Poly-Pharmacy: Clinician-Informatician's Perspective

Dr. Thomas Agresta, MD, MBI Professor of Family Medicine – UConn Health Informational Hearing on Polypharmacy Public Health and General Law Committees January 22, 2018



BH – 78 year old Very low Blood Pressure at visit

Complex Med History – recent ER visit due to fall

- Hypertension, Diabetes, Kidney cancer,
- 13 Medications (2 blood pressure, 3 diabetes)
- 1 Medication discontinued but still filled
- Daughter why does he keeps getting medication
- Pt doesn't "think" he is taking this other blood pressure medication
- Seen in 3 different organizations all on EPIC but all have different medication list on review



BN – 47 year old Refill request from pharmacy

Nurse notes refill request for medication discontinued in May 2017

- Medication is for diabetes no longer on her medication list
- She is currently on 7 medications (2 for diabetes)
- It has been delivered to patient for 8 months (cost > \$2,000)
- Strong nursing protocol prevented refill pharmacy called

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Who is involved in Prescription Medication?

- Patients & Families / Caregivers
- Clinicians
- Pharmacists
- Pharmacy Benefits Managers
- Governments (Controlled substance monitoring)
- Insurance Cos
- Pharm Cos

Large Majority > 80% Meds via e-Prescribing



Electronic Exchanges to Fill an Rx



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NCPDP Electronic Prescribing Standards. (2014). Retrieved from <u>http://www.ncpdp.org/NCPDP/media/pdf/</u> NCPDPEprescribingBasics.pdf

Complexity of Medication Reconciliation:

- Data is in many places only partial interoperability currently
- Multiple prescribers multiple EHRs
- Pharmacy IT systems (some old)
- Workflow of providers / pharmacists
 No one can tolerate extra work, new IT systems
- Which one is correct / "the truth?"

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Many electronic messages each with many complex parts

HL7-NCPDP Electronic Prescribing Coordination Mapping Document, Release 1

5. TRANSMISSION FROM SENDER TO RECEIVER STRUCTURE

5.1 LISTING OF NCPDP SCRIPT MESSAGES USED IN THIS MAPPING

TRANSACTION	EXPLANATION
TYPE	
NEWRX	This message type is a new prescription from the doctor to the pharmacy.
REFREQ	This indicates a message from the pharmacy to the prescriber requesting additional refills.
REFRES	This indicates that the message within the envelope is a RX Authorization from the prescriber to the pharmacy. A REFRES is the response to a request for additional refills (REFREQ).
RXFILL	This message is sent to the prescriber from the pharmacy and indicates the status of the prescription fill (filled, not filled, partially filled).
CANRX	This message is a request from the prescriber to the pharmacy to not fill a previously sent prescription.
CANRES	This message is a response from the pharmacy to the prescriber to acknowledge a cancel request. A CANRES is the response to a cancel request (CANRX).
VERIFY	If the sender asked for verification that the recipient did in fact receive the message, this is the message type that is sent back to the sender.
STATUS	Is used to relay acceptance of a transaction back to the sender. A STATUS in response to REFREQ, REFRES, NEWRX, VERIFY, RXCHG, CHGRES, CANRX, CANRES, or RXFILL indicates acceptance and responsibility for a request. A STATUS may not contain an error.
RXCHG	This is used when the pharmacy is asking for a change in the original prescription. An example may be to allow for generic substitution.
CHGRES	This is the response from the RXCHG message.
ERROR	This indicates an error has occurred indicating the request was terminated. (An ERROR can be generated when there is a communication problem or when the transaction actually had an error.)
RXHREQ	This indicates a message from an entity (prescriber, pharmacy, payer) requesting medication history from an entity (payer, pharmacy, prescriber).
RXHRES	This message is a response from an entity (payer, pharmacy, prescriber) to an entity (prescriber, pharmacy, payer) to describe the patient's medication history. A RXHRES is the response to a request for medication history (RXHREQ).

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Cancel prescription message not uniformly implemented

HL7-NCPDP Electronic Prescribing Coordination Mapping Document, Release 1 (2007). Retrieved from http://www.hl7.org/documentcenter/private/standard s_temp_2E43EF29-1C23-BA17-0C7A680FC1501C06/informative/V2_EPCMAPPING_R1 INFORM_2007JAN.pdf