mg/dl. His blood pressure is higher than usual at 180/100 mmHg. He sends these results to his physician and also reports that he is almost out of his usual insulin supply.

Dr. Harris receives J.M.'s remote monitoring results. He knows J.M. well, having been his physician for the last 10 years. Dr. Harris decides to increase J.M.'s insulin dose to 15 units twice a day. Dr Harris also decides to change the Furosemide (Lasix) dose from 40mg to 80mg by mouth daily. Dr. Harris calls J.M. to discuss the plans to change the medication doses and lets J.M. know that he will be sending the prescriptions electronically to J.M.'s preferred pharmacy.

A week later J.M. goes to Dr. Harris' office for medical follow-up. His vital signs are recorded as part of the examination. His blood pressure is better controlled at 150/85mmHg. A finger stick blood sugar result is 110 mg/dl. J.M. asks Dr. Harris to send an electronic summary of this office visit to his PHR which he uses to help manage his chronic diseases.

Care Scenario Steps:	Care Setting From	Care Setting To	IHE Profiles*	Title	HITSP Constructs	Title
5-1 Remote Monitoring (via Continua devices). "new directions"	Home Dev	Remote Monitoring Mgmt System (RMMS)	DEC (w 2010 CP) (PCD)	Device Enterprise Communication	HITSP/T73 "New Directions"	Continua Device Output, RMMS module
5-2 RMMS sends measurement data to PCP	RMMS	PCP office			HITSP/CAP119 HITSP/C74	Communicate Structured Document  Remote Monitoring Observation Document
5-3 PCP Orders Meds via eRx ("new directions")	PCP Office	Pharmacy		eRX	HITSP/CAP117 HITSP/TP43	Communicate Ambulatory and LTC Prescription Medication Orders
5-4 Ambulatory Encounter Summary	PCP Office	Home	XPHR (PCC)	Exchange of Personal Health Record Content	HITSP/CAP119 HITSP/C32	Communicate Structured Document  Summary Document Using HL7 Continuity of Care Document (CCD)

Health Information Exchange (HIE) Core Services			
IHE Profiles		HITSP Service Collaborations / Constructs	
XCA XDS/XDR/XDM	Cross-community and Cross-enterprise Document Sharing	SC112 / TP13, T31, T33	Healthcare Document Management Manage Transfer of Documents, Document Reliable Interchange, Transfer of Documents on Media
PIX	Patient Identity Cross-reference	SC112 / TP22	Patient ID Cross-Referencing
PDQ	Patient Demographics Query	SC112 / T23	Patient Demographics Query
ATNA	Audit Trail and Node Authentication	SC112 / T15, T17	Collect and Communicate Security Audit Trail Secured Communication Channel
CT	Consistent Time	SC112 / T16	Consistent Time