

Identifications of medicines in an EHR

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A Puzzling Problem

- Why has it been so difficult to include medicines and a medication history in the EHR?
- Why are most of the medical errors due to errors in medications?



What do we need?

- Within the EHR, we need to know the drug and its prescribing components.
- We need to know management or administration details.
- External to the EHR we need to know additional attributes of the drug.
- The EHR System needs to provide a set of functionalities to support the medication process.



Prescribing

- Name of medicine
- Strength of medicine
- Amount dispensed
- Form of medicine
- Method/route of administration (site)
- Frequency medicine is taken
- Prescribing modifiers
- Prescribing conditionals



Administration Details

- Date prescribed
- Date dispensed
- Date medicine is all taken
- Number of refills
- Daily dose
- Prescribing clinician
- Dispensing physician



Conditional Entries

- Drug stopped for adverse reaction
- Reason for not giving drug



Medication history

- List of ALL active medicines a patient is taking. Includes prescribed drugs, over the counter drugs, complementary and alternative medicines.
- Drugs prescribed elsewhere
- List of all allergies specific to cause and response



Past Medicine History

- Drug name, daily dose, start dates, end dates
- If any reaction to drug note



Metadata Dictionary

- Contains additional information about medicine that may be used for management, query, or other supporting activities
- Includes therapeutic class, potential drug interactions, brand or generic tag. If brand generic equivalent, manufacturer
- ID in one or more controlled terminologies
- Therapeutic equivalents less expensive



THERAPIES SECTION

- 1 DRUG NAME
- 2 FREQUENCY TABLE
- 3 ROUTE TABLE
- 4 METHODS OF ADMINISTRATION TABLE
- 5 DRUG FORM TABLE
- 6 THERAPEUTIC CATEGORY TABLE
- 7 PRESCRIBING MODIFIERS TABLE
- 8 PRESCRIBING CONDITIONALS TABLE
- 9 MANUFACTURERS SECTION
- 10 DRIP SHEET
- 11 TRANSLATION TABLE
- 12 CODED COMMENTS
- 13 SITE TO ADMINISTER DRUG TABLE
- 14 REASON FOR NOT GIVING DRUG TABLE



999-99-9993 BROWN, CHARLES F. ALLERGIES

	THERAPY	SIG	DOSE	EXPIRES
1	BASALJEL 620 MG C	3 QID /C MEALS & SNACK	7440	11/09/99
2	CALCITRIOL .25 MCG C	1 QAM	.25	12/09/99
3	TABRON 1 T	1 BID	2	12/09/99
4	FLUOXYMESTERONE 10 MG T	3 QAM	30	12/09/99
5	TRIMEPRAZINE TARTRATE 2.5 MG T	1 Q6H PRN ITCHING	2.5P	12/09/99
6	DIOCTYL NA SULFOSUCCINATE 100 MG	2 PO BID	400	12/09/99
7	CALCIUM CARBONATE 650 MG T	1 PO QID	2600	12/10/99

NAME:CALCIUM CARBONATE 650 MG T

MD: STEPHEN J COX

SIG: 1 PO QID

DAILY DOSE: 2600

#DISP: 120 #REFILLS: 1

STARTED: 10/12/99

WRITTEN: 10/12/99

EXPIRATION: 12/10/99

SELECT FOR UPDATE (APODNRSWEX): ■



	THERAPY	#DISP	DATE DSP	FILLS	BIN DATE=# DISP
3	BETHANECHOL 10 MG TAB	2	09/17/83	30/11	9/17=2,9/18=2
2	PROCHLORPERAZN 25 MG SUPP	4		30/11	9/18=4
3	ACETAMINOPHEN 650 MG SUPP	2	09/17/83	30/14	9/17=6,9/18=6
4	ACETMNPHN/CODEINE 30 MG TAB	6	09/17/83	30/24	9/17=16,9/18=16
5	ENSURE TUBE FEEDING 240 ML	6	09/18/83	30/14	9
6	HEPARIN LOK 100U/ML 5 ML INJECT	3	09/14/83	30/22	9/17=3,9/18=3
7	HYPERAL 1000ML 50%D 50/5.5 %AA IV	1	09/16/83	30/18	9,9/17=0,9/18=0
8	ACETAMINOPHEN 325 MG TAB	4	09/17/83	30/23	9/17=12,9/18=12
9	NYSTATIN 100000 U/ML 60 ML SUSP	1	09/12/83	7/0	9/17=0,9/18=0
10	NYSTATIN VAGINAL 100000 UNIT TAB	2	09/17/83	7/0	9/17=2,9/18=2
11	VANCOMYCIN IVPB 500 MG IV	4	09/18/83	7/2	9
12	BISACODYL 10 MG SUPP	1	09/17/83	1/0	0

BETHANECHOL
DATE THERAPY FOR (MO/DA) => 9/19





Clinical Summary

Current Problems

- * Diabetes Mellitus, Type II insulin requiring
 - Diabetic Neuropathy
 - Ulcer-Lower Limb left foot
 - Diabetic Retinopathy
 - Retinal Laser Therapy OU
 - Diabetic Nephropathy
 - Nephrotic Syndrome
- Hypertension
- * Atherosclerotic Cardiovasc Disease coronary
 - Acute Myocardial Infarction-inferior
 - Angioplasty - Coronary Artery LCX
- * Hypercholesterolemia
- Tobacco Abuse

Current Medications

- ASPIRIN 325 mg TAB 1 PO QD
- FLUVASTATIN Na 20 mg CAP 1 PO QHS
- HUMULIN N 100 units/ml INJ 32u sq acB, 12u sq ac
- HUMULIN R 100 units/ml INJ 16u sq acB, 12u sq ac
- Isosorbide Dinitrate ORAL 30 mg TAB 1 PO TID
- LISINOPRIL 10 mg TAB 1 PO QD

Action List

- WT
- BP
- foot exam
- hgbA1C
- follow up visit
- ophthalmology consult
- smoking cessation
- Lisinopril 10 mg po qd

Allergies

- PENICILLAMINE - rash