Existing Product Intake Program (EPIP)

Patch NUR\*4.0\*45

Remediation Plan



Department of Veterans Affairs

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Version 2.0

Revision History

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| 07/21/2017 | 2.0 | Updated Section 5.3 Coding Changes, Section 7 Documentation Remediation, and Appendices | EPIP Project Team |
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# Introduction

The Department of Veterans Affairs (VA) currently utilizes the Veterans Health Information Systems and Technology Architecture (VistA) suite of applications to provide clinical, financial, infrastructure, and management tools. The process of advancing “Class 3” field-developed VistA software to “Class 1” nationally-distributed status is referred to as the Existing Product Intake Program (EPIP). The VA’s goal is to supplement ongoing activities associated with evaluating and advancing field-developed software to a state that meets national standards and facilitates release for Veterans Health Administration (VHA)-wide use.

# Purpose

The purpose of this document is to fully describe the remediation plan to be used for the successful remediation of the intake product code to be deployed as patch NUR\*4.0\*45. This patch addresses the following NSRs:

* NSR20170309 *Enhancements to Nursing Patient Assignment Worksheet*

This NSR has been implemented locally at the VA Medical Centers in Memphis TN and West Palm Beach FL.

* NSR20170316 *Enhancements to Nursing End of Shift Report*

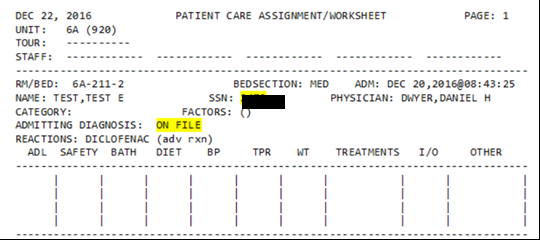
This NSR has been implemented locally at the VA Medical Centers in Memphis TN, Charleston SC, San Francisco CA, Cleveland OH, Gainesville FL, Los Angeles CA, and Seattle WA, and at the VA New Jersey Health Care System (East Orange and Lyons NJ).

This document addresses the schedule, code remediation, testing, documentation, and delivery of this remediation effort.

# Patch Description

NUR\*4.0\*45 provides the following enhancements to VistA:

* Modifies the Nursing Patient Care Assignment Worksheet to display only the last four digits of each patient’s Social Security Number (SSN) and to remove the admitting diagnosis from the worksheet and replace it with the text “ON FILE.” These changes protect confidential patient information and help ensure privacy.

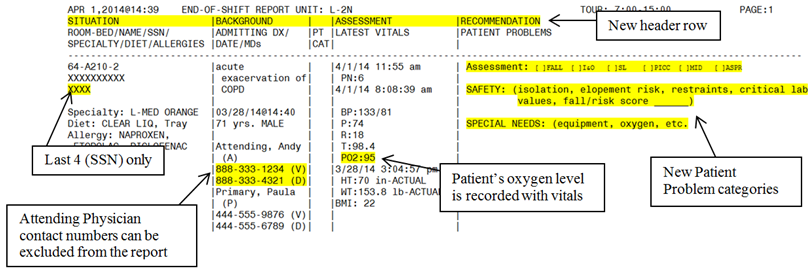


**Patient Care Assignment Worksheet Modifications**

* Enhances the Nursing End of Shift Report to facilitate communication between staff when shifts change. This modification adds an additional line of header information to the report to clarify the purpose of the various report sections. The new header information includes Situation, Background, Assessment, and Recommendation column headings. The report additionally displays oxygen levels in the Assessment section where the patient’s vitals (Latest Vitals) are displayed.

New categories (Assessment, Safety, and Special Needs) are added to the Patient Problems section of the report to enable staff to document additional information that is critical to patient care. The report is further modified to display only the last four digits of the patient’s Social Security Number (SSN) to help ensure privacy.

The Attending Physician’s voice and digital pager numbers can be included or excluded from the Nursing End of Shift Report using the parameter NUR EOS REPORT REMOVE ATT NUMS. This parameter enables each site to determine whether Attending Physician contact numbers will display on the report. The patch is delivered with this parameter set to NULL (NO), so Attending Physician contact numbers are displayed by default. To hide the Attending Physician contact numbers, set this parameter to YES using XPAR MENU TOOLS in VistA. Excluding contact information for the Attending Physician eliminates confusion for staff who must contact a Resident or On Call Physician for patient care issues.



**End of Shift Report Modifications**

## Needs and Requirements

The Needs and Requirements for the NSR(s) addressed in this remediation are:

NSR20170309 *Enhancements to Nursing Patient Assignment Worksheet*:

* NEED 883343: Remove Full SSN and Diagnosis from Nursing Worksheet – For Nursing staff who are responsible for providing patient care. A set of enhancements to the Nursing Patient Assignments Worksheet that prevents the display of sensitive patient information. Unlike the current process that displays sensitive information, our process ensures that information is only available to staff who have a need to know.
* REQUIREMENT 883344: Display Only Last 4 SSN On Nursing Assignment Worksheet – For Nursing staff who care for patients. A modification to the Nursing Patient Assignment Worksheet that restricts display of the Social Security Number (SSN) to the last four digits. Unlike the current report that displays the patient’s full SSN, our process ensures personally identifiable information is not visible to others who may see this output.
* REQUIREMENT 883345: Remove Admitting Diagnosis Nursing Assignment Worksheet – For Nursing staff who provide care for patients. A modification to the Nursing Patient Assignment Worksheet that replaces the display of the Admitting Diagnosis with text stating ‘ON FILE.’ Unlike the current report that displays the Admitting Diagnosis, our process prevents sensitive patient information from being visible to users who do not need to know this information.

NSR20170316 *Enhancements to Nursing End of Shift Report* are:

* NEED 884015: Enhancements to Nursing End of Shift Report – For Nursing staff who are responsible for communicating patient information during shift changes. A set of enhancements to the Nursing End of Shift Report that allows information to be documented. Unlike the current process that relies on verbal communication of information, our process ensures that critical patient care information is not forgotten during the transition of care.
* REQUIREMENT 884016: Use Last 4 SSN Nursing End of Shift Report – For Nursing staff who care for patients. A modification to the Nursing End of Shift Report that restricts display of the Social Security Number (SSN) to the last four digits. Unlike the current report that displays the patient’s full SSN, our process ensures personally identifiable information is not visible to others who may see this output.
* REQUIREMENT 884017: End of Shift Report Section Header – For Nursing staff who are responsible for communicating patient information during shift changes. A modification to the Nursing End of Shift Report that adds an additional line of text (‘Situation’, ‘Background’, ‘Assessment’ and ‘Recommendation’) to the header. Unlike the current report that does not have additional header information, our process clarifies the intent of the various report sections and reduces confusion for the staff using the report.
* REQUIREMENT 884018: Display Categories Under Patient Problem Section of End of Shift Report – For Nursing staff who are responsible for relaying critical patient data to the next nursing shift. A modification to the Nursing End of Shift Report that displays textual categories under the Patient Problem Section to allow staff to document Assessment, Safety and Special Needs for each patient. Unlike the current process that relies on verbal communication of this information, our process provides an extra monitoring tool for nurses to relay data from shift to shift.
* REQUIREMENT 884019: Display Include Oxygen Levels on Nursing End of Shift Report – For Nursing managers who are responsible for communicating patient information during shift changes. A modification to the End of Shift Report that displays oxygen levels in the vitals section of the report. Unlike the current process that relies on verbal communication of this information, our process ensures that critical information related to patients in distress is not forgotten during the transition of care.
* REQUIREMENT 884020: Remove Attending and On Call Physician Pager Numbers from End of Shift Report – For Nursing staff who must contact the Resident or On Call Physician for patient care issues. A modification to the End of Shift Report that removes the voice and digital pager numbers for the Attending Physician. Unlike the current process that includes the Attending Physicians contact information, our process ensures that staff are not confused on which staff to contact, and follow protocol to contact the proper staff.

# Points of Contact

The VA POC for NSR20170309 *Enhancements to Nursing Patient Assignment Worksheet* is PII (PII), PII.

The VA Point of Contact (POC) for NSR20170316 *Enhancements to Nursing End of Shift Report* is PII (PII), PII.

# Code Remediation

Leidos will review and analyze the intake product code for compliance with coding standards, pointers, shared tables, dependencies, and any interference with VistA systems.

## Standards and Conventions

Leidos will reference the http://URL/ website for applicable documents and will adhere to VA standards to complete the analysis of this intake product. The output of the VA XINDEX utility will be used to analyze the MUMPS source code and document the affected routines (see Appendix A).

The MUMPS coding standards website http://URL/ will also be used to ensure that the remediated code conforms to VA standards.

## Review and Analysis

Review and analysis of this intake product involves two parts: 1) verification that the source code changes specified in this document provide the desired effect, and 2) verification that the source code changes do not adversely affect any other VistA or CPRS functionality.

Testing will be performed to validate that the intended effect of these products is implemented, and that no other VistA or CPRS Graphical User Interface (GUI) functionality is adversely affected.

## Coding Changes

The coding changes required for NSR20170309 *Enhancements to Nursing Patient Assignment Worksheet* are in the following routines:

**Modified MUMPS routines:** NURCAS0

**New MUMPS routines:** None

The coding changes required for NSR20170316 *Enhancements to Nursing End of Shift Report* are in the following routines:

**Modified MUMPS routines:** NURCES01, NURCES2, NURCES5

**New MUMPS routines:** None

**New Parameters:** NUR EOS REPORT REMOVE ATT NUMS

A detailed analysis of the coding changes is provided in Appendix B.

# Testing

Leidos will perform all testing-related activities to ensure that the remediated code meets the expectations of the VA business owner.

## Test Plan

Leidos will configure the test environment, provide code modifications and end-to-end testing, and deliver applicable testing documentation, following Veteran-focused Integration Process (VIP) guidelines.

The Leidos developer will modify the software pursuant to the VA standards defined in the *Standards and Conventions* section of this document, and will conduct full unit testing of the functionality and verify performance of all software code before it is released to Leidos SQA. SQA will then perform all applicable testing types as described in the *Testing Phases* section of this document. The developer and SQA will resolve problems and address issues as they arise during testing and will document issues using the Rational Team Concert (RTC) defect tracking tool.

## Test Environment

Within five working days of approval of this Remediation Plan, the developer will configure the development/test environment on an Austin Information Technology Center (AITC) server or other VA-approved development/test environment used for this intake product and install the remediated Kernel Installation and Distribution System (KIDS) build. The environment will be restored to its original baseline state by the VistA system administrator after development testing is completed, followed by installation of the remediated software.

Upon notification from the developer of test environment readiness, SQA will commence with planned testing activities. The SQA test execution and reporting documentation will reside in the Rational Quality Manager (RQM) “EPIP” Project. In order to perform testing of this VistA modification, the following tools will be leveraged: RQM, Reflections emulator, CPRS GUI v31 (1.0.30.75), and SnagIt.

## Test Readiness Review

Leidos will conduct a Test Readiness Review (TRR) at the conclusion of unit testing to verify the contents of the software to be tested, the test schedule, test environments, test participants, and associated logistics. Leidos will provide an agenda prior to the TRR and written minutes after completion of the TRR, in accordance with the Performance Work Statement (PWS).

## Testing Phases

Leidos will perform development and SQA testing activities in phases, and will provide all required testing documentation.

### Unit Testing

The developer will conduct unit testing of individual units of source code to determine if they are fit for use.

### Component Integration and Systems Testing (CI/ST)

Component Integration and Systems testing will be conducted by SQA to ensure that connectivity to the VistA application exists and is functioning normally. SQA will record Passed/Failed outcomes and capture displayed content to document the system testing effort.

### Functional Testing

Functional testing will be performed by SQA to test the code modifications. This testing will ensure that the software functionality is in alignment with the Government Furnished Information. SQA will record Passed/Failed outcomes and capture displayed content to document the functional testing effort.

### Regression Testing

Regression testing will be performed by SQA to ensure that the remediated code does not introduce errors to existing functionality. The regression test framework will be kept up-to-date with manual test cases and test scripts defining the inputs and expected outcomes. SQA will record Passed/Failed outcomes and capture displayed content to document the regression testing effort.

### Section 508 Compliance Testing

Section 508 testing will be performed on VistA and CPRS code when new user interface changes are introduced by the developer. The VA-recommended Assistive Technology tool, JAWS, will be used to conduct the 508 testing. Test results and related documentation will be submitted to the VA Section 508 team in accordance with the VA 508 testing requirements. Defects found during testing will be assessed and remediated by the developer.

# Documentation Remediation

Leidos will review existing VA documentation for possible impact as a result of this remediation effort, and will make updates where applicable.

To determine the existing VA documentation that requires modification, Leidos will conduct a thorough review of the documents currently available from the VA Software Document Library (VDL) located at http://URL/. Keyword searches using terms relevant to this remediation effort will be used to identify documents that might be impacted; those documents will then be reviewed in their entirety for any needed revisions.

The following sections outline the VDL documents to be revised for this remediation.

## User Guides

The following User Guide will be updated in the VDL:

* *VistA Nursing User Manual –* Only a PDF version of this manual is available, so updates will be provided via Change Pages:

*Updates to the VistA Nursing User Manual Version 4.0 for Patch NUR\*4.0\*45 Change Pages* (nurs\_4\_p45\_um\_cp.doc)

## Installation Guides

The *National Patch Module Patch Description* document for this remediation will provide the procedure for installing KIDS packages migrated from the test environment to the VA   
Pre-Production environments. Therefore, no Installation Guides will be updated.

## Technical Manuals

No Technical Manuals require revision as a result of this modification.

## Operations Manuals

No Operations Manuals require revision as a result of this modification.

# Project Reporting

Leidos will provide interim progress updates during daily Scrum calls and weekly management calls with VA representatives.

# Project Schedule

Leidos will follow the Scrum Agile methodology for software development. It is anticipated that this patch will require five 2-week sprints.

# Deployment

Leidos will create a KIDS package containing the software changes necessary to fulfill the requirements for this remediation effort. A KIDS package, along with all related documentation, will be delivered to the Contracting Office Representative (COR) for acceptance. If accepted, the KIDS package can then be released for national VA consumption; otherwise, Leidos will correct any defects found and repeat the necessary remediation activities.

# Sustainment Requirements

Leidos will provide maintenance support for 60 days to the VA to support the final Class 1 product after it is nationally released.

# Maintenance and Knowledge Transfer

To facilitate continuous process improvement, Leidos will deliver *Sprint Review and Retrospective* slides and a *Lessons Learned* *Report* to VA upon completion of the final sprint.

XINDEX Listing for MUMPS Code Changes

The XINDEX tool is the standard tool used by the VA to analyze MUMPS source code. Following is a listing of the results of the XINDEX analysis of the affected routines.

V. A. C R O S S R E F E R E N C E R 7.3

[2008 VA Standards & Conventions]

UCI: VISTA CPU: ROU May 25, 2017@11:02:26

The BUILD file Data Dictionaries are being processed.

The option and function files are being processed.

Routines are being processed.

Routines: 4 Faux Routines: 0

NURCAS0 NURCES01 NURCES2 NURCES5

--- CROSS REFERENCING ---

Press return to continue:

Compiled list of Errors and Warnings May 25, 2017@11:02:26 page 1

No errors or warnings to report

--- END ---

Source Code Changes

This appendix displays the VistA code before and after the updates required for this code modification were implemented. The following routines were affected:

**Modified MUMPS routines:** NURCAS0, NURCES01, NURCES2, NURCES5

**New MUMPS routines:** None

**NURCAS0**

**Before:**

HEADER1 ;

S VAINDT=NURDT D INP^VADPT W !,"RM/BED: ",$S($D(VAIN(5)):VAIN(5),1:""),?26,"BEDSECTION: ",NSEC,?45,"ADM: ",$P(NDATA,"^",3)

K NURSAL,NURSALGR D ALLERGY^NURCUT1(DFN,.NURSAL)

S (NURSJ,X)=1,NURSALGR(1)="REACTIONS: " F NURSI=0:0 S NURSI=$O(NURSAL(NURSI)) Q:NURSI'>0 D

. I $L(NURSALGR(X))+$L(NURSAL(NURSI))+2>IOM S NURSJ=1,NURSALGR(X)=NURSALGR(X)\_",",X=X+1,NURSALGR(X)=" "

. S NURSALGR(X)=NURSALGR(X)\_$S(NURSJ>1:", ",1:"")\_$P(NURSAL(NURSI),U),NURSJ=NURSJ+1

. Q

W !,"NAME: ",$S(N1'=" BLANK":$E(N1,1,19),1:""),?26,"SSN: ",SSN,?45,"PHYSICIAN: ",$E($P(VAIN(2),"^",2),1,25)

W !,"CATEGORY: ",$S($D(NURCAT):NURCAT,1:"") W ?26,"FACTORS: (" W:$D(NURFACT) NURFACT W ")" I $D(NCOM),NCOM'="" W !,"COMMENTS: ",?22,NCOM

W !,"ADMITTING DIAGNOSIS: "

W ?22,VAIN(9)

F I=0:0 S I=$O(NURSALGR(I)) Q:I'>0 W !,NURSALGR(I)

Q

**After:**

HEADER1 ;

S VAINDT=NURDT D INP^VADPT W !,"RM/BED: ",$S($D(VAIN(5)):VAIN(5),1:""),?26,"BEDSECTION: ",NSEC,?45,"ADM: ",$P(NDATA,"^",3)

K NURSAL,NURSALGR D ALLERGY^NURCUT1(DFN,.NURSAL)

S (NURSJ,X)=1,NURSALGR(1)="REACTIONS: " F NURSI=0:0 S NURSI=$O(NURSAL(NURSI)) Q:NURSI'>0 D

. I $L(NURSALGR(X))+$L(NURSAL(NURSI))+2>IOM S NURSJ=1,NURSALGR(X)=NURSALGR(X)\_",",X=X+1,NURSALGR(X)=" "

. S NURSALGR(X)=NURSALGR(X)\_$S(NURSJ>1:", ",1:"")\_$P(NURSAL(NURSI),U),NURSJ=NURSJ+1

. Q

W !,"NAME: ",$S(N1'=" BLANK":$E(N1,1,19),1:""),?26,"SSN: ",$E($TR(SSN,"-"),6,9),?45,"PHYSICIAN: ",$E($P(VAIN(2),"^",2),1,25)

W !,"CATEGORY: ",$S($D(NURCAT):NURCAT,1:"") W ?26,"FACTORS: (" W:$D(NURFACT) NURFACT W ")" I $D(NCOM),NCOM'="" W !,"COMMENTS: ",?22,NCOM

W !,"ADMITTING DIAGNOSIS: ",?22,"ON FILE"

F I=0:0 S I=$O(NURSALGR(I)) Q:I'>0 W !,NURSALGR(I)

Q

**NURCES01**

**Before:**

PRINT1 ;

D ^NURSAPCH

S GMROUT=0 I GPACK D SETARRY^NURCES2

I GFH D DIET^NURCES4

D EN6^NURSCUTL S NURSCLAS("CL")=1 D EN2^NURSCUTL

I NURSCLAS S NDATA(1)=$S($D(^NURSA(214.6,NURSCLAS,0)):^(0),1:"") S NURFACT=$S($P(NDATA(1),"^",4)'="":$P(NDATA(1),"^",4),1:""),NURCAT=$S(+$P(NDATA(1),"^",3):$P(NDATA(1),"^",3),1:""),NCOM=$S($P(NDATA(1),"^",7)'="":$P(NDATA(1),"^",7),1:"")

I $D(^NURSF(214,DFN,0)) S NDATA(2)=^(0),NSEC=$S('$D(NDATA(2)):"",'$P(NDATA(2),"^",4):"",'$D(^NURSF(213.3,$P(NDATA(2),"^",4),0)):"",1:$P(^NURSF(213.3,$P(NDATA(2),"^",4),1),"^"))

D PTDATA^NURCES2,PTPROB^NURCES1 Q:NURQUIT

I GPACK,$D(NURIV),NURIV>0 S N=0 F S N=$O(NURIV(N)) Q:N'>0 D

. D FITLINE^NURCES5(NURIV(N),62,.NPR)

I GPACK,$D(NURTUBE),NURTUBE>0 S NPR=NPR+1,NPR(NPR)="Last tube changed:",GSITE="" F S GSITE=$O(NURTUBE(GSITE)) Q:GSITE="" S Y=NURTUBE(GSITE) X ^DD("DD") S NPR=NPR+1,NPR(NPR)=" "\_GSITE\_" on "\_$P(Y,":",1,2)

K NURIV,NURTUBE,GLEFT,GSITE,GSAVEH S NN(1)=2 S:NPR>2&(NOPT=1) NN(1)=NPR S:NADM>NN(1) NN(1)=NADM S:NPT>NN(1) NN(1)=NPT S:NVM>NN(1) NN(1)=NVM F NN=1:1:NN(1) D:$Y>(IOSL-8) HEADER^NURCES2 Q:NURQUIT D PRINT2^NURCES2 Q:NURQUIT

I NOPT=2 D PART2

Q:NURQUIT W $S(NOPT=1:NURX,NOPT=2:$E(NURX,1,79),1:NURX),!

Q

**After:**

PRINT1 ;

D ^NURSAPCH

S GMROUT=0 I GPACK D SETARRY^NURCES2

I GFH D DIET^NURCES4

D EN6^NURSCUTL S NURSCLAS("CL")=1 D EN2^NURSCUTL

I NURSCLAS S NDATA(1)=$S($D(^NURSA(214.6,NURSCLAS,0)):^(0),1:"") S NURFACT=$S($P(NDATA(1),"^",4)'="":$P(NDATA(1),"^",4),1:""),NURCAT=$S(+$P(NDATA(1),"^",3):$P(NDATA(1),"^",3),1:""),NCOM=$S($P(NDATA(1),"^",7)'="":$P(NDATA(1),"^",7),1:"")

I $D(^NURSF(214,DFN,0)) S NDATA(2)=^(0),NSEC=$S('$D(NDATA(2)):"",'$P(NDATA(2),"^",4):"",'$D(^NURSF(213.3,$P(NDATA(2),"^",4),0)):"",1:$P(^NURSF(213.3,$P(NDATA(2),"^",4),1),"^"))

D PTDATA^NURCES2,PTPROB^NURCES1 Q:NURQUIT

I GPACK,$D(NURIV),NURIV>0 S N=0 F S N=$O(NURIV(N)) Q:N'>0 D

. D FITLINE^NURCES5(NURIV(N),62,.NPR)

I GPACK,$D(NURTUBE),NURTUBE>0 S NPR=NPR+1,NPR(NPR)="Last tube changed:",GSITE="" F S GSITE=$O(NURTUBE(GSITE)) Q:GSITE="" S Y=NURTUBE(GSITE) X ^DD("DD") S NPR=NPR+1,NPR(NPR)=" "\_GSITE\_" on "\_$P(Y,":",1,2)

D ASSN

K NURIV,NURTUBE,GLEFT,GSITE,GSAVEH S NN(1)=2 S:NPR>2&(NOPT=1) NN(1)=NPR S:NADM>NN(1) NN(1)=NADM S:NPT>NN(1) NN(1)=NPT S:NVM>NN(1) NN(1)=NVM F NN=1:1:NN(1) D:$Y>(IOSL-8) HEADER^NURCES2 Q:NURQUIT D PRINT2^NURCES2 Q:NURQUIT

I NOPT=2 D PART2

Q:NURQUIT W $S(NOPT=1:NURX,NOPT=2:$E(NURX,1,79),1:NURX),!

Q

ASSN ;Assessment, Safety and Special Needs

I '$G(NPR) D FITLINE^NURCES5(" ",62,.NPR)

D FITLINE^NURCES5(" ",62,.NPR)

D FITLINE^NURCES5("Assessment: [ ]FALL [ ]I&O [ ]SL [ ]PICC",62,.NPR)

D FITLINE^NURCES5(" [ ]MID [ ]ASPR",62,.NPR)

D FITLINE^NURCES5(" ",62,.NPR)

D FITLINE^NURCES5("SAFETY: (isolation, elopement risk, restraints,",62,.NPR)

D FITLINE^NURCES5(" critical lab values,fall/risk score \_\_\_\_\_\_)",62,.NPR)

D FITLINE^NURCES5(" ",62,.NPR)

D FITLINE^NURCES5("SPECIAL NEEDS: (equipment, oxygen, etc.)",62,.NPR)

D FITLINE^NURCES5(" ",62,.NPR)

Q

**NURCES2**

**Before:**

HEADER ; PRINTING OF HEADING ROUTINE

I $E(IOST)="C",NURSW1 W !,$C(7),"Enter <RET> to continue " R X:DTIME I '$T!(X="^") S NURQUIT=1 Q

S Y=(GMRFIN+.0001)\_"00"

S NURPAGE=NURPAGE+1,NURSW1=1 W:NURPAGE>1 @IOF

W !,NURDT,?20,"END-OF-SHIFT REPORT",?40,"UNIT: ",NPWARD W ?$S(NOPT=1:90,NOPT=2:55,1:55),"TOUR: "\_+$E($P(GMRSTRT,".",2),1,2)\_":"\_$E($P(GMRSTRT,".",2)\_"00",3,4)\_"-"\_+$E($P(Y,".",2),1,2)\_":",$E($P(Y,".",2),3,4)

W ?$S(NOPT=1:118,NOPT=2:72,1:72),"PAGE:",NURPAGE

W !,"ROOM-BED/NAME/SSN/",?25,"|ADMITTING DX/ |PT |LATEST VITALS" W:NOPT=1 ?68,"|PATIENT PROBLEMS"

W !,"SPECIALTY/DIET/ALLERGIES",?25,"|DATE/MDs",?42,"|CAT|" W:NOPT=1 ?68,"|",!,NURX,! W:NOPT=2 !,$E(NURX,1,79),!

Q

PTDATA ;

S NPT(1)=$S($P(VAIN(5),"^")'="":$P(VAIN(5),"^"),1:"")

S NPT(2)=$S(N1'=" BLANK":$E(N1,1,17),1:""),NPT(3)=NSSN,NPT=3 D FITLINE^NURCES5("Specialty: "\_$P($G(VAIN(3)),"^",2),25,.NPT)

I GFH D FITLINE^NURCES5(NDIET,25,.NPT)

D ALLERGY^NURCES4

S NCL(1)=$S($D(NURCAT):NURCAT,1:"") S NADM=0 D INP^VADPT D FITLINE^NURCES5(VAIN(9),16,.NADM)

S Y=$P(VAIN(7),"^") S:Y'="" NADM=NADM+1,NADM(NADM)=$E(Y,4,5)\_"/"\_$E(Y,6,7)\_"/"\_$E(Y,2,3) S Y=$P(Y,".",2) S:Y'="" NADM(NADM)=NADM(NADM)\_"@"\_$E(Y\_"00",1,2) S Y=$E(Y,3,4) S:Y'="" NADM(NADM)=NADM(NADM)\_":"\_$E(Y\_"0",1,2)

S NADM=NADM+1,NADM(NADM)=$P(VADM(4),"^")\_" yrs. "\_$S($P(VADM(5),"^",2)'="":$P(VADM(5),"^",2),1:" ")

I $P($G(VAIN(11)),"^",2)'="" D K G

. S G=0,NADM=NADM+1,NADM(NADM)=$P(VAIN(11),"^",2),G=$O(^VA(200,"B",NADM(NADM),0)),NADM=NADM+1,NADM(NADM)=" (A)"

. I G>0,$D(^VA(200,G,.13)) S G(1)=$P($G(^(.13)),"^",7),G(2)=$P($G(^(.13)),"^",8) D

. . I G(1)'="" S NADM=NADM+1,NADM(NADM)=G(1) D

. . . I $L(G(1))>11 S NADM=NADM+1,NADM(NADM)=" (V)"

. . . E S NADM(NADM)=NADM(NADM)\_" (V)"

**After:**

HEADER ; PRINTING OF HEADING ROUTINE

I $E(IOST)="C",NURSW1 W !,$C(7),"Enter <RET> to continue " R X:DTIME I '$T!(X="^") S NURQUIT=1 Q

S Y=(GMRFIN+.0001)\_"00"

S NURPAGE=NURPAGE+1,NURSW1=1 W:NURPAGE>1 @IOF

W !,NURDT,?20,"END-OF-SHIFT REPORT",?40,"UNIT: ",NPWARD W ?$S(NOPT=1:90,NOPT=2:55,1:55),"TOUR: "\_+$E($P(GMRSTRT,".",2),1,2)\_":"\_$E($P(GMRSTRT,".",2)\_"00",3,4)\_"-"\_+$E($P(Y,".",2),1,2)\_":",$E($P(Y,".",2),3,4)

W ?$S(NOPT=1:118,NOPT=2:72,1:72),"PAGE:",NURPAGE

W !,"SITUATION",?25,"|BACKGROUND | |ASSESSMENT " W:NOPT=1 ?68,"|RECOMENDATION"

W !,"ROOM-BED/NAME/SSN/",?25,"|ADMITTING DX/ |PT |LATEST VITALS" W:NOPT=1 ?68,"|PATIENT PROBLEMS"

W !,"SPECIALTY/DIET/ALLERGIES",?25,"|DATE/MDs",?42,"|CAT|" W:NOPT=1 ?68,"|",!,NURX,! W:NOPT=2 !,$E(NURX,1,79),!

Q

PTDATA ;

S NPT(1)=$S($P(VAIN(5),"^")'="":$P(VAIN(5),"^"),1:"")

S NPT(2)=$S(N1'=" BLANK":$E(N1,1,17),1:"")

S NPT(3)=$E($TR(NSSN,"-",""),6,9),NPT=3

D FITLINE^NURCES5("Specialty: "\_$P($G(VAIN(3)),"^",2),25,.NPT)

I GFH D FITLINE^NURCES5(NDIET,25,.NPT)

D ALLERGY^NURCES4

S NCL(1)=$S($D(NURCAT):NURCAT,1:"") S NADM=0 D INP^VADPT D FITLINE^NURCES5(VAIN(9),16,.NADM)

S Y=$P(VAIN(7),"^") S:Y'="" NADM=NADM+1,NADM(NADM)=$E(Y,4,5)\_"/"\_$E(Y,6,7)\_"/"\_$E(Y,2,3) S Y=$P(Y,".",2) S:Y'="" NADM(NADM)=NADM(NADM)\_"@"\_$E(Y\_"00",1,2) S Y=$E(Y,3,4) S:Y'="" NADM(NADM)=NADM(NADM)\_":"\_$E(Y\_"0",1,2)

S NADM=NADM+1,NADM(NADM)=$P(VADM(4),"^")\_" yrs. "\_$S($P(VADM(5),"^",2)'="":$P(VADM(5),"^",2),1:" ")

I $P($G(VAIN(11)),"^",2)'="" D K G

. S G=0,NADM=NADM+1,NADM(NADM)=$P(VAIN(11),"^",2),G=$O(^VA(200,"B",NADM(NADM),0)),NADM=NADM+1,NADM(NADM)=" (A)"

. I '$$GET^XPAR("PKG","NUR EOS REPORT REMOVE ATT NUMS"),G>0,$D(^VA(200,G,.13)) S G(1)=$P($G(^(.13)),"^",7),G(2)=$P($G(^(.13)),"^",8) D

. . I G(1)'="" S NADM=NADM+1,NADM(NADM)=G(1) D

. . . I $L(G(1))>11 S NADM=NADM+1,NADM(NADM)=" (V)"

. . . E S NADM(NADM)=NADM(NADM)\_" (V)"

**NURCES5**

**Before:**

VITAL ;

N NUR,NURVIT,NURIEF,NURDT,NDTFLG,NURDT,NURTYP,NURQUAL,NURDATA,NURWT,NURHT,NURBMI

S GMRVSTR="T;P;R;BP;WT;HT;PN;",GMRVSTR(0)="^^1^1" D EN1^GMRVUT0

I $D(^UTILITY($J,"GMRVD")) S %X="^UTILITY($J,""GMRVD"",",%Y="NURVIT(" D %XY^%RCR K ^UTILITY($J,"GMRVD")

S GMRVSTR="T;P;R;BP;PN;",GMRVSTR(0)=NURNOW(1)\_"^"\_NURNOW D EN1^GMRVUT0

F NUR="T","P","R","BP" S NURDT=0 F S NURDT=$O(^UTILITY($J,"GMRVD",NUR,NURDT)) Q:NURDT'>0 S NURDA=0 F S NURDA=$O(^UTILITY($J,"GMRVD",NUR,NURDT,NURDA)) Q:NURDA'>0 D

. I $P(^UTILITY($J,"GMRVD",NUR,NURDT,NURDA),"^",12)="\*",'$D(NURVIT(NURDT,NUR,NURDA)) S NURVIT(NURDT,NUR,NURDA)=^UTILITY($J,"GMRVD",NUR,NURDT,NURDA)

**After:**

VITAL ;

N NUR,NURVIT,NURIEF,NURDT,NDTFLG,NURDT,NURTYP,NURQUAL,NURDATA,NURWT,NURHT,NURBMI

S GMRVSTR="T;P;R;BP;WT;HT;PN;PO2;",GMRVSTR(0)="^^1^1" D EN1^GMRVUT0

I $D(^UTILITY($J,"GMRVD")) S %X="^UTILITY($J,""GMRVD"",",%Y="NURVIT(" D %XY^%RCR K ^UTILITY($J,"GMRVD")

S GMRVSTR="T;P;R;BP;PN;",GMRVSTR(0)=NURNOW(1)\_"^"\_NURNOW D EN1^GMRVUT0

F NUR="T","P","R","BP" S NURDT=0 F S NURDT=$O(^UTILITY($J,"GMRVD",NUR,NURDT)) Q:NURDT'>0 S NURDA=0 F S NURDA=$O(^UTILITY($J,"GMRVD",NUR,NURDT,NURDA)) Q:NURDA'>0 D

. I $P(^UTILITY($J,"GMRVD",NUR,NURDT,NURDA),"^",12)="\*",'$D(NURVIT(NURDT,NUR,NURDA)) S NURVIT(NURDT,NUR,NURDA)=^UTILITY($J,"GMRVD",NUR,NURDT,NURDA)