

Patient Safety Alert

Veterans Health Administration Warning System
Published by VA Central Office

AL09-15

March 3, 2009

Item: Medication Safety- Insulin U-500 Safety Enhancements

Specific Incident: South West VA CMOP received an order for 40 units of U-500 insulin and questioned its validity. The actual dose desired by the physician was 200 units. The physician indicated the 40 units reflected the mark on a U 100 syringe to which the patient was to draw back the plunger.

General Information: Patients with marked insulin resistance can be prescribed a concentrated form of human insulin in a concentration of 500 units/mL. Nationally, confusion between U-100 and U-500 insulin concentration during prescribing, dispensing and administration has caused significant patient harm. The VA National Center for Patient Safety (NCPS) has reviewed the Patient Safety Information System database and found multiple patient incidents related to the U-500 insulin. To mitigate U-500 insulin errors CPRS should accurately reflect the actual dose taken by the patient and the Institute of Safe Medical Practices (ISMP) has made the following recommendations: **Consistent use of a tuberculin syringe with U-500 insulin is recommended, with total doses expressed in terms of both units and volume. For example, “200 units (0.4mL).”**

588 VHA patients received U-500 insulin during Q4FY08, of these patients 124 had a concurrent Rx for NPH, insulin glargine or insulin detemir. Approximately forty percent (40%) of the patients have directions in CPRS that are inconsistent with the ISMP's recommendations.

Actions: 1. In the VA, to standardize the ISMP recommendations for the prescribing, dispensing and the use of a tuberculin syringe instead of an insulin syringe for administration of U-500 Insulin the following actions (A thru D) must be taken by the close of business (COB) March 31, 2009:

- A. Pharmacy Information Manager (ADPAC) or designee at all VA medical facilities must:
- (1) Implement U-500 Insulin Quick Order option (See attachment 1, 2 and 3 for procedure) which will:
 - a) Standardize the SIG line to reflect the total dose in terms of units and volume.
E.g. “200 units (0.4mL)”

- b) Label insulin U-500 as “concentrated Insulin”
- c) Include tuberculin syringes which are calibrated in mLs in the order set.

(2) Remove U-500 Insulin from the CPRS medication alphabetical selection list.

(3) Notify prescribers to use Quick Order Option to prescribe U-500 Insulin.

B. Pharmacy Information Manager (ADPAC) will identify patients currently on U-500 insulin with CPRS directions inconsistent with the ISMP recommendation and/or using U-100 insulin syringes. The list of patients will be given to the facilities Chief of Staff (COS). See Attachment 4 for fileman process.

C. COS will assure that each patient identified in B above is seen by their prescribing clinic within 90 days and education given to the patient on the appropriate insulin U-500 dose to use the proper use of a tuberculin syringe and assure insulin orders are entered into CPRS consistent with the ISMP recommendation. See Attachment 5 for sample cognitive aid. A progress note documenting the education presented and the patient’s understanding of the education must be entered into CPRS.

D. Pharmacy Chief will assure that U-500 insulin is physically segregated from U-100 insulin stored in the Pharmacy Department.



In this example a VAMC has placed U 500 insulin in a locked drawer and labeled as a “High Risk Medication”

2. By close of business June 30, 2009, the Patient Safety Manager (PSM) shall assure that this Alert has been addressed and the action status updated on the Hazardous Recalls / Alerts website, <http://vaww.nbc.med.va.gov/visn/recalls/index.cfm>.

Addl. Information:

NOTE: there is no U-500 insulin syringe commercially available at this time.

U-500 insulin should also never be used intravenously because of the extremely serious nature of any inadvertent overdose.

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Downloadable samples of the cognitive aid and other education tools are available on the NCPS web page at: <http://vaww.ncps.med.va.gov/education.html#u500>

Additional ISMP Alerts related to U-500 insulin may be found at http://www.ismp.org/Newsletters/ambulatory/archives/200708_2.asp

Source: Associate Director Southwest CMOP (762), ISMP.

Attachments:

- 1) Unmark U-500 Insulin for CMOP Transmission
- 2) Remove U-500 from CPRS medication selection list.
- 3) Implement Quick Orders and CPRS Order Set
- 4) Sample FileMan process to identify patients receiving U-500 insulin
- 5) Patient education cognitive aid.

Contact: General Alert Information. Mr. Keith Trettin or Mr. Bryanne Patail at VA National Center for Patient Safety (NCPS): (734) 930-5890

Attachments 1-4. Robert Silverman, PharmD at VHA Pharmacy Benefits Management (PBM): (708) 202-5040

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U - Unit Dose
I - IV
W - Ward Stock
X - Non-VA Med

Enter your choice(s) separated by commas : 0
0 - Outpatient

** You are NOW editing OUTPATIENT fields. **

AN Outpatient Pharmacy ITEM? Yes// <RETURN> (Yes)
CORRESPONDING INPATIENT DRUG: <RETURN>
MAXIMUM DOSE PER DAY: <RETURN>
LOCAL NON-FORMULARY: N/F// <RETURN>
NORMAL AMOUNT TO ORDER: <RETURN>
SOURCE OF SUPPLY: <RETURN>
CURRENT INVENTORY: 0// <RETURN>
ACTION PROFILE MESSAGE (OP): <RETURN>
MESSAGE: <RETURN>
QUANTITY DISPENSE MESSAGE: PER 20ML VIAL (DISPENSE UNIT IS 1)
Replace <RETURN>
OP EXTERNAL DISPENSE: <RETURN>

Do you wish to mark to transmit to CMOP?
Enter Yes or No: YES ← *This is the prompt that begins the CMOP unmarking process*

This option allows you to choose entries from your drug file and helps you review your NDF matches and mark individual entries to send to CMOP.

If you mark the entry to transmit to CMOP, it will replace your Dispense Unit with the VA Dispense Unit. In addition, you may overwrite the local drug name with the VA Print Name and the entry will remain uneditable.

Local Drug Generic Name: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML

ORDER UNIT: VI
DISPENSE UNITS/ORDER UNITS: 1
DISPENSE UNIT: VI
PRICE PER DISPENSE UNIT: 121.7100

VA Print Name: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML VA Dispense Unit: VI
VA Drug Class: HS501 CMOP ID: I0452

Do you wish to UNmark this drug to transmit to CMOP?
Enter Yes or No: YES ← *This step is only required if the drug is still marked for CMOP. If the above prompt asks to 'mark' the drug to transmit to CMOP, answer 'NO', and no further changes are required.*

Do you wish to mark/unmark as a LAB MONITOR or CLOZAPINE DRUG?
Enter Yes or No: NO

** You are NOW in the ORDERABLE ITEM matching for the dispense drug. **

INSULIN CONCENTRATE REG HUMAN 500 UNT/ML is already matched to

INSULIN REG 500 UNIT/ML INJ

Do you want to match to a different Orderable Item? NO// <RETURN>

ATTACHMENT 2 – Remove U-500 from CPRS medication selection list

MARKING A DRUG ITEM AS “QUICK ORDER ONLY”

(Also known at some sites as “blinding a drug”)

This procedure will remove an item from the alphabetic medication selection list in CPRS.
(**Bold** text indicates user responses typed into the system)

Select Manage orderable items Option: Enter/edit QO restriction
Select an ORDERABLE ITEM (meds or labs only): **INSULIN CONCENTRATE REG
500 UNT/ML INJ**

Select the type of usage for which you wish to restrict ordering of
this item.

Usage: **OUTPATIENT MEDICATIONS**

QO ONLY: YES// Enter ‘**YES**’ if not already present and ‘**RETURN**’ to keep
the existing value if it has already been set appropriately.

Usage: **UNIT DOSE MEDICATIONS**

QO ONLY: YES// Enter ‘**YES**’ if not already present and ‘**RETURN**’ to keep
the existing value if it has already been set appropriately.

ATTACHMENT 3 - Implementation of Quick Orders and CPRS Order Set

1. Pharmacy Information Manager (ADPAC) creates proper Local Possible Doses to display proper dose/volume for syringe using option "Enter/Edit Dosages".

```
Enter/Edit Dosages
Select Drug: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML          HS501      N/F
             CAUTION **CONCENTRATE**

This entry is marked for the following PHARMACY packages:
Outpatient
Unit Dose
Non-VA Med

INSULIN CONCENTRATE REG HUMAN 500 UNT/ML      *N/F*      Inactive Date:

This drug can have Possible Dosages, but currently does not have any.
Create Possible Dosages for this drug? N// <RETURN> 0

This drug has the following Local Possible Dosages:

1 INJECTION                                PACKAGE: IO
2 INJECTION                                PACKAGE: IO

Do you want to merge new Local Possible Dosages? Y// <RETURN> NO

Strength: 500                               Unit: UNT/ML

Select LOCAL POSSIBLE DOSAGE: 1 INJECTION      IO

LOCAL POSSIBLE DOSAGE: 1 INJECTION// @
  SURE YOU WANT TO DELETE THE ENTIRE '1 INJECTION' LOCAL POSSIBLE DOSAGE? Y
  (Yes)

Strength: 500                               Unit: UNT/ML

Select LOCAL POSSIBLE DOSAGE: 2 INJECTION      IO

LOCAL POSSIBLE DOSAGE: 2 INJECTION// @
  SURE YOU WANT TO DELETE THE ENTIRE '2 INJECTION' LOCAL POSSIBLE DOSAGE? Y
  (Yes)

Strength: 500                               Unit: UNT/ML

Select LOCAL POSSIBLE DOSAGE: CLICK DROP DOWN,OR ENTER DOSE IN ML'S
  Are you adding 'CLICK DROP DOWN,OR ENTER DOSE IN ML'S' as
  a new LOCAL POSSIBLE DOSAGE (the 1ST for this DRUG)? No// Y (Yes)

LOCAL POSSIBLE DOSAGE: CLICK DROP DOWN,OR ENTER DOSE IN ML'S
  Replace <RETURN>
PACKAGE: IO Both
BCMA UNITS PER DOSE: <RETURN>
```

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```
Strength: 500                               Unit: UNT/ML

You may choose the dosage range to be displayed. One site entered all dosages
from 0.17 ML (85 UNITS) to 0.62 ML (310 UNITS). This example shows creation of
the first 2 dosages, and the creation of a header dosage to be displayed.

Select LOCAL POSSIBLE DOSAGE: 0.17ML (85 UNITS)
Are you adding '0.17ML (85 UNITS)' as
a new LOCAL POSSIBLE DOSAGE (the 2ND for this DRUG)? No// Y (Yes)

LOCAL POSSIBLE DOSAGE: 0.17ML (85 UNITS)// <RETURN>
PACKAGE: IO Both
BCMA UNITS PER DOSE: <RETURN>

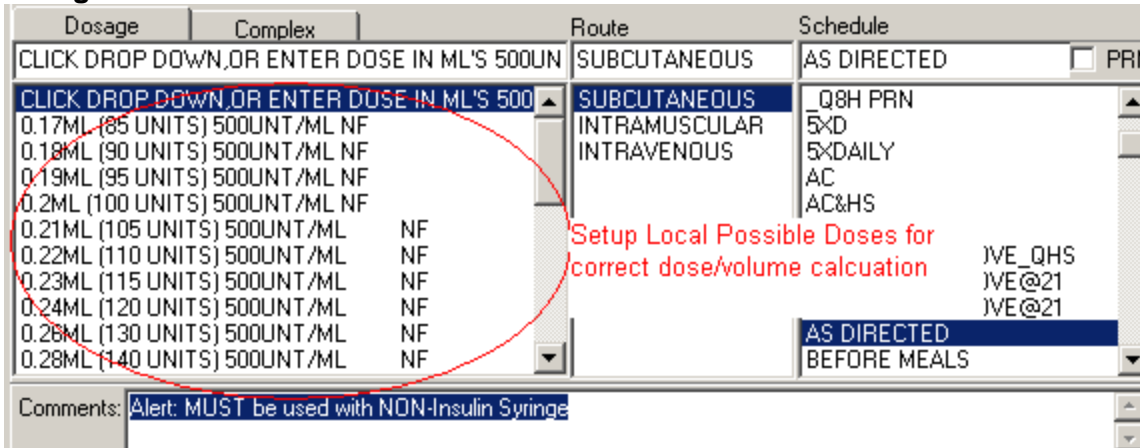
Strength: 500                               Unit: UNT/ML

Select LOCAL POSSIBLE DOSAGE: 0.18 ML (90 UNITS)
Are you adding '0.18 ML (90 UNITS)' as
a new LOCAL POSSIBLE DOSAGE (the 3RD for this DRUG)? No// Y (Yes)

LOCAL POSSIBLE DOSAGE: 0.18 ML (90 UNITS)// <RETURN>
PACKAGE: IO Both
BCMA UNITS PER DOSE: <RETURN>

Select LOCAL POSSIBLE DOSAGE: <RETURN>
```

Picture: CPRS Medication Order Dialog showing example of local possible dosages with units and volume.



2. Pharmacy Information Manager (ADPAC) adds a message restriction (example shown here) using the Drug Enter/Edit option.

MESSAGE: CAUTION **CONCENTRATE**

```
Drug Enter/Edit
Select DRUG GENERIC NAME: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML
HS501      N/F
          ...OK? Yes// (Yes)

*****
This entry is marked for the following PHARMACY packages:
  Outpatient
  Unit Dose
  Non-VA Med
```


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```
GENERIC NAME: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML
      Replace ^MESSAGE
MESSAGE: CAUTION **CONCENTRATE**
RESTRICTION: ^
```

3. Pharmacy Information Manager (ADPAC) to confirm that the U-500 Insulin Dispense Drug is matched to its own individual Orderable Item:

INSULIN CONCENTRATE REG HUMAN 500 UNT/ML is already matched to

INSULIN CONCENTRATE REG HUMAN 500 UNT/ML INJ

4. Clinical Application Coordinator (CAC) confirms that the Orderable Item has been marked as “Quick Order Only” (See Attachment #2)

Select Manage orderable items Option: ENTER/EDIT

4 Enter/edit QO restriction <<< **Use this option**

```
Select Manage orderable items Option: Enter/edit QO restriction
Select an ORDERABLE ITEM (meds or labs only): INSULIN CONCENTRATE REG
500 UNT/ML INJ
```

Select the type of usage for which you wish to restrict ordering of this item.

Usage: **OUTPATIENT MEDICATIONS**

QO ONLY: YES// Enter 'YES' if not already present and 'RETURN' to keep the existing value if it has already been set appropriately.

Usage: **UNIT DOSE MEDICATIONS**

QO ONLY: YES// Enter 'YES' if not already present and 'RETURN' to keep the existing value if it has already been set appropriately.

5. Clinical Application Coordinator (CAC) creates Two quick orders, one each for Inpatient and Outpatient, using option “Enter/Edit Quick Orders”

When creating the “display text” for these quick orders, which is the name that will appear on a CPRS order menu, keep in mind the ISMP recommendation to ensure that the word *Concentrate* appears for each of these orders.

Each order should have comments explicitly instructing the use of a tuberculin (TB) syringe when administering the medication. This can be displayed in BCMA for inpatient orders and can appear on the Rx label for outpatient orders.

1 PSJZ INSULIN CONCENTRATE 500 UNT/ML

2 PSOZ INSULIN CONCENTRATE 500 UNT/ML

```
Enter/Edit Quick Orders
```

```
Select QUICK ORDER NAME: PSOZ INSULIN CONCENTRATE 500 UNT/ML
NAME: PSOZ INSULIN CONCENTRATE 500 UNT/ML Replace
DISPLAY TEXT: Humulin R Concentrated 500 UNITS/ML
```

```
Medication: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML INJ //
CAUTION **CONCENTRATE**
```

```
Complex dose? NO//
```

```
Dose: CLICK DROP DOWN,OR ENTER DOSE IN ML'S 500UNT/ML
```

```
Replace (non-formulary)
```

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Route: SUBCUTANEOUS//
Schedule: AS DIRECTED//

CAUTION**CONCENTRATE*

Patient Instructions: FOR BLOOD SUGAR
Include Patient Instructions in Sig? YES//

Days Supply:

Quantity (VI):

Refills (0-11):

Pick Up:

Priority: ROUTINE//

Comments:

Alert: MUST be used with NON-Insulin (TB/Tuberculin) Syringe
Edit? No// (No)

(P)lace, (E)dit, or (C)ancel this quick order? PLACE//
Auto-accept this order? NO//

6. Clinical Application Coordinator (CAC) creates Quick order for Tuberculin syringe to be used with U-500 Insulin.

Note: the days supply and quantity as shown here are only a suggestion and may be adjusted according to local policy

1 PS0Z TUBERCULIN SYRINGE 1ML 27G 1/2IN

NAME: PS0Z TUBERCULIN SYRINGE 1ML 27G 1/2IN Replace
DISPLAY TEXT: Tuberculin Syringe 1mL 27G 1/2IN Replace
VERIFY ORDER:
DESCRIPTION:
No existing text
Edit? NO//

Medication: TUBERCULIN SYRINGE 1ML 27G 1/2IN SYRINGE/NDL //
Complex dose? NO//
Dose: SYRINGE TUBERCULIN SYRINGE 1ML 27G 1/2IN Replace
Route: SUBCUTANEOUS//
Schedule: AS DIRECTED//
Days Supply: 90//
Quantity (EA): 100//
Refills (0-3): 3//
Pick Up:
Priority: ROUTINE//
Comments:
To be used with Insulin U-500 rx.

7. Clinical Application Coordinator (CAC) creates Quick Order SET for Insulin U-500 and Tuberculin Syringes (using option "Enter/Edit Order Sets").

Select ORDER SET NAME: PS0Z INSULIN-R U500 W/SYRINGES
NAME: PS0Z INSULIN-R U500 W/SYRINGES
DISPLAY TEXT: Insulin 500 units/mL Concentrate w/Syringes
Replace
ORDER SET COMPONENTS:
1 PS0Z INSULIN CONCENTRATE 500 UNT/ML
2 PS0Z TUBERCULIN SYRINGE 1ML 27G 1/2IN

8. Clinical Application Coordinator (CAC) confirms that a Drug Text Alert is Displayed (entered by Pharmacy ADPAC using options “Drug Text Enter/Edit” and “Edit Orderable Items”):

Drug Text Name: INSULIN CONC 500 UNT/ML

ALERT! * MEDICATION IS 500 UNITS/ML * *CAUTION*

Drug Text Enter/Edit

This option enables you to edit entries in the DRUG TEXT file.

Select DRUG TEXT NAME: INSULIN CONC 500 UNT/ML

Are you adding ' INSULIN CONC 500 UNT/ML as a new DRUG TEXT (the 55TH)? No// Y
(Yes)

There may be entries in your DRUG file and PHARMACY ORDERABLE ITEM file linked to this Drug Text Name. Editing information related to this Drug Text entry will affect the display of information related to these.

Do you want to review the list of drugs and orderable items linked to this Drug Text entry? ? YES// NO

Do you want to edit the Drug Text Name? NO//

IMPORTANT!! After editing the Drug Text Name OR Text, review the drugs and orderable items linked to this entry for accuracy.

Do you want to edit the text for this entry? YES// YES

TEXT:

ALERT! * MEDICATION IS 500 UNITS/ML * *CAUTION*

Select SYNONYM:

INACTIVATION DATE:

Select DRUG TEXT NAME:

Edit Orderable Items

This option enables you to edit Orderable Item names, Formulary status, drug text, Inactive Dates, and Synonyms.

Select PHARMACY ORDERABLE ITEM NAME: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML
INJ N/F

Orderable Item -> INSULIN CONCENTRATE REG HUMAN 500 UNT/ML INJ
Dosage Form -> INJ

List all Drugs/Additives/Solutions tied to this Orderable Item? YES// NO

Are you sure you want to edit this Orderable Item? NO// YES

Now editing Orderable Item:

INSULIN CONCENTRATE REG HUMAN 500 UNT/ML INJ

Orderable Item Name: INSULIN CONCENTRATE REG HUMAN 500 UNT/ML Replace

This Orderable Item is Non-Formulary.

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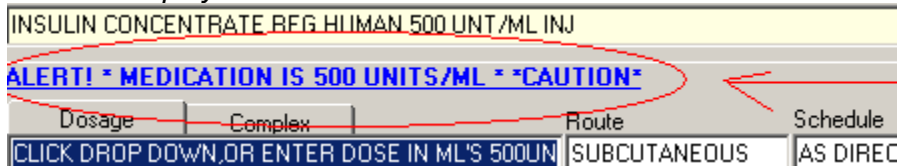
This Orderable Item is marked as a Non-VA Med.

Select OI-DRUG TEXT ENTRY: **INSULIN CONC 500 UNT/ML**
Are you adding 'INSULIN CONC 500 UNT/ML' as
a new OI-DRUG TEXT ENTRY (the 1ST for this PHARMACY ORDERABLE ITEM)? No// Y
(Yes)
ADD THIS DRUG TEXT AS A SYNONYM? ? N// 0
Select OI-DRUG TEXT ENTRY: ^

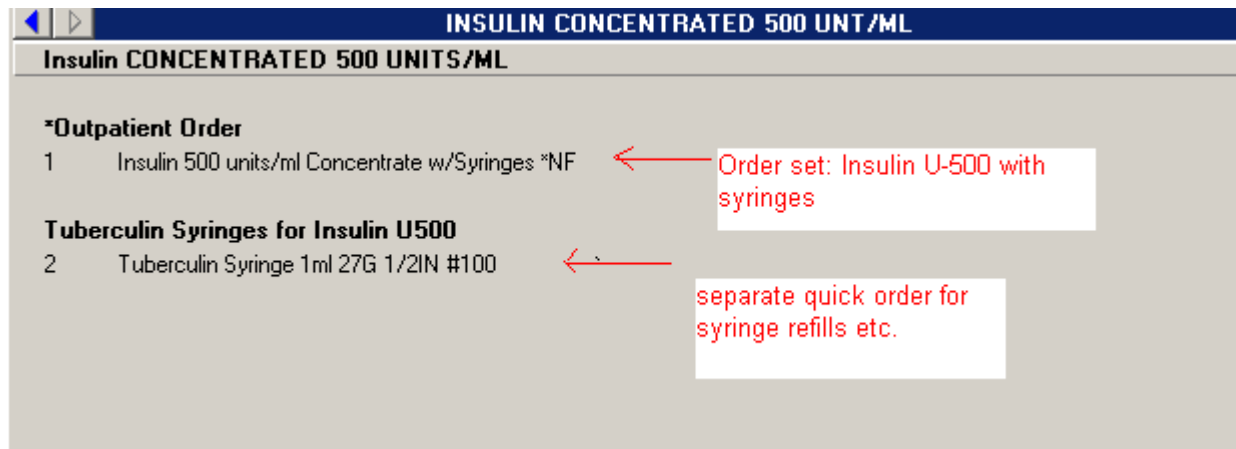
Select SYNONYM:

Select PHARMACY ORDERABLE ITEM NAME:

Will now display as:



9. Clinical Application Coordinator (CAC) creates separate Menu for provider authorized to order (using option “Enter/Edit Order Menus”). One method for restricting access to U-500 insulin is to provide this menu to only a limited number of prescribers.



ATTACHMENT 4- Sample FileMan process to identify patients receiving U-500 insulin

Note: The process shown below was derived from New Service Request #20081114. As such, it is better suited for identifying all patients on a selected medication, but does not contain information to differentiate those patients with SIGs that are inconsistent with the ISMP recommendations for labeling of U-500 insulin.

Facility IRM programmers may download an installable KIDS build version of this method from Shop, All on FORUM, using the following email message which is located in the PHARMACY RELATED basket.

Subj: PSUZ Drug Warnings 1.0 (tv2) [#7999068] 22 Dec 2008 17:30:34 -0500 (EST)

The FileMan print template shown here assumes the availability of a custom FileMan "function" called PSUZDECEASED, which may be created by a programmer as follows:

NAME: PSUZDECEASED

MUMPS CODE: S X=\$S(\$\$GET1^DIQ(2,X,.351)]": "***",1:"")

EXPLANATION: Function returns "***" if patient deceased, null otherwise.

Step 1 – Create a print template which will act as a spreadsheet header row.
VA FileMan 22.0

Select OPTION: INQUIRE TO FILE ENTRIES

```
OUTPUT FROM WHAT FILE: PRESCRIPTION//
Select PRESCRIPTION RX #: 500300C    METFORMIN HCL 500MG TAB,SA ← choose any existing Rx
ANOTHER ONE: <RETURN>
STANDARD CAPTIONED OUTPUT? Yes// N (No)
FIRST PRINT FIELD: "\\^PATIENT^SSN^ADDRESS 1^ADDRESS 2^ADDRESS 3^CITY^STATE^ZIP^PHONE
(HOME)^PHONE (WORK)^PHONE (CELL)^DECEASED?^RX #^DRUG^FINISH D/T^QTY PER DAY^STATUS^REF
REM^PRO
VIDER^LAST DISPENSED DATE^RETURNED TO STOCK?"
THEN PRINT FIELD: <RETURN>
Heading (S/C): @// <RETURN>
STORE PRINT LOGIC IN TEMPLATE: PSUZ DRUG WARNINGS HEADER
DEVICE: TELNET PORT    Right Margin: 80//
\\^PATIENT^SSN^ADDRESS 1^ADDRESS 2^ADDRESS 3^CITY^STATE^ZIP^PHONE (HOME)^PHONE (
WORK)^PHONE (CELL)^DECEASED?^RX #^DRUG^FINISH D/T^QTY PER DAY^STATUS^REF REM^PRO
VIDER^LAST DISPENSED DATE^RETURNED TO STOCK?
```

Step 2 – Create a FileMan Sort and Print template to identify selected prescriptions.
This example shows how the method appears when editing an existing template.

Select OPTION: PRINT FILE ENTRIES

```
OUTPUT FROM WHAT FILE: PRESCRIPTION//
SORT BY: RX #// [    PSUZ DRUG WARNINGS
(Oct 21, 2008@10:38) User #1  File #52    SORT
WANT TO EDIT 'PSUZ DRUG WARNINGS' TEMPLATE? NO// YES
NAME: PSUZ DRUG WARNINGS//
READ ACCESS:
WRITE ACCESS:
SORT BY: 'FINISH DATE/TIME//
* Previous selection: FINISH DATE/TIME from Jan 1,2005
START WITH FINISH DATE/TIME: Jan 1,2005// (JAN 01, 2005)
GO TO FINISH DATE/TIME: LAST//
WITHIN FINISH DATE/TIME, SORT BY: 'DRUG//
* Previous selection: DRUG from METFORMIN to METFORMINZ
START WITH DRUG: METFORMIN//    ← TO RUN THIS REPORT FOR INSULIN U-500, DEPENDING
ON THE EXACT NAME OF THE DRUG IN YOUR SYSTEM, A
VALID SORT ORDER
MIGHT BE FROM 'INSULIN C' TO 'INSULIN D', AS IT
WILL INCLUDE 'INSULIN CONCENTRATE...'
GO TO DRUG: METFORMINZ//
```

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```
WITHIN DRUG, SORT BY: PATIENT//
START WITH PATIENT: FIRST//
WITHIN PATIENT, SORT BY:
STORE IN 'SORT' TEMPLATE:
FIRST PRINT FIELD: [PSUZ DRUG
  1 PSUZ DRUG WARNINGS
                                (Oct 21, 2008@10:46) User #1 File #52
  2 PSUZ DRUG WARNINGS HEADER
                                (Oct 21, 2008@10:48) User #1 File #52
CHOOSE 1-2: 1                    (Oct 21, 2008@10:46) User #1 File #52
WANT TO EDIT 'PSUZ DRUG WARNINGS' TEMPLATE? No// Y (Yes)
NAME: PSUZ DRUG WARNINGS//
READ ACCESS:
WRITE ACCESS:
FIRST PRINT FIELD: "\\\";X//
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: PATIENT;X//
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: PATIENT:SSN;X//
  By 'SSN', do you mean PATIENT 'SOCIAL SECURITY NUMBER'? Yes// (Yes)
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: PATIENT://
  THEN PRINT PATIENT FIELD: STREET ADDRESS [LINE 1];X
  Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: STREET ADDRESS [LINE 2];X
  Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: STREET ADDRESS [LINE 3];X
  Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: CITY;X//
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: STATE;X//
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: ZIP CODE;X//
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: PHONE NUMBER [RESIDENCE];X
  Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: PHONE NUMBER [WORK];X Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: PHONE NUMBER [CELLULAR];X
  Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: PSUZDECEASED(INTERNAL(PATIENT));X
  Replace
  THEN PRINT PATIENT FIELD: "^\";X//
  THEN PRINT PATIENT FIELD: //
THEN PRINT FIELD: RX #;X//
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: DRUG;X//
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: NUMDATE(FINISH DATE);X Replace
  By 'FINISH DATE', do you mean PRESCRIPTION 'FINISH DATE/TIME'? Yes// (Yes)
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: (QTY/DAYS SUPPLY);X;"QTY PER DAY"
  Replace
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: STATUS;X//
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: (#9)-(COUNT(REFILL));X;"REF REM" Replace
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: PROVIDER;X//
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: LAST DISPENSED DATE;X Replace
THEN PRINT FIELD: "^\";X//
THEN PRINT FIELD: RETURNED TO STOCK;X//
THEN PRINT FIELD:
Heading (S/C): [PSUZ DRUG WARNINGS HEADER] Replace
```

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STORE PRINT LOGIC IN TEMPLATE:

START AT PAGE: 1//

DEVICE:

Attachment 5- Patient education cognitive aid.

Questions?

Notes:

If in doubt about
the change to
U-500 insulin,
check it out with
your **Primary
Care Provider** or
Pharmacist:

**Primary Care
Provider Tel. #**

Pharmacist Tel.#



**Veterans
Administration**

**How to
Draw up
U500
Insulin with
a
Tuberculin
Syringe**



**National Center for
Patient Safety**

Prepared by:
Edith Nourse Rogers
Veterans Memorial Hospital
Bedford, MA 01730

TWO IMPORTANT FACTS TO REMEMBER

★ 1. **U-500** insulin is **FIVE** times stronger than **U-100** insulin.

★ 2. To make sure you get the right amount of **U-500** insulin you

draw up your insulin.

Important Changes

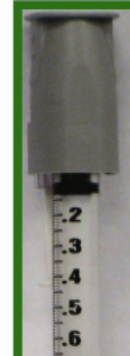
Your prescription label for U-500 insulin will be different.

It will read: U-500 insulin.
Inject _____ units (____ml.)
You will draw up your U-500 insulin in ml, using a Tuberculin syringe which is marked in ml.

DO NOT USE U-100 SYRINGES WITH U-500 INSULIN!

Before you leave the visit, practice with your Diabetes

Using a **Tuberculin** syringe means you will draw up your insulin in **ml**.



(Tuberculin with ml markings).

2. Draw up your correct amount of U-500 insulin.

Ask questions to make sure you are taking the right amount of U-500 insulin, in the right syringe, and at the right time.

