



Training

Pharmacy Informatics
Drug File Optimization

Pharmacy Informatics

March 2016

The Indian Health Service
Office of Information Technology



FileMan Reports

- FM Report 1 Generic and Long Names
 - Fields to be Optimized
 - Generic Name
 - Long Name
- FM Report 2 Unit Fields and Available to e-Rx
 - Fields to be Optimized
 - DEA, Special HDLG
 - Order Unit
 - Dispense Unit
 - Dispense Unit/Order Unit
 - Dispense Unit NCPDP Code
 - NDC Number
 - Available to e-Rx

FileMan Reports

- FM Report 3 NDF
 - Fields to be Optimized
 - VA Product Name
 - VA Drug Class Code
- FM Report 4 DOSAGES
 - Fields to be Optimized
 - Possible Doses (and Package Designation)
 - Local Possible Doses (and Package Designation)
- FM Report 5 DOSAGE FORM
 - Including noun, verb, preposition, conjunctions

FileMan Reports

- FM Report 6 PHARMACY OI
 - Pharmacy OI File
 - Med Route
 - Schedule Type
 - Schedule
 - Synonym
 - Patient Instructions
- FM Report 7 DISPENSE DRUG OI
 - Verification of accuracy of OI and Dispense Drug link
- Report 8 OI and DOSAGES
 - Verification of Orderable Item setup

VA FileMan-Search Option

Select VA FileMan Option: SEARCH File Entries

Enter or Edit File Entries

Print File Entries

Search File Entries

Modify File Attributes

Inquire to File Entries

Utility Functions ...

Data Dictionary Utilities ...

Transfer Entries

Other Options ...

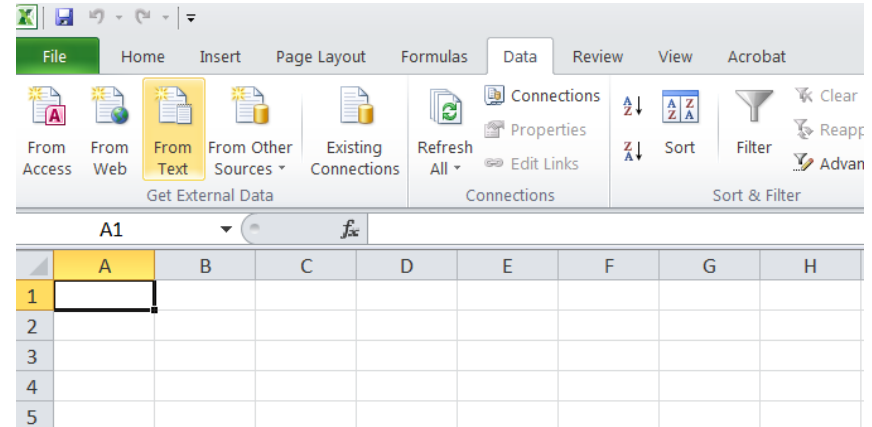
Select VA FileMan Option: SEARCH File Entries

FileMan (FM) Reports

- Two options for running the reports
 - Type in the “recipe” exactly field by field as indicated on the report instructions using the Search option in FM
 - Copy/Paste Method
 - Turn on Session Logging
 - Use the Search option and at the “-A- SEARCH FOR DRUG FIELD:” use copy and paste to run the report automatically

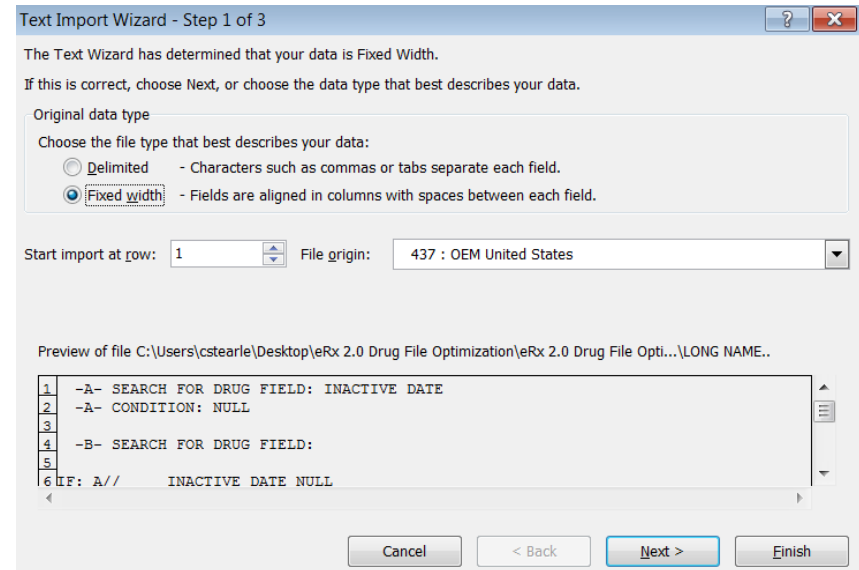
Importing into Excel

- Either way of running the report will result in a .txt file:
- Import this file into Excel
 - Data Tab > From Text



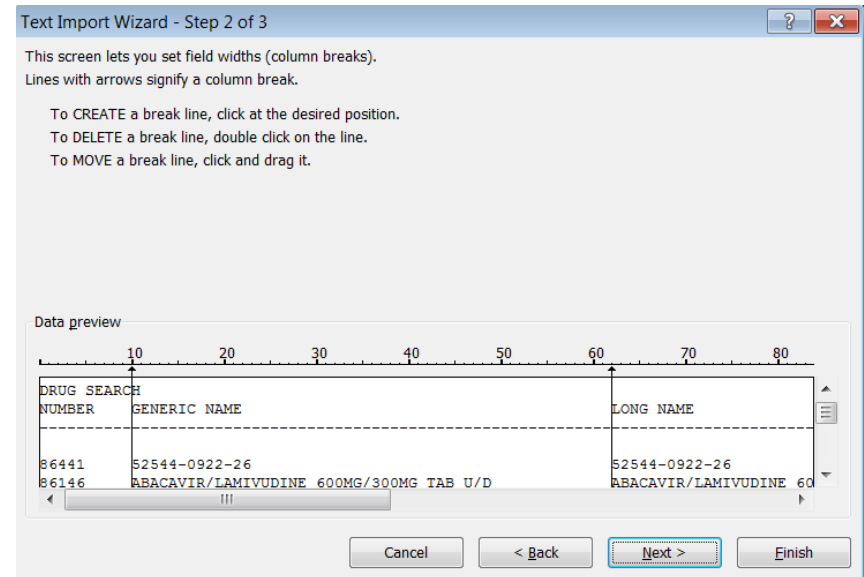
Text Import Wizard

- After selecting the .txt file follow the steps of the Text Import Wizard being sure to select Fixed Width on Step 1 of 3.



Text Import Wizard

- In the Text Import Wizard be sure to adjust the column breaks on Step 2 of 3.
- Select Finish and adjust rows/columns on spreadsheet as necessary.



Drug File Optimization Report #1

- FM Report 1 Generic and Long Names
 - Fields to be Optimized
 - Generic Name
 - Long Name

Drug File Optimization

- Generic Name Field:
 - Standard format:
 - <DRUG NAME> <STRENGTH> <DOSAGE FORM>
 - Character limitation: 50 characters
 - If the LONG NAME field is not populated then information in this field will be transmitted to Surescripts.
 - Abbreviations will still be necessary but review entries for standard format, misspellings, dosage form accuracy, etc.
 - Avoid the following characters in this field:

Control Characters (ASCII)	Symbol
Quote	"
Apostrophe	'
Ampersand	&
Less than	<
Greater than	>
Equals	=

Drug File Optimization

- CMOP Recommendations:
 - Generic Name should be the same as the VA Print Name unless you determine that the VA Print Name could be confusing to patients or staff members

Drug File Optimization

- Long Name Field
 - Standard format
 - <DRUG NAME> <STRENGTH> <DOSAGE FORM>
 - Character limitation: 105 characters
 - Information in this field is transmitted to Surescripts
 - Minimal abbreviations
 - Dosage forms spelled out
 - See other documents for Surescripts recommendations and Long Name examples

Drug File Optimization

- Long Name Field
 - Avoid the following characters:

Control Characters (ASCII)	Symbol
Quote	"
Apostrophe	'
Ampersand	&
Less than	<
Greater than	>
Equals	=

Long Name

- General Format - In this order:
- Complete Name - Dosage Strength - Strength Units - Dosage Form
- Examples:
 - **CIPROFLOXACIN 500 MG TABLET** instead of Ciprofloxacin tablet 500mg
 - **AMOXICILLIN 250 MG/5 ML POWDER FOR SUSPENSION** instead of Amoxicillin powder for suspension 250mg/5mL

Long Name

- Use of Punctuation
 - Limit the use of punctuation except in the following examples:
 - Use Dashes (-) to separate similar elements:
 - AUGMENTIN 875 MG-125 MG TABLET
 - TENORETIC 100 MG-25 MG TABLET
 - Parentheses to differentiate brand and generic drug names.
 - Commas to separate groups of numbers (i.e., 1,000).
 - Forward slash to convey a concentration per unit of volume:
 - FLUTICASONE 50 MCG/ACTUATION NASAL SPRAY
 - INSULIN LISPRO 100 UNITS/ML SOLUTION FOR INJECTION
 - A space is recommended between numbers and units of measure:
 - CIPROFLOXACIN 500 MG TABLET

Long Name

- Drug Name-Complete Name:
 - Spelled out in FULL, avoiding the use of abbreviations

RECOMMENDED	AVOID
HYDROCHLOROTHIAZIDE 50 MG TABLET	HCTZ 50 MG TABLET
ZIDOVUDINE 300 MG TABLET	AZT 300 MG TABLET
BUTALBITAL-ACETAMINOPHEN-CAFFEINE 50 MG-325 MG-40 MG CAPSULE	BUTALBITAL-APAP-CAFFEINE CAP

Long Name

- Drug Name-Salt Form:
 - If multiple salts are available then the salt should be included as part of the name.
 - USP approved abbreviations are okay: K, NA, HBr, and HCl.
 - Examples:
 - HYDROXYZINE HYDROCHLORIDE 100 MG TABLET OR HYDROXYZINE HCL 100 MG TABLET
 - METOPROLOL TARTRATE 50 MG TABLET

Long Name

- Drug Name-Generic (Proprietary) Name:
 - When both names are used they should be separated appropriately and completely spelled out.
 - ALL Vaccines should include TRADE Name.
 - Example:
 - METOPROLOL SUCCINATE (TOPROL XL) 100 MG EXTENDED-RELEASE TABLET

Long Name

- Dosage Strength-Active Ingredients:
 - The dosage strength MUST be provided for drugs with three or less ingredients.
 - Brand name is acceptable without accompanying strength and strength units when the list of active ingredients is too large (character limitations).
 - Categories where a listing of all active ingredients is NOT necessary: Multivitamins, bowel preps, and hydration solutions.
 - Oral contraceptives should include strengths on the estrogen, progestin, and iron (if applicable):
 - ORTHO TRI-CYCLEN LO (ETHINYL ESTRADIOL/NORGESTIMATE) 0.18-0.215-0.25 MG 25 MCG TABLETS

Long Name

- Dosage Strength-Strength Units:
 - Dosage form strength:
 - HYDROCORTISONE 2.5% TOPICAL CREAM
- Delivery Rate:
 - ESTRADERM 0.1MG/24HR TRANSDERMAL PATCH
- Dosage released from a single delivery:
 - ADVAIR DISKUS 100 MCG-50 MCG/ACTUATION POWDER FOR INHALATION

Long Name

- Dosage Strength-Decimal Use:
 - Use leading zeroes:
 - Use 0.X mg
 - NOT this .X mg
 - Avoid trailing zeroes:
 - Use X mg
 - NOT X.0 mg
 - Use alternative units of measure if possible:
 - 30mcg instead of 0.03mg

Long Name

- Dosage Strength-Large Number Format:
 - Commas to separate number of 1,000 or more
 - Examples:
 - HEPARIN 10,000 UNIT SUBCUTANEOUS INJECTION
 - PANCRELIPASE (CREON) 12,000-38,000-60,000 USP UNITS DELAYED RELEASE CAPSULE

Long Name

- Dosage Strength-Units Abbreviation:
 - Use USP standard abbreviations for dosing units:
 - mcg for microgram
 - mg for milligram
 - Unit should be spelled out at all times and “u” or “U” should **not** be used
 - ml or mL, but AVOID using “cc”

Long Name

- Dosage Form-Modified Release Form:
 - Identify in the drug name:
 - SUSTAINED RELEASE
 - CONTROLLED RELEASE
 - EXTENDED RELEASE
 - TIME RELEASE
 - CONTINUOUS RELEASE
 - Examples:
 - TOPROL XL 100MG EXTENDED RELEASE TABLET
 - ALLEGRA-D 24 HOUR 180 MG-240 MG EXTENDED RELEASE TABLET
 - GLIPIZIDE 10MG EXTENDED-RELEASE TABLET

Long Name

- Dosage Form-Dosage Route:
 - Dosage route must be included when same drug name and strength are used via different routes.
- Examples:
 - OFLOXACIN 0.3% OPHTHALMIC SOLUTION
 - CORTISPORIN
(HYDROCORTISONE/NEOMYCIN/POLYMYXIN B)
1%-0.35%-10,000 UNITS/ML OPHTHAMLIC
SUSPENSION

Long Name

- Dosage Form-Delivery Method or Device:
 - When a drug is available in multiple variants then it is recommended to include the dispensing method along with the drug name and dosage form.
- Examples:
 - LANTUS 100 UNITS/ML SOLUTION FOR INJECTION
 - LANTUS OPTICLIK CARTRIDGE 100 UNITS/ML SOLUTION FOR INJECTION
 - LANTUS SOLOSTAR PEN 100 UNITS/ML SUBCUTANEOUS SOLUTION FOR INJECTION

STOP

- Stop and run Fileman Report #1
FM_Report1GENERICandLONG_NAME.doc

Drug File Optimization Report #2

- FM Report 2 Unit Fields and Available to e-Rx
 - Fields to be Optimized
 - DEA, Special HDLG
 - Order Unit
 - Dispense Unit
 - Dispense Unit/Order Unit
 - Dispense Unit NCPDP Code
 - NDC Number
 - Available to e-Rx

Drug File Optimization

- DEA, Special HDLG Field:
 - Must be accurate
 - No blanks
 - All supplies marked as “S”
 - All compounds marked as “0”
 - Controlled substances marked correctly

0	MANUFACTURED IN PHARMACY
1	SCHEDULE 1 ITEM
2	SCHEDULE 2 ITEM
3	SCHEDULE 3 ITEM
4	SCHEDULE 4 ITEM
5	SCHEDULE 5 ITEM
6	LEGEND ITEM
9	OVER-THE-COUNTER
L	DEPRESSANTS AND STIMULANTS
A	NARCOTICS AND ALCOHOLS
P	DATED DRUGS
I	INVESTIGATIONAL DRUGS
M	BULK COMPOUND ITEMS
C	CONTROLLED SUBSTANCES - NON NARCOTIC
R	RESTRICTED ITEMS
S	SUPPLY ITEMS
B	ALLOW REFILL (SCH. 3, 4, 5 ONLY)
W	NOT RENEWABLE
F	NON REFILLABLE
E	ELECTRONICALLY BILLABLE
N	NUTRITIONAL SUPPLEMENT
U	SENSITIVE DRUG

Drug File Optimization

- Order Unit Field:
 - How the drug is supplied from the manufacturer
 - Must be accurate
 - No blanks

AM	AMPUL	DI	DISPENSER	ML	MILLILITER
BG	BAG	DR	DRUM	OZ	OUNCE
BR	BAR	EA	EACH	PG	PACKAGE
BT	BOTTLE	GAL	GALLON	PK	PACKET
BX	BOX	GL	GLASS	PT	PINT
CC	CUBIC CENTIMETER	GM	GRAM	QT	QUART
CK	CAKE	GR	GRAIN	RL	ROLL
CN	CAN	JR	JAR	SE	SET
CO	CONTAINER	KG	KILOGRAM	TR	TRAY
CS	CASE	LB	POUND	TU	TUBE
CT	CARTON	MG	MILLIGRAM	V	VIAL

Drug File Optimization

- Dispense Unit Field:
 - This is the smallest unit that can be dispensed.
 - It is the dose of the order unit (i.e., tab, cap, mL, gm).
 - This field often matches the NCPDP Code field.
 - No blanks.
 - Accurate.

Drug File Optimization

- Dispense Unit Field – CMOP guidelines
- **Local Dispense Unit** versus **VA Dispense Unit**- Refer to the most current IHS Mapped Drugs Listing. The VA often uses a Dispense Unit of “Each” rather than a metric Dispense Unit such as a “gram” or “milliliter”, for creams, ointments, eye drops, insulins, inhalers, etc.
- **Do Not** change your local Dispense Unit, which is most likely a metric unit, unless it makes sense. The IHS Office of Information Technology programmed RPMS to prevent the dispense unit from automatically being over-ridden when marking a single drug for CMOP, but the system will still give the user the option to manually change the dispense unit.

Drug File Optimization

- Dispense Unit per Order Unit Field:
 - How many dispense units per order unit? (i.e., 100, 10, 50, 6.7, 5, etc.).
 - Accurate.
 - No blanks.

Drug File Optimization

- Dispense Unit NCPDP Code Field:
 - National Council for Prescription Drug Programs (NCPDP).
 - Provides a standard for the exchange between prescribers, pharmacies, intermediaries, payers.
 - REQUIRED field for successful e-Rx transmissions.
 - This field often matches the Dispense Unit Field.
 - Minimize the use of “EA” for Each.
 - Changes to the list came about with EHR P12/APSP 1016:
 - Many additions
 - Some deletions, including:
 - F2 (International Units)
 - MR (Meter)
 - UM (Million Units)
 - ZZ (Mutually Defined)
 - UN (Unit)

Drug File Optimization

- NDC Number Field:
 - 5-4-2 Format Only for proper functioning with POS & NDF Matching.
 - Must be **accurate**.
 - Used by Surescripts for controlled substance validation.
 - Used by POS and potentially ScriptPro as well
 - Only entries that should be blank are SUPPLIES or COMPOUNDS :
 - If an item does **not** have an NDC number and it is NOT a compound or supply then it cannot be e-Prescribed at this time.
 - For sites that don't have a pharmacy, you will still need to populate the NDC field.
 - The National Drug File (NDF) Menu in RPMS has a useful INQ (Inquiry) option to look up NDC's based off the VA Generic Drug Name.
 - To acquire an NDC you can also search the FDA NDC file search:
<http://www.accessdata.fda.gov/scripts/cder/ndc/default.cfm>.

Drug File Optimization

- Available to eRx Field:
 - Choose from:
 - 0 Available
 - 1 Not Available
 - It is not necessary to mark the Available drugs as “0” as that is the default for this field.
 - The following items should be marked as Not Available:
 - PYXIS/OMNICELL items
 - SAMPLES
 - ER ITEMS
 - Drugs with no NDC numbers (some herbals, homeopathic products) unless they are supplies or compounds
 - Unknown Medication Miscellaneous or any other “Generic” entry

STOP

- Stop and run Fileman Report #2
 - FM_Report2UNIT_FIELDSandERX

Drug File Optimization Report #3

- FM Report 3 NDF
 - Fields to be Optimized
 - VA Product Name
 - VA Drug Class Code

Drug File Optimization

- National Drug File (NDF) Matching
 - You MUST match to the NDF to obtain VA Drug Class.
 - This will allow allergy checking and Drug/Drug interactions to operate correctly.
 - Without this code your providers will NOT get the appropriate order checks, which can ultimately result in adverse patient outcomes.
 - NOTE: The attempt to match is based off the NDC code(s), then the Generic Name.
 - Make sure the drug, dosage form, package size, and package type are accurate

Drug File Optimization

- VA Product Name
 - When reviewing this report look for accuracy of the actual product, strength, and dosage form
 - If this field is BLANK but the VA Drug Class Code is populated it means that a manual match was made
 - Attempt to do a re-match to find the actual product
 - If actual product not located in the NDF then request for a new entry to be added on the RPMS Feedback page:
<http://www.ihs.gov/RPMS/index.cfm?module=feedback&option=add&newquery=1>

Drug File Optimization

- VA Drug Class Code
 - MUST attempt to match ALL drugs to the NDF
 - If this field is blank then it means that no match (or manual match) has been made to the NDF
 - Order checking will NOT work correctly!

STOP

- Top and run Fileman report #3
 - FM_Report3NDF

Drug File Optimization Report #4

- FM Report 4 DOSAGES
 - Fields to be Optimized
 - Possible Doses (and Package Designation)
 - Local Possible Doses (and Package Designation)

Drug File Optimization

- Dosages
 - There are 2 types of dosages that a drug can be assigned
 - POSSIBLE Dosages
 - LOCAL Possible Dosages
 - Possible dosages are assigned automatically when you match the drug to the NDF
 - There are some drugs that will not automatically receive a possible dose when matched and in those cases we will optimize the LOCAL possible dosage field.
 - Best practice supports possible dosages over local possible dosages HOWEVER we have already indicated that not all drugs will have possible dosing.

Drug File Optimization

- POSSIBLE Dosages
 - When possible dosages are auto-created, the system automatically creates entries for 1 x strength of the dispense unit and 2 x strength of dispense unit
 - Keep in mind that this is automatically done for you AND you should always confirm that the dose automatically assigned is therapeutically and clinically appropriate
 - If the dose is inappropriate it can be removed by using the @ sign
 - If the drug has additional dosing options (1/2 tab, 3 tabs, etc.) the package owner may create those in order to optimize dosing options for the provider during CPOE

Drug File Optimization

- LOCAL Possible Dosages
 - For drugs that are not automatically assigned a possible dosage you will need to manually create FREE TEXT dosages using Local Possible Dosage option.
 - Drugs that you will typically need to create local possible dosage include: combination products, ophthalmic products, topical, inhalers, etc.
 - When creating a local possible dosage keep in mind that they need to “speak” to the patient.
 - You will also need to be consistent with expanding numeric values in local possible dosage.
 - Remember best practice supports use of possible dosages over local possible dosages in most cases.

Drug File Optimization

- Dosages
 - Best practice indicates that range dosing should be avoided to prevent drug errors
 - For CPOE to be successful every drug should have an assigned dose. Drugs with no dose result in the provider free texting the entry which can increase the risk of error, increased work in pharmacy and transmission failure in eRx.
 - POSSIBLE dosages always override LOCAL possible dosages when both options are populated
 - To “unmask/reveal” Local Possible Dosages, use the @ to get rid of Possible Dosages

Drug File Optimization

- Dosages
 - Optimization Steps
 - NO Blanks
 - Clinically appropriate dosing is available for all drugs
 - POSSIBLE dosages are used as much as possible
 - Attempt to avoid Range Dosing (1-2 tablets)
 - If a drug uses LOCAL possible dosages then it needs a specific and descriptive Pharmacy Orderable item name (more on that later in presentations)

STOP

- Stop and run FileMan report #4
 - FM_Report4DOSAGES

Drug File Optimization Report #5

- FM Report 5 DOSAGE FORM
 - Including noun, verb, preposition, conjunctions

Drug File Optimization

- Dosage Form File
 - Need to go into “Dosages” Menu to find it
 - Edits here affect EVERY drug with that dosage form!
- The following fields can be found in the Dosage Form File:
 - Med Route
 - Verb
 - Other Language Verb
 - Preposition
 - Other Language Preposition
 - Noun
 - Conjunction
 - NCPDP Code

Drug File Optimization

- Dosage Form File
 - Med Route
 - Route(s) used for the dosage form
 - Impacts all drugs with this dosage form
 - More than one med route can be populated
 - Verb
 - Used to build the sig of the order (prescription)
 - i.e., Take, Place, Use
 - Patient Friendly Language
 - Other Language Verb: **LEFT BLANK**

Drug File Optimization

- Dosage Form File
 - Preposition
 - Do NOT populate
 - Other Language Preposition
 - Do NOT populate
 - Noun
 - Doses of 1 and 2 of every noun listed here will be created
 - Conjunction
 - not usually used, but might an option for topicals that have a % strength. Example: 2 drops moxifloxacin 0.5% becomes 2 drops **of** moxifloxacin 0.5%
- NCPDP Code
 - Do NOT populate

STOP

- Stop and run Fileman report #5
 - FM_Report5DOSAGE_FORM

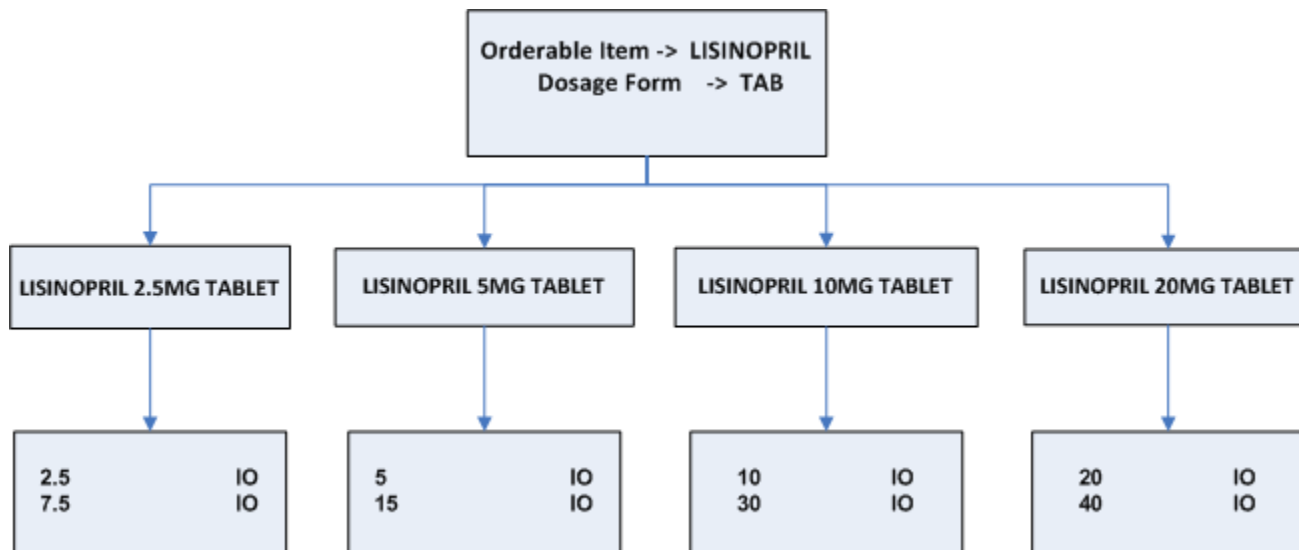
Drug File Optimization Report #6

- FM Report 6 PHARMACY OI
 - Pharmacy OI File
 - Med Route
 - Schedule Type
 - Schedule
 - Synonym
 - Patient Instructions

Pharmacy Orderable Items

- Dispense Drugs vs Pharmacy Orderable Items
 - Dispense drugs are linked to pharmacy orderable items
 - Pharmacists use **dispense drugs** when entering orders in RPMS
 - Providers order pharmacy **orderable items** in EHR
 - Dispense drugs are detailed in nature and should follow the format of “Drug-Strength-Dosage Form”
 - Pharmacy Orderable Items are *typically* generic in nature

Pharmacy Orderable Items



Pharmacy Orderable Items

- The Pharmacy Orderable Item Name should be **SPECIFIC, DESCRIPTIVE, and DETAILED** in nature IF:
 - The drug utilizes **LOCAL Possible Dosages**
 - Combination products, inhalers, ophthalmics, otics, topicals, injectables, etc
 - Strength is expressed as a percent
 - Topicals, ophthalmics
 - IV Additives with more than one strength
 - Omnicell/Pyxis medications

Pharmacy Orderable Items

- Example of Orderable Item name if POSSIBLE dosages are utilized

SIMVASTATIN TAB

Outpatient Dosages:

10MG	(1 TABLET)	SIMVASTATIN 10MG TAB
20MG	(1 TABLET)	SIMVASTATIN 20MG TAB
40MG	(1 TABLET)	SIMVASTATIN 40MG TAB
80MG	(1 TABLET)	SIMVASTATIN 80MG TAB

Pharmacy Orderable Items

- Examples of Orderable Item name if LOCAL POSSIBLE dosages are utilized

Example 1:

EZETIMIBE-SIMVASTATIN 10MG/20MG TAB

Outpatient Dosages: 1 TABLET EZETIMIBE/SIMVASTATIN 10MG-20MG TABLET

Example 2:

PENICILLIN 250MG/5ML PWDR,RENS-ORAL

Outpatient Dosages:

2.5 ML	PENICILLIN VK 250MG/5ML ORAL SOLUTION
5 ML	PENICILLIN VK 250MG/5ML ORAL SOLUTION
7.5 ML	PENICILLIN VK 250MG/5ML ORAL SOLUTION
10 ML	PENICILLIN VK 250MG/5ML ORAL SOLUTION

Pop Quiz 1!

Is the following Orderable Item name correct?

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
ACETAMINOPHEN TAB	ACETAMINOPHEN 325MG TAB	325MG 650MG
ACETAMINOPHEN TAB	ACETAMINOPHEN 500MG TAB	500MG 1000MG

YES!

Pop Quiz 2!

Is the following Orderable Item name correct?

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
AMOXICILLIN/CLAVULANATE 500MG-125MG TAB	AMOXICILLIN/CLAVULANATE 500MG-125MG TABLET	1 TABLET

YES!!

Pop Quiz 3!

Is the following Orderable Item name correct?

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
FLUTICASONE INHL,ORAL	FLUTICASONE 44MCG/ACTUATION INHALATION AEROSOL	1 PUFF 2 PUFFS
FLUTICASONE INHL,ORAL	FLUTICASONE 110MCG/ACTUATION INHALATION AEROSOL	1 PUFF 2 PUFFS
FLUTICASONE INHL,ORAL	FLUTICASONE 220MCG/ACTUATION INHALATION AEROSOL	1 PUFF 2 PUFFS

NO!!

Pop Quiz 3!

Answer:

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
FLUTICASONE 44MCG/ACTUATION INHL,ORAL	FLUTICASONE 44MCG/ACTUATION INHALATION AEROSOL	1 PUFF 2 PUFFS
FLUTICASONE 110MCG/ACTUATION INHL, ORAL	FLUTICASONE 110MCG/ACTUATION INHALATION AEROSOL	1 PUFF 2 PUFFS
FLUTICASONE 220MCG/ACTUATION INHL, ORAL	FLUTICASONE 220MCG/ACTUATION INHALATION AEROSOL	1 PUFF 2 PUFFS

Pop Quiz 4!

Is the following Orderable Item name correct?

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
LATANOPROST 0.005% SOLN,OPH	LATANOPROST 0.005% OPHTHALMIC SOLUTION	1 DROP 2 DROPS

YES!!

Pop Quiz 5!

Is the following Orderable Item name correct?

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
METFORMIN/ROSIGLITAZONE 1000MG-2MG TAB	METFORMIN/ROSIGLITAZONE 1000MG-2MG TABLET	1 TABLET
METFORMIN/ROSIGLITAZONE 1000MG-2MG TAB	METFORMIN/ROSIGLITAZONE 1000MG-4MG TABLET	1 TABLET

NO!!

Pop Quiz 5!

Answer:

Orderable Item Name	Dispense Drug(s)	Associated Dosages (PD or LPD)
METFORMIN/ROSIGLITAZONE 1000MG-2MG TAB	METFORMIN/ROSIGLITAZONE 1000MG-2MG TABLET	1 TABLET
METFORMIN/ROSIGLITAZONE 1000MG-4MG TAB	METFORMIN/ROSIGLITAZONE 1000MG-4MG TABLET	1 TABLET

Pharmacy Orderable Item Name Recommendations

- When changing a name of the orderable item please keep the following in mind:
 - Changing the name (i.e., making it more descriptive) does NOT break a medication quick order.
 - REMEMBER: Only edit the name when you have a 1:1 relationship of OI to drug
 - Creating new orderable items for certain dispense drugs WILL break the associated medication quick order.
 - IMPORTANT: If you are separating out drugs from a common orderable then be sure to create all new orderable items and NOT re-name the previously non-descriptive orderable item. There are most likely prescriptions (with refills) associated with these original orderable items.


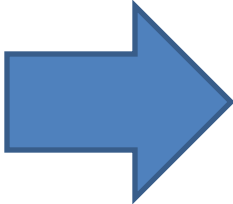
Orderable Item File

- Pharmacy Orderable Item File
 - Orderable Item Name
 - See specifics for naming requirements
 - Dosage Form
 - Determined by the NDF match
 - Schedule Type
 - Typically blank for outpatient sites
 - Inpatient sites may utilize “On-Call” or “Fill on Request”
 - Schedule
 - Most common schedule for drug is populated
 - Avoid populating PRN (provider will decide this by using PRN check box in medication order dialog)
 - Patient Instructions
 - Most common patient instructions should be populated here
 - May Free Text OR chose an option from the Medication Instruction File sig codes OR a combination of both
 - Providers are now able to edit these default patient instructions if they desire when ordering in EHR.
 - Synonym
 - Populate brand names, etc.
 - This synonym field is for the provider when ordering meds via EHR

OI and Dosages

ENALAPRIL TAB  Pharmacy Orderable Item Name

Outpatient Dosages:

	2.5MG	(1 TABLET)	ENALAPRIL 2.5MG TAB	
	5MG	(1 TABLET)	ENALAPRIL 5MG TAB	
POSSIBLE Dosages 	10MG	(1 TABLET)	ENALAPRIL 10MG TAB	
	20MG	(1 TABLET)	ENALAPRIL 20MG TAB	
	40MG	(2 TABLETS)	ENALAPRIL 20MG TAB	

Dispense Drug(s)
linked to OI

ENALAPRIL/HYDROCHLOROTHIAZIDE 10MG/25MG TAB

Outpatient Dosages:

1 TABLET ENALAPRIL/HYDROCHLOROTHIAZIDE 10MG/25MG TAB



LOCAL Possible Dosages

STOP

- Stop and run Fileman report #6
 - FM_Report6PHARMACY_OI

Drug File Optimization

Report #7 and #8

- FM Report 7 DISPENSE DRUG OI
 - Verification of accuracy of OI and Dispense Drug link
- Report 8 OI and DOSAGES
 - Verification of Orderable Item setup

Drug File Optimization

- On Report #7
- For all drugs:
 - Review drug file for accuracy.
 - Verify that the drug is matched to the correct orderable item and dosage form.
 - Verify that the matched orderable item is not inactivated.

Drug File Optimization

- On Report #8
- Review Orderable Items attached to dispense drugs with NO assigned dosages:
 - All dispense drugs need dosages assigned.
- Review Dosages and verify (one last time) that they are optimized including lowest dosage to highest dosage.
- Review the Orderable item and the attached Dispensed drugs assigned:
 - Identify drugs that utilize local possible dosages with multiple dispense drugs attached to one orderable item.
 - These are the orderable items that you might consider separating out as discussed in class.
- Review Orderable Items and verify that all dispense drugs have been appropriately matched to the correct orderable item.

Stop

- Stop and run reports #7 and #8
 - FM_Report7DISPENSE_DRUG_OI
 - Report8OIandDOSAGES
- These reports are different ways of reviewing some of the same information on previous reports

Switching Gears

- Associated Files
 - These are files that are accessed via the Pharmacy Data Management Menu and also play important roles in an optimized Computerized Provider Order Entry (CPOE) process

Drug File Optimization

- Associated Files
 - Dosage Form File
 - Medication Instruction File
 - In Drug File, the field you populate with these entries is called PATIENT INSTRUCTIONS
 - Medication Route File
 - Drug Text File
 - Standard Schedule file

Dosage Form File

**Covered in section on Report #5 Dosage Form
Accessed via PDM Menu Dosages...**

```
Dosages ...  
Drug Enter/Edit  
Drug Interaction Management ...  
Electrolyte File (IV)  
Lookup into Dispense Drug File  
Medication Instruction Management ...  
Medication Routes Management ...  
Orderable Item Management ...  
Formulary Information Report  
Drug Text Management ...  
Pharmacy System Parameters Edit  
Standard Schedule Management ...  
Synonym Enter/Edit  
Controlled Substances/PKI Reports ...  
Send Entire Drug File to External Interface  
  **> Out of order: Not used in IHS  
Enhanced Order Checks Setup Menu ...  
IV Additive/Solution Reports ...  
Warning Builder  
Warning Mapping
```

```
Auto Create Dosages  
Dosage Form File Enter/Edit  
Enter/Edit Dosages ←  
Most Common Dosages Report  
Noun/Dosage Form Report  
Review Dosages Report  
Local Possible Dosages Report  
Request Change to Dose Unit
```

Medication Instruction File

Accessed via PDM Menu Medication Instruction Management...

```
Dosages ...  
Drug Enter/Edit  
Drug Interaction Management ...  
Electrolyte File (IV)  
Lookup into Dispense Drug File  
Medication Instruction Management ...  
Medication Routes Management ...  
Orderable Item Management ...  
Formulary Information Report  
Drug Text Management ...  
Pharmacy System Parameters Edit  
Standard Schedule Management ...  
Synonym Enter/Edit  
Controlled Substances/PKI Reports ...  
Send Entire Drug File to External Interface  
  **> Out of order: Not used in IHS  
Enhanced Order Checks Setup Menu ...  
IV Additive/Solution Reports ...  
Warning Builder  
Warning Mapping
```

```
Medication Instruction File Add/Edit  
Medication Instruction File Report
```



Medication Instruction File

- The following fields are found in the Medication Instruction File:
 - Name:
 - Synonym:
 - Expansion:
 - Plural:
 - Intended Use:
 - Frequency (in minutes):

Medication Instruction File

- Name
 - Limited to 9 characters
 - Use an abbreviation – this abbreviation is only seen in RPMS when choosing defaults
 - Ex: UD
- Synonym: Leave Blank

Medication Instruction File

- Expansion:
 - This is what users and patients will see
 - Should “speak” to the patient
 - Providers can now edit this during order entry in EHR
 - Ex: UD expands to AS DIRECTED

Medication Instruction File

- Plural – Leave Blank
- Intended Use:
 - Inpatient, Outpatient, or Both
- Frequency (in minutes) - Leave Blank

Medication Route File

Accessed via PDM Menu Medication Routes Management...

```
Dosages ...  
Drug Enter/Edit  
Drug Interaction Management ...  
Electrolyte File (IV)  
Lookup into Dispense Drug File  
Medication Instruction Management ...  
Medication Routes Management ...  
Orderable Item Management ...  
Formulary Information Report  
Drug Text Management ...  
Pharmacy System Parameters Edit  
Standard Schedule Management ...  
Synonym Enter/Edit  
Controlled Substances/PKI Reports ...  
Send Entire Drug File to External Interface  
  **> Out of order: Not used in IHS  
Enhanced Order Checks Setup Menu ...  
IV Additive/Solution Reports ...  
Warning Builder  
Warning Mapping
```

```
Medication Route File Enter/Edit  
Medication Route Mapping Report  
Medication Route Mapping History Report  
Request Change to Standard Medication Route  
Default Med Route For OI Report
```



Medication Route File

- Medication Route(s) are linked to a dosage form in the Dosage Form File
 - Impacts all drugs with this dosage form
 - More than one medication route can be populated

Medication Route File

- Fields Available in the Medication Route File:
 - Name:
 - Abbreviation:
 - Package Use:
 - Outpatient Expansion:
 - Other Language Expansion:
 - IV Flag:
 - Prompt for Inj. Site in BCMA:
 - Dsply on IVP/IVPB Tab in BCMA:

Medication Route File

- Name:
 - This is seen in RPMS and EHR during order entry
- Abbreviation:
 - This is only seen in RPMS, not seen by end users in EHR
- Package Use:
 - National Drug File Only or All Packages
 - The NDF uses far more Med Routes than need to be selected by inpatient personnel. This field is used to screen out Med Routes not needed by the Inpatient packages

Medication Route File

- Outpatient Expansion:
 - This is what will appear in the sig and on the labels for the patient. Wording needs to speak to the patient
 - Ex: ORAL expands to “by mouth”
 - Note that you DO want your preposition here, NOT in the Preposition Field of the Dosage Form File
- Other Language Expansion – Leave Blank

Medication Route File

- IV Flag:
 - Indicates if the medication route is an IV one or not
 - The effect of this field's setting is seen when finishing an IV ordered via EHR.
 - COMPLETE THIS ORDER AS IV OR UNIT DOSE?
IV//
 - When field is set to "Yes" this defaults to IV
 - When the field is set to "No" or is blank the pharmacist must make the selection each time
 - Because IV meds can be ordered for outpatient and inpatient, this field will affect both

Medication Route File


- Prompt for Inj Site in BCMA:
 - If this field is set to “Yes”, when a nurse administers the medication using this medication route, a dialog box appears from which the nurse picks the injection site
- Dsply on IVP/IVPB Tab in BCMA:
 - If this field is set to “Yes”, any medication ordered with this route will appear on the IVP/IVPB tab regardless whether it’s an IV or UD.

Drug Text File

Accessed via PDM Menu Drug Text Management...

```
Dosages ...  
Drug Enter/Edit  
Drug Interaction Management ...  
Electrolyte File (IV)  
Lookup into Dispense Drug File  
Medication Instruction Management ...  
Medication Routes Management ...  
Orderable Item Management ...  
Formulary Information Report  
Drug Text Management ...  
Pharmacy System Parameters Edit  
Standard Schedule Management ...  
Synonym Enter/Edit  
Controlled Substances/PKI Reports ...  
Send Entire Drug File to External Interface  
  **> Out of order: Not used in IHS  
Enhanced Order Checks Setup Menu ...  
IV Additive/Solution Reports ...  
Warning Builder  
Warning Mapping
```

Drug Text Enter/Edit
Drug Text File Report



Drug Text File

- Can be viewed in RPMS by pharmacist processing medications
- Can be viewed in EHR by providers entering orders
- Tied to Orderable Item, not Dispense Drug

Drug Text File

74 Characters AND 1 line or less...

Medication Order

LISINOPRIL TAB
1234567 1234567 1234567 1234567 1234567 1234567 1234

Pt Wt on 01/15/2014
193 lb (87.54 kg)

Dosage Complex

Dosage	Route	Schedule
10MG	ORAL	DAILY
2.5MG	BID (NOVOLOG)	
5MG	BID AC	
10MG	BID W/MEAL	
20MG	BIW	
40MG	BL AND BS	
80MG	BQID	
	BS	
	BTID	
	DAILY	

Patient Instructions: FOR KIDNEY PROTECTION AND/OR BLOOD PRESSURE

Days Supply: 90 Qty (TAB): 90 Refills: 0 Clinical Indication: [Dropdown]

Pick Up: ☐ Clinic ☐ Mail ☒ Window ☐ Outside Pharmacy - Print

Priority: ROUTINE

Discharge Medication: ☐

Notes to Pharmacist:

LISINOPRIL TAB 10MG
TAKE ONE (1) TABLET BY MOUTH DAILY FOR KIDNEY PROTECTION AND/OR BLOOD PRESSURE
Quantity: 90 Days: 90 Refills: 0 *Chronic Med: NO Dispense as Written: NO

ADR's Accept Order Quit

74 Characters AND 2 lines or more...

Medication Order

LISINOPRIL TAB
1234567 1234567 1234567 1234567 1234567 1234567 1234

Pt Wt on 01/15/2014
193 lb (87.54 kg)

Dosage Complex

Dosage	Route	Schedule
10MG	ORAL	DAILY
2.5MG	BID (NOVOLOG)	
5MG	BID AC	
10MG	BID W/MEAL	
20MG	BIW	
40MG	BL AND BS	
80MG	BQID	
	BS	
	BTID	
	DAILY	

Patient Instructions: FOR KIDNEY PROTECTION AND/OR BLOOD PRESSURE

Days Supply: 90 Qty (TAB): 90 Refills: 0 Clinical Indication: [Dropdown]

Pick Up: ☐ Clinic ☐ Mail ☒ Window ☐ Outside Pharmacy - Print

Priority: ROUTINE

Discharge Medication: ☐

Notes to Pharmacist:

LISINOPRIL TAB 10MG
TAKE ONE (1) TABLET BY MOUTH DAILY FOR KIDNEY PROTECTION AND/OR BLOOD PRESSURE
Quantity: 90 Days: 90 Refills: 0 *Chronic Med: YES Dispense as Written: NO

ADR's Accept Order Quit

Drug Text File

- Common types of information displayed here:
 - Conversion tables
 - Dosing tables
 - Blackbox warnings
 - Pregnancy guidelines
- Format that can be used to build tables:
 - Can copy from Excel, WORD, or Text files

Drug Text File

- When processing a prescription the pharmacist has the ability to view the Drug Text within RPMS.
- The pharmacist should answer the question,
"Restriction/Guideline(s) exist. Display? : (N/O): No// O"
as YES (O) to see the same information that is also displayed to the provider in EHR.
- Orderable Item Text Example:

CEPHALEXIN 250MG/5ML

EVERY 6 HOURS

Weight (Lbs)	Weight (Kg)	Dose - MG	Dose - ML
-----	-----	-----	-----
> 11	> 5	65.5 MG	1.25 ML (1/4 TSP)
12-28	5-12.5	125 MG	2.5 ML (1/2 TSP)
>28	>12.5	250 MG	5 ML (1 TSP)

Drug Text File

- Fields available in Drug Text File:
 - Drug Text Name
 - Text
 - Synonym
 - Inactivation Date

Drug Text File

- Name:
 - This is only seen in RPMS when associating with orderable item
- Text:
 - This is where you enter the text you want to display
 - If it is short, the actual text will display
 - If longer, or multi-line, “Display Restrictions/Guidelines” will display

Drug Text File

- When entering text in the screen editor:
 - You can Copy & Paste from word processing and spreadsheet programs.
 - Tip: you may want to select a monospaced font like `Courier`.
- Use the Screen Editor to move items or adjust tabs or margins

Example of Drug Text tables

ACETAMINOPHEN ELIXIR 160MG/5ML PEDIATRIC DOSING CHART Q46H prn

Wt in LBS	Wt in KG	Dose in MG	Dose in ML(s)

6-11 LBS	3-5 KG	40MG	1.25ML
12-17 LBS	6-8 KG	80MG	2.5ML
18-23 LBS	9-11 KG	120MG	3.75ML
24-35 LBS	12-16 KG	160MG	5ML
36-47 LBS	16-21 KG	240MG	.5ML
48-59 LBS	21-27 KG	320MG	10ML
60-71 LBS	27- 32 KG	400MG	12.5ML

Drug Text File

- Synonym – Leave Blank
- Inactivation Date:
 - Use if entry is no longer needed
 - Use the @ to remove a date if you wish to reactivate an entry

Standard Schedule File

Accessed via PDM Menu Standard Schedule Management...

```
Dosages ...  
Drug Enter/Edit  
Drug Interaction Management ...  
Electrolyte File (IV)  
Lookup into Dispense Drug File  
Medication Instruction Management ...  
Medication Routes Management ...  
Orderable Item Management ...  
Formulary Information Report  
Drug Text Management ...  
Pharmacy System Parameters Edit  
Standard Schedule Management ...  
Synonym Enter/Edit  
Controlled Substances/PKI Reports ...  
Send Entire Drug File to External Interface  
  **> Out of order: Not used in IHS  
Enhanced Order Checks Setup Menu ...  
IV Additive/Solution Reports ...  
Warning Builder  
Warning Mapping
```

Standard Schedule Edit ←
Administration Schedule File Report

Standard Schedule File

- These entries will display in EHR during order entry
- Avoid using PRN in schedule expansion
 - Provider should use PRN box during EHR order entry or PRN can be defaulted in quick order

Standard Schedule File

- Fields Available:
 - Name
 - Outpatient Expansion
 - Other Language Expansion
 - Type of Schedule
 - Frequency (in minutes)
 - Standard Administration Times
 - Ward

Standard Schedule File

- Name:
 - This is seen by the users in EHR and RPMS
- Outpatient Expansion:
 - This is the language that appears in the sig and on the label
- Other Language Expansion: Leave Blank

Standard Schedule File

- Type of Schedule:
 - Choices: Continuous, Day of the week, One-time, On call, PRN
 - Most effect on Inpatient and BCMA
 - Outpatient – use Continuous or Leave Blank
 - PRN Type can have negative effects on outpatient day supply calculations

Standard Schedule File

- Frequency (in minutes):
 - Meant for inpatient use. In BCMA, this field is used to indicate the number of minutes between doses and is used by RPMS to determine the number of doses that should be given in a day.
 - Only schedules marked as Continuous allow you to edit this field

Standard Schedule File

- Standard Administration Times:
 - Standard times that doses are due in the inpatient ward.
 - Manually entered and should agree with the nursing administration policy to simplify administration times for the nurses.
 - Times should coordinate with the frequency based on 1440 minutes/24 hrs.
 - Example: QID = 4 administrations, 240 minutes apart.
 - BCMA will accentuate errors in this field
 - These are also the times that appear on the computer generated MAR used in inpatient units not using BCMA

Standard Schedule File

- Ward:
 - Allows you to designate scheduled times for a specific ward
 - Example: Med-surg ward delivers meals 1hr later than Peds ward. You can set your meal dependent schedules to different times, based on ward.

Putting it all together

- See graphics on next 2 slides

Putting it all together

Medication Order

IBUPROFEN TAB Change

Dosage Form (points to IBUPROFEN TAB)

Complex

Dosage	Route	Schedule
800MG	ORAL	Q8H
200MG	BY MOUTH	PC&HS
400MG	ORAL	Q12H
800MG		Q1H WHILE AWAKE
		Q2H WHILE AWAKE
		Q3H
		Q46H
		Q4H
		Q6H
		Q72H
		Q8H

Only routes that are linked to the dosage form show here (points to Route column)

Standard Schedules (points to Schedule column)

Medication instructions, shows expanded. Is free text and editable by provider here (points to Patient Instructions field)

Patient Instructions: FOR PAIN - TAKE WITH FOOD OR MILK

Days Supply: 7 Quantity: 21 Refills: 0 Clinical Indication: ☐ Chronic Med ☐ Dispense as Written

Pick Up: ☐ Clinic ☐ Mail ☒ Window ☐ Outside Pharmacy - Print

Priority: ROUTINE ☐ Discharge Medication

Notes to Pharmacist:

IBUPROFEN TAB 800MG
 TAKE ONE (1) TABLET BY MOUTH EVERY 8 HOURS AS NEEDED FOR PAIN - TAKE WITH FOOD OR MILK
 Quantity: 21 Days: 7 Refills: 0 *Chronic Med: NO Dispense as Written: NO

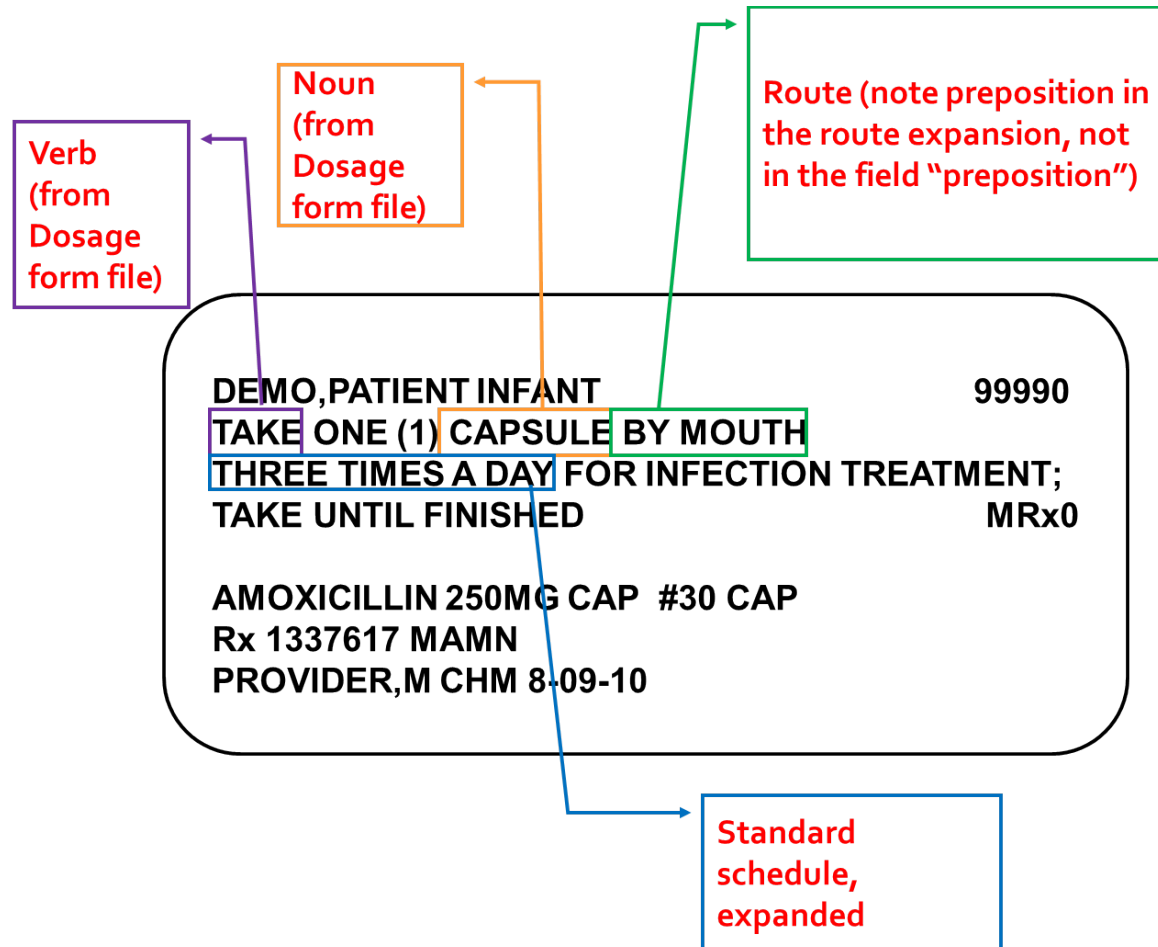
Verb (from the Dosage Form file) (points to TAKE ONE (1) TABLET)

Noun (from the Dosage Form file) (points to BY MOUTH)

Route - note preposition in the route expansion text, not in the dosage form file field "preposition" (points to BY MOUTH)

ADR's Accept Order Quit

Putting it all together



Maintenance

- Optimization is an ongoing project, not a one-time job
- Recommend periodically running these reports to keep the drug file maintained

Questions?