**MCCF EDI TAS US589**

System Design Document



Department of Veterans Affairs

**May 2017**

Version 1.01

**User Story Number:** USRX-14

**User Story Name:** Need the ECME AUTO-REVERSAL PROCESS email bulletin to include patient’s eligibility and drug name

**Product Backlog ID:** 14

**Backlog Priority:** Low

**Initial Sizing Estimate:**

**Rational ID:** tbd

**Rally ID:** US589

# Design – Summary

The BPS Nightly Background Job creates the ECME AUTO-REVERSAL PROCESS email bulletin. The bulletin needs to be updated to include the patient’s eligibility and drug name. The routine that creates the email bulletin is ^BPSBCKJ. This Routine uses the BPS TRANSACTION File (9002313.59).

AUTOREV^BPSBCKJ collects the data to be used in the email bulletin.

ARLIST^BPSBCKJ uses the collected data to produce the email bulletin.

List of Components:

* Routine: ^BPSBCKJ

# Design – Detail

| Subroutine Name | **AUTOREV^BPSBCKJ** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Enhancement Category | New | Modify | | | Delete | | No Change | |
| Story | US589 | | | | | | | |
| Related Menu Options or ListMan Actions | BPS NIGHTLY BACKGROUND JOB | | | | | | | |
| Related Routines | This Subroutine is Called By | | | This Subroutine Calls | | | | |
| EN^BPSBCKJ | | | C^%DTC, $$DT^XLFDT, $$PAID^BPSOSQ4, $$REVINP^BPSBCKJ, $$FMDIFF^XLFDT, $$RELDATE^BPSBCKJ and $$REVERSE^BPSBCKJ | | | | |
| Related Integration Control Registrations (ICRs) | n/a | | | | | | | |
| Data Passing | Parameter Input | | Parameter Output | | | Function Return Value | | Global Modified |
| Input Attribute Name and Definition | Name: n/a  Definition:  New  Modify  Delete  No Change | | | | | | | |
| Output Attribute Name and Definition | Name: n/a  Definition:  New  Modify  Delete  No Change | | | | | | | |
| Current Logic | | | | | | | | |
| BPSBCKJ ;BHAM ISC/AAT - BPS NIGHTLY BACKGROUND JOB ;02/27/2005  ;;1.0;E CLAIMS MGMT ENGINE;\*\*1,2,5,7,8\*\*;JUN 2004;Build 29  ;;Per VHA Directive 2004-038, this routine should not be modified.  …  AUTOREV ; The Auto-Reverse Procedure  N BDT,BTRAN,BPHARM,BTRAN0,BTRAN1,BTRAN4,BDAYS,BRX,BFIL,BDATE,BNOW,BCLAIM,BRES,BREV,BTEST,REF,BCNT,BTX,X,X1,X2  ;  S BTEST=0 ; Debugging flag 1 - TEST, 0 - LIVE  S BCNT=0 ; Count reversals  ;  S REF=$NA(^TMP($J,"BPSBCKJ")) K @REF  ;  S (X1,BNOW)=$$DT^XLFDT()  ;  ;Define number of days to look back - Auto Reverse days can be from 0-31  ;To make sure every claim is caught, moving back 45 days  S X2=-45 D C^%DTC S BDT=X  ;  ;Loop through 'LAST UPDATE' 'AH' index  F S BDT=$O(^BPST("AH",BDT)) Q:'BDT S BTRAN=0 F S BTRAN=$O(^BPST("AH",BDT,BTRAN)) Q:'BTRAN D  . W:BTEST !,"TRAN=",BTRAN," ",?20  . S BTRAN0=$G(^BPST(BTRAN,0)),BTRAN1=$G(^(1)),BTRAN4=$G(^(4))  . I BTRAN0=""!(BTRAN1="") W:BTEST "ZERO OR ONE NODE MISSING" Q  . I '$$PAID^BPSOSQ4(BTRAN) W:BTEST "NOT PAID" Q ; Not paid  . S BPHARM=$P(BTRAN1,U,7) I 'BPHARM W:BTEST "NO BPS PHARM" Q ; BPS PHARMACY  . W:BTEST "BPHARM=",$P($G(^BPS(9002313.56,BPHARM,0)),U,1)," "  . ;  . ;Handle 'Inpatient' Auto-Reversals  . S BREV=$$REVINP(BNOW,BTRAN,BTRAN0,BTRAN1,BPHARM) Q:BREV  . ;  . ;Handle Regular Auto-Reversals  . S BDAYS=+$P($G(^BPS(9002313.56,BPHARM,0)),U,9)  . I 'BDAYS W:BTEST "AUTO-REV DISABLED" Q ;disabled  . I $P(BTRAN4,U,1) Q ;Reversal claim exist  . S BCLAIM=$P(BTRAN0,U,4) I 'BCLAIM W:BTEST "NO BCLAIM" Q  . I $P($G(^BPSC(BCLAIM,0)),U,7) W:BTEST "AUTO-REVERSE FLAG" Q  . S BDATE=$P($G(^BPSC(BCLAIM,0)),U,5)  . I 'BDATE S BDATE=$P($G(^BPSC(BCLAIM,0)),U,6)  . S BDATE=$P(BDATE,".")  . I 'BDATE="" W:BTEST "NO DATE" Q  . W:BTEST "DATE=",BDATE," "  . I $$FMDIFF^XLFDT(BNOW,BDATE,1)'>BDAYS W:BTEST "TOO EARLY" Q  . S BRX=$P(BTRAN1,U,11) I 'BRX W:BTEST "NO RX" Q  . S BFIL=$P(BTRAN1,U,1)  . I $$RELDATE(BRX,BFIL) W:BTEST " RELEASED" Q ;released  . S BRES=$$REVERSE(BRX,BFIL,BCLAIM,1)  . W:BTEST " \*REV CLM=",BCLAIM," STAT=",BRES  . I BRES=0!(BRES=4) D  .. S (BCNT,@REF@(BRES))=$G(@REF@(BRES))+1  .. S @REF@(BRES,BCNT)=BTRAN\_U\_BCLAIM\_U\_BRX\_U\_BFIL\_U\_BPHARM  . ; Any notifications to IB?  D BULL(REF) ; Send the bulletin  K @REF  Q | | | | | | | | |
| Modified Logic (Changes are highlighted) | | | | | | | | |
| BPSBCKJ ;BHAM ISC/AAT - BPS NIGHTLY BACKGROUND JOB ;02/27/2005  ;;1.0;E CLAIMS MGMT ENGINE;\*\*1,2,5,7,8,22\*\*;JUN 2004;Build 29  ;;Per V~~H~~A Directive 6402, this routine should not be modified.  …  AUTOREV ; The Auto-Reverse Procedure  N BDT,BTRAN,BPHARM,BTRAN0,BTRAN1,BTRAN4,BDAYS,BRX,BFIL,BDATE,BNOW,BCLAIM,BRES,BREV,BTEST,REF,BCNT,BTX,X,X1,X2  N BTRAN9,BELIG,BDRUG  ;  S BTEST=0 ; Debugging flag 1 - TEST, 0 - LIVE  S BCNT=0 ; Count reversals  ;  S REF=$NA(^TMP($J,"BPSBCKJ")) K @REF  ;  S (X1,BNOW)=$$DT^XLFDT()  ;  ;Define number of days to look back - Auto Reverse days can be from 0-31  ;To make sure every claim is caught, moving back 45 days  S X2=-45 D C^%DTC S BDT=X  ;  ;Loop through 'LAST UPDATE' 'AH' index  F S BDT=$O(^BPST("AH",BDT)) Q:'BDT S BTRAN=0 F S BTRAN=$O(^BPST("AH",BDT,BTRAN)) Q:'BTRAN D  . W:BTEST !,"TRAN=",BTRAN," ",?20  . S BTRAN0=$G(^BPST(BTRAN,0)),BTRAN1=$G(^(1)),BTRAN4=$G(^(4)),BTRAN9=$G(^(9))  . I BTRAN0=""!(BTRAN1="") W:BTEST "ZERO OR ONE NODE MISSING" Q  . I '$$PAID^BPSOSQ4(BTRAN) W:BTEST "NOT PAID" Q ; Not paid  . S BPHARM=$P(BTRAN1,U,7) I 'BPHARM W:BTEST "NO BPS PHARM" Q ; BPS PHARMACY  . W:BTEST "BPHARM=",$P($G(^BPS(9002313.56,BPHARM,0)),U,1)," "  . ;  . ;Handle 'Inpatient' Auto-Reversals  . S BREV=$$REVINP(BNOW,BTRAN,BTRAN0,BTRAN1,BPHARM) Q:BREV  . ;  . ;Handle Regular Auto-Reversals  . S BDAYS=+$P($G(^BPS(9002313.56,BPHARM,0)),U,9)  . I 'BDAYS W:BTEST "AUTO-REV DISABLED" Q ;disabled  . I $P(BTRAN4,U,1) Q ;Reversal claim exist  . S BCLAIM=$P(BTRAN0,U,4) I 'BCLAIM W:BTEST "NO BCLAIM" Q  . I $P($G(^BPSC(BCLAIM,0)),U,7) W:BTEST "AUTO-REVERSE FLAG" Q  . S BDATE=$P($G(^BPSC(BCLAIM,0)),U,5)  . I 'BDATE S BDATE=$P($G(^BPSC(BCLAIM,0)),U,6)  . S BDATE=$P(BDATE,".")  . I 'BDATE="" W:BTEST "NO DATE" Q  . W:BTEST "DATE=",BDATE," "  . I $$FMDIFF^XLFDT(BNOW,BDATE,1)'>BDAYS W:BTEST "TOO EARLY" Q  . S BRX=$P(BTRAN1,U,11) I 'BRX W:BTEST "NO RX" Q  . S BFIL=$P(BTRAN1,U,1)  . I $$RELDATE(BRX,BFIL) W:BTEST " RELEASED" Q ;released  . S BELIG=$P(BTRAN9,U,4) I BELIG=”” W:BTEST “NO ELIGIBILITY” Q  . S BDRUG=$$RXAPI1^BPSUTIL1(BRX,6,”E”) I BDRUG=”” W:BTEST “NO DRUG” Q  . S BRES=$$REVERSE(BRX,BFIL,BCLAIM,1)  . W:BTEST " \*REV CLM=",BCLAIM," STAT=",BRES  . I BRES=0!(BRES=4) D  .. S (BCNT,@REF@(BRES))=$G(@REF@(BRES))+1  .. S @REF@(BRES,BCNT)=BTRAN\_U\_BCLAIM\_U\_BRX\_U\_BFIL\_U\_BPHARM\_U\_BELIG\_U\_BDRUG  . ; Any notifications to IB?  D BULL(REF) ; Send the bulletin  K @REF  Q | | | | | | | | |

| Subroutine Name | **ARLIST^BPSBCKJ** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Enhancement Category | New | Modify | | | Delete | | No Change | |
| Story | US589 | | | | | | | |
| Related Menu Options or ListMan Actions | BPS NIGHTLY BACKGROUND JOB | | | | | | | |
| Related Routines | This Subroutine is Called By | | | This Subroutine Calls | | | | |
| BULL^BPSBCKJ | | | $$RXAPI1^BPSUTIL1, $$MWC^BPSRPT6, $$DAT^BPSBCKJ, $$FILDATE^BPSBCKJ, $$J^BPSBCKJ, $$RELDATE^BPSBCKJ and T^BPSBCKJ | | | | |
| Related Integration Control Registrations (ICRs) | n/a | | | | | | | |
| Data Passing | Parameter Input | | Parameter Output | | | Function Return Value | | Global Modified |
| Input Attribute Name and Definition | Name: BRES  Definition: Reversal Flag: 0=Test 4=Auto Reversal  New  Modify  Delete  No Change  Name: REF  Definition: Array containing Reversal Info  New  Modify  Delete  No Change | | | | | | | |
| Output Attribute Name and Definition | Name: n/a  Definition:  New  Modify  Delete  No Change | | | | | | | |
| Current Logic | | | | | | | | |
| ARLIST(BRES,REF) ;Auto-Rev List  N I,TXT,BCLAIM,BTRAN,Y,BRX,BFIL,BFDATE,BPHARM,BRXN,BPHARMN,BPAT,BPSTAT  D T()  D T(" # RX FILL STATUS FILL DATE PATIENT BPS PHARMACY")   D T("------------------------------------------------------------------------------")  S I=0 F S I=$O(@REF@(BRES,I)) Q:'I D  . S Y=@REF@(BRES,I)  . S BTRAN=$P(Y,U)  . S BCLAIM=$P(Y,U,2)  . S BRX=$P(Y,U,3),BRXN=$$RXAPI1^BPSUTIL1(BRX,.01,"I")  . S BPAT=$P($G(^DPT(+$$RXAPI1^BPSUTIL1(BRX,2,"I"),0)),U)  . S BFIL=$P(Y,U,4)  . S BPHARM=$P(Y,U,5),BPHARMN=$P($G(^BPS(9002313.56,BPHARM,0)),U)  . S BFDATE=$$FILDATE(BRX,BFIL)  . S BPSTAT=$$MWC^BPSRPT6(BRX,BFIL)\_"/"\_$S($$RELDATE(BRX,BFIL)]"":"RL",1:"NR")  . S TXT=$J(I,3)\_" "\_$$J(BRXN,10)\_" "\_$$J(BFIL,2)\_" "\_$J(BPSTAT,4)\_" "\_$$J($$DAT(BFDATE),11)\_$$J(BPAT,25)\_" "\_$J($E(BPHARMN,1,15),15)  . S TXT=$J(I,3)\_" "\_$$J(BRXN,10)\_" "\_$$J(BFIL,2)\_" "\_$J(BPSTAT,4)\_" "\_$$J($$DAT(BFDATE),11)\_$$J(BPAT,25)\_" "\_$J($E(BPHARMN,1,15),15  . D T(TXT)  D T("------------------------------------------------------------------------------")  Q | | | | | | | | |
| Modified Logic (Changes are highlighted) | | | | | | | | |
| ARLIST(BRES,REF) ;Auto-Rev List  N I,TXT,BCLAIM,BTRAN,Y,BRX,BFIL,BFDATE,BPHARM,BRXN,BPHARMN,BPAT,BPSTAT,BELIG,BDRUG  D T()  D T(" # RX/FILL STATUS DATE ELIG PATIENT BPS PHARM DRUG NAME")  D T("------------------------------------------------------------------------------")  S I=0 F S I=$O(@REF@(BRES,I)) Q:'I D  . S Y=@REF@(BRES,I)  . S BTRAN=$P(Y,U)  . S BCLAIM=$P(Y,U,2)  . S BRX=$P(Y,U,3),BRXN=$$RXAPI1^BPSUTIL1(BRX,.01,"I")  . S BPAT=$P($G(^DPT(+$$RXAPI1^BPSUTIL1(BRX,2,"I"),0)),U)  . S BFIL=$P(Y,U,4)  . S BPHARM=$P(Y,U,5),BPHARMN=$P($G(^BPS(9002313.56,BPHARM,0)),U)  . S BELIG=$P(Y,U,6)  . S BDRUG=$P(Y,U,7)  . S BFDATE=$$FILDATE(BRX,BFIL)  . S BPSTAT=$$MWC^BPSRPT6(BRX,BFIL)\_"/"\_$S($$RELDATE(BRX,BFIL)]"":"RL",1:"NR")  . S TXT=$J(I,3)\_" "\_$$J((BRXN\_"/"\_BFIL),13)\_" "\_$J(BPSTAT,4)\_" "\_$$J($$DAT(BFDATE),10)  . S TXT=TXT\_$J(BELIG,1)\_" "\_$$J($E(BPAT,1,18),18)\_" "\_$J($E(BPHARMN,1,3),3)  . S TXT=TXT\_" "\_$$J($E(BDRUG,1,18),18)  . D T(TXT)  D T("------------------------------------------------------------------------------")  Q | | | | | | | | |

# Back Out/Rollback Procedure

This story does not include adding or changing data fields in any VistA files, so no rollback of data would be necessary if this enhancement needed to be backed out.

To back out this enhancement, the routine ^BPSBCKJ should be backed up prior to installing this patch. Reverting to the previous version of this routine would back out this enhancement. Alternatively, the previous version of this routine could be distributed via an emergency patch.