Some Experiences at Partners Healthcare with Implementing Unique Identifiers

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FDA Public Meeting on Unique Device Identification

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Background

- Partners Healthcare, located in Boston, is an integrated health system founded by Brigham and Women's Hospital and Massachusetts General Hospital in 1994
- As part of a broad "Signature Initiative" Partners Healthcare began working on a "Positive ID" project in 2004
- While originally envisioned to deal with identifying patients and medications, the work evolved to include uniquely identifying employees and devices
- This standard was released in the Summer of 2006 to a standards development organization to begin the ISO standards review and ratification process

More on the ID Standard…

- Identifies:
    - IV Medications
    - Employees
    - Patients
    - Non-IV Medications
    - Devices
- Loosely based on RMV drivers-license standards
- Supports linear and 2-D barcodes
- "XML-Like" in its structure:

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Record	Description	EmployeeID	PatientID	DrugID	SmartIV	Device
EI1	Employee Identification	X				
EI2	Employee Supplemental Information	X				
PI1	Patient Identification Information		X			
PI2	Patient Supplemental Information		X			
PHY	Physician Information		X			
SID	Security Information Data		X			
PCD	Patient Clinical Information		X			
DIL	Drug Identification Label Information			X		
PID	Patient Identification Information			X	X	
EXR	External Provider Cross Reference			X	X	
EXO	External Provider Order			X	X	
CAR	Care Area Information				X	
DID	Drug Identification Information (IV Only)				X	
DDR	IV Drug Delivery Rate				X	
PDA	IV Primary Drug Additive Information				X	
SDA	IV Secondary Drug Additive Information				X	
DLU	IV Diluent Information				X	
VDR	IV Volume Delivery Rate				X	
DTI	Dose Tracking Information				X	
VER	Version Information				X	
VTI	IV Total Infusion Delivery Volume (VTBI)				X	
LIR	Library Information Record				X	
CMR	Custom Message Record				X	
DIR	Drug Inventory Record				X	
DLD	Drug Loading Dose				X	
VLD	Drug Loading Dose				X	
DRI	Drug Repeated Dose				X	
VRI	Volume Repeated Dose				X	
DSB	Drug Bolus Dose (offset)				X	
VSB	Volume Bolus Dose (offset)				X	
DSO	Drug Specific Dose (offset)				X	

One Unexpected Benefit

- There is an obvious benefit of having machine-readable ID's for patients, employees, medications, etc.
- One unexpected benefit was the ability to "speed dial" communications: we call this *Workflow Aware Connectivity*

Use auto-ID to identify *what* medical device is being used

Use a smart agent to interface medical devices into the IT system - the agents operation changes based on its context of use

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Workflow Aware…..

Clinician scans her ID badge	→	System figures out credentialing and training level
Clinician scans patient's ID band	→	System figures out what needs to be done to patient
Clinician scans medical device	→	System figures out how to communicate to device & what it can do

Result: the agent configures itself to do the expected task and automatically establishes communications to the appropriate systems

…Connectivity

- The auto-ID technology (barcode) tells the agent what type of medical device it is and how to communicate to it
- Different communications protocols can be resident in the agent or downloaded on-the-fly
- The agent communicates to the "IT network" via 802.11 or a wired Ethernet connection

Final Thoughts

- Unique device identifiers are potentially powerful enablers to help "streamline" clinicians' busy tasks
- UDI are more important than simply post-market tracking, they also enable new functionality
- PHS is offering its work as a starting point for a standard to move through the public review process

Thank You & Questions

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