MQAPHHAB DEMO MODEL PROGRAM

MQAPHHAB streamlines HHA editing for DEMO model

PGM LINES

MQAPHHAB 3191 (all copybooks hardcoded in program)

DDSDDCHK 124 (ALC utility) Called for INFILE, OUTFILE names

MQANHCPC 385 (Linked-list utility, super-fast access for HCPC edits;

List is in WS after first call)

HCPC FILE: [P@QAC.@BFA2701.CONTROL.HCPCS.LOAD.G0087V00](mailto:P@QAC.@BFA2701.CONTROL.HCPCS.LOAD.G0087V00) downloaded to

HCPC\_LINKED\_LIST.BIN

DATA FILE: B1D9.#MQR.OSDM.HHAB.D190729.EDTD PII Scrubbed: downloaded to

HHAB\_CLAIMS.BIN

25 CLAIMS, 14 Follow-on RVNU records

JCL: JH00.AWS.CNTL(MQAPR01H)

PROD: MQAPHHAB code distilled from:

MQAP010D 2582 (minus copybooks) EDIT I/O DRIVER;RVNU ARRAY BUILD

MQAMCONS 4199 (minus copybooks) EDIT TRAFFIC COP, REPORT BUILD

MQAMCER5 4069 (minus copybooks) Home Health edit module

10850

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* MQAPHHAB \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* SCOPE:

\* - CLAIM I/O: MIRROR MQR COLLECT LOGIC FOR CWF CLAIM REFORMAT

\* - ALSO MQA EDIT COLLECT/MOD/WRITE: TO BUILD RVNU TRLR ARRAY

\* FOR MQA RVNU EDITS; AND PROVES CAN HANDLE CWF CLAIM

\* LOGICAL/PHYSICAL STRUCTURE => TO DATABASES

\* (THESE CLAIMS CAN NOT GO DIRECT TO DB'S, REQUIRE

\* ANOTHER REFORMAT DOWNSTREAM. THAT REFORMAT IS TOO

\* COMPLEX FOR A DEMO)

\* - RETAIN HHAB SPLIT CODE: REQD: CHANGES CLAIM VAL TRAILERS

\* EVEN THOUGH IT IS AN 'EDIT'.

\* - RETAIN MQA[N]HCPC SUBPROGRAM CALL TO A LINKED LIST

\* CREATED FROM CWF HCPC FLAT FILE BY MQAXHCPC.

\* TESTS ABILITY TO ACCEPT EXTERIOR-BUILT DATA FILES.

\* (OTHERS: 3M DRG OBJECTS FOR INPT EDIT AND MEDPAR;

\* MH00 IDE FILE; SSA ZIP3 FILE)

\* PRP QUARTERLY PROVIDER HH & HOSPC EXTRACT)

\* - RETAIN ONLY ESSENTIAL TRAILER EDITING AND ERROR CODES.

\* - RETAIN KEY EDITS TO TEST ERROR LOGIC TRAVERSAL AND ABILITY

\* OF NEW LANG TO MIMIC COBOL LOGIC STRUCTURES

\* - REWRITE ERROR RANK AND CLAIM ERROR ARRAY BUILD.

\* (DONE IN PROD BY CALLS TO MQAMQAER).

\* - SKIP PRINT-FILE REPORT BUILD: USE DISPLAYS.

\* - SKIP CONTROL FILE INTERACTIONS & UPDATES: ASSUME NEW LANG

\* - ABILITY TO READ/WRITE VSAM FILES

\* - EXEC JCL USES PARMS: TEST ABILITY TO ACCEPT RUN CONTROL(S)

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\* NB: ERROR CODES LEFT IN CODE, BUT NOT TRIGGERED BY THE 07/29 DATA

\* FILE: LEAVING ESSENTIAL CODE LOGIC INTACT FROM PROD.

\* IF NEED TO TRIGGER MORE EDIT ERRORS,

\* CHANGE DATA TO INVOKE, AND ADD TO THE ERROR-RNK TBL.

\* IF THEY DO GET INVOKED SOMEHOW, WILL SHOW AS RANK 999

\* AND 'DISPLAY UNKNOWN ERROR' E.G. NOT IN TABLE.

\*

\* DEMO-TRAILER EDIT: 5277 4603 5800

\* VALU-TRAILER EDIT: 0414

\* ~~MQANDATE CALL: 51XP 51XX 51XY~~

\* IN A002 EDIT : 8894

\* IN RVNU EDIT : 9901

\* PPL DGNS : 4502 IN CODE THAT TESTS: EVAL X ALSO Y

\* PPS-GENL-EDITS: A041 2213 46#U 0415 0418

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ERRORS TRIGGERED:

03 ERROR-RANKING-AREA.

05 WS-ERROR-RANK-ENTRIES.

VALUE 'A002 100 CAN, MBI, BENE-ID-TYPE FORMAT ERROR'.

VALUE 'Y001 200 HHAB SPLIT CLAIM'.

VALUE 'Y0X4 650 HCPC NOT VALID FOR SVC DATE'.

VALUE 'Y0X5 300 BENE AGE >=115'.

VALUE '0014 400 DEMO NUM INVALID FOR CLAIM'.

VALUE '0419 250 RICV,W;U VAL 62/63;XX-Y-Z MISSING'. <NB: just in case

VALUE '46#V 150 TOB 32/33X VC62/63 <> RC42-44+55-57'.

VALUE '51XZ 500 TOB 32/33X INVALID RC CODE 0624'.

VALUE '61XH 600 MEDICARE PAYMENT AMT ERROR'.

VALUE '6101 200 REV COMPUTED CHARGES INCORRECT'.

VALUE '6102 200 REV COMPUTED NON-COVERED/NON-COV'.

VALUE '6106 300 TOB 3X2, RC0023 CHG <> RC0001 CHG'.

VALUE '8904 250 HHA A/B SPLIT BYP'.

VALUE 'XXXX 999 UNKNOWN ERROR CODE'.

**MQAPHHAB: PROCESSES AND EDITS INCLUDED: PURPOSE**

BACKGROUND:

EDITS SELECTED HAVE COBOL-SUPPORTED DATA HANDLING FEATURES

Home Health claims carry MQA RIC 5, and NCH-NEARLINE-RIC of U or W. All NRIC U claims carry both Part A, Part B, {and Other} revenue (rvnu) lines. These claims must bear certain VALUE-TRLR codes that provide the number of lines of Part A and Part B on the claim. Downstream users needed to have the reimb $$ amounts for each Part in addition to the number of lines. CWF denied our request to have those values calculated there and included on the claims.

The logic was too complex to force MQR to apply as claims arrive, so the split logic was developed within MQA Home Health edit module MQAMCER5.

In MQR, on arrival, when a splittable claim is detected, MQR adds three VAL-TRLR trailers to the claim:

03 QAR5-VAL-TRAILER OCCURS 0 TO 36 << *never seen more than 6 or so*

DEPENDING ON QAR5-VALU-COUNT.

05 QAR5-VAL-TRLR-CD PIC X(01).

88 VAL-TRAILER VALUE 'V'.

05 QAR5-CLM-VAL-CD PIC X(02).

05 QAR5-CLM-VAL-AMT PIC S9(9)V99 COMP-3.

MQR ADDS:

- QAR5-CLM-VAL-CD = ‘XX’ for Part A rvnu lines reimb$ total;

- QAR5-CLM-VAL-CD = ‘XY’ for Part B rvnu lines reimb$ total;

- QAR5-CLM-VAL-CD = ‘XZ’ for Other rvnu lines reimb$ total

- QAR5-CLM-VAL-AMT PIC S9(9)V99 COMP-3 initialized to ZEROs.

A splittable claim MUST carry VAL-CD = ‘62’ and ‘63’ trailers:

VAL-TRLR QAR5-CLM-VAL-CD = ‘62’ QAR5-CLM-VAL-AMT = # of Part A rvnu lines.

VAL-TRLR QAR5-CLM-VAL-CD = ‘63’ QAR5-CLM-VAL-AMT = # of Part B rvnu lines.

There are many MQAMCER5 edits to report wrong VAL-TRLR data/trlrs for a split, but these edits/codes are included in MQAPHHAB *only if they occur inside an essential block of code.* The claims were selected from 20190729 production MQA0001 Daily Edit run, as having been split successfully, hence no data/trlr-type edits will post for these claims: if DEMO successful.

Furthermore, some of the MQA edits do not exist at CWF, as CWF does not perform the split. However, the specifications to identify or bypass inclusion were provided by CWF SME’s to support our effort.

DEMO claims were selected by posting error 8904 HHA A/B SPLIT BYP. This looks confusing, but 8904 is at the rvnu line level, not claim level:

If HCPC 'Q5001' OR 'Q5002' OR 'Q5009' is on the rvnu line, the reimb$ amount is not applied to either Part A, B, or Other (XX, XY, XZ) QAR5-CLM-VAL-AMT.

These places of service do not (apparently) play in the summation:

Q5001 HOSPICE OR HOME HEALTH CARE PROVIDED IN PATIENT'S HOME/RESIDENCE

Q5002 HOSPICE OR HOME HEALTH CARE PROVIDED IN ASSISTED LIVING FACILITY

Q5009 HOSPICE OR HOME HEALTH CARE PROVIDED IN PLACE NOT OTHERWISE SPECIFIED

MQAPHHAB FLOW

REVENUE LINE() EDIT LOGIC

VAL-TRLR() EDIT LOGIC

SPLIT LOGIC

Rvnu lines are in Rvnu-center order. Base claim carries all other trailers, but only first 45 rvnu trailers; up to 450 rvnu trailers possible, so up to 9 additional physical records can exist, each with (up to) another 45 rvnu trailers.

Current single Medicare claim sizes are close to COBOL & QSAM maximum record sizes: hence necessity for multiple physical claims for one logical claim.

MAXCLAIM record (in the test file) carries full 450, on 10 fully-loaded physical claims. The base claim format (MQAHRIC5) is different from the follow-on claim format (MQAHTRL5): follow-ons do not need the internal ERROR-CODE array or the ONLINE before-after trailers.

SIMPLIFIED HIGH-LEVEL LOGIC:

READ CLAIM FILE << Test ability to access claims

Read base claim

Move to HRVNU-REC(1)

If more than one physical claim

Read additional claim() into HRVNU-REC()

Until loop count > QA5L-TOT-SEG-COUNT.

PREPARE FOR CLAIM EDITS:

BUILD ARRAY OF ALL RVNU LINES: << Test ability to handle COBOL (X:Y)

Access HRVNU-REC(SEG)for QA5L-TOT-SEG-COUNT times

Compute HRVNU-REC(SEG) rvnu lines RECLEN and START-OFFSET

Move HRVNU-REC(SEG) (START-OFFSET:RVNU-RECLEN)

TO TRL-TRLR (SEG) < This is the rvnu trlr array from

1 to QAR5-TOT-LINE-COUNT

*NB: In production the claim I/O and rvnu edit array are done elsewhere, and passed to MQAMCER5. Those functions were pulled into MQAPHHAB.*

PERFORM BASE CLAIM EDITS:

. . . and Set a bunch of switches . . . .

. . . .

EDIT RVNU LINES:

Access TRL-RVNU() QAR5-TOT-LINE-COUNT times

Post edit errors.

IF THIS CLAIM IS A SPLIT CANDIDATE: { Prep for split }

If rvnu center (1:2) matches split criteria

If not bypass line conditions

Add TRL-RVNU-TOTAL(X) to WS-AB-AMT.

END EDIT RVNU LINES.

EDIT VAL-TRLR().

IF QAR5-CLM-VAL-CD = ‘62’

Capture QAR5-CLM-VAL-AMT to WS-A-VISIT { # Part A rvnu lines )

IF QAR5-CLM-VAL-CD = ‘63’

Capture QAR5-CLM-VAL-AMT to WS-B-VISIT { # Part B rvnu lines )

. . .

END EDIT VAL-TRLR.

IF THIS CLAIM IS A SPLIT CANDIDATE:

PERFORM HHAB-SPLIT-CHGS:

BUILD SORT ARRAY of A, B lines only

Access TRL-TRLR(X) QAR5-TOT-LINE-COUNT times

IF rvnu center (1:2) matches split criteria

If not bypass line conditions

Capture TRL-RVNU-DATE (X) as SRT-TRL-DATE (Y)

Capture TRL-RVNU-TOTAL(X) as SRT-TRL-TOTAL(Y)

Add 1 to AB-INDEX. < Number of A + B lines

Develop split totals:

Sort SRT-TRL by SRT-TRL-DATE ascending.

Read SRT-TRL WS-A-VISIT times

Add SRT-TRL-TOTAL() to WS-A-AMT.

Compute WS-B-AMT = WS-AB-AMT minus WS-A-AMT

Compute WS-C-AMT = TRL-RVNU-TOTAL(TRL-RVNU-COUNT) {RVNU center 0001}

minus WS-AB-AMT

Update VAL-TRLR XX XY XZ with WS-A-AMT WS-B-AMT WS-C-AMT respectively.

END ALL EDITS.

WRITE CLAIMS(1) THRU (QA5L-TOT-SEG-COUNT)

DISPLAY RUN TOTALS.

END PROGRAM.

CONCISE RATIONALE FOR INCLUSION

EDIT RANK DESC

'**A002** 100 CAN, MBI, BENE-ID-TYPE FORMAT ERROR'.

All PII CANs replaced with scrubbed value, with bytes 4-6 = ZERO to trigger edit A002 in all claims whether RIC U or W.

Assure DEMO traverses code properly, and CANs translated OK.

Also test handle COBOL OFFSET(X:Y) type string access.

'**Y001** 200 HHAB SPLIT CLAIM'.

Posts on entering split logic. Original claims selected from 20190729 production job MQA0001 by post of 8904 error: 8904 sets during split when line item has HCPC 'Q5001' OR 'Q5002' OR 'Q5009'. All splittable RIC U claims posted 8904. The claim extract was on the basis of 8904 HICN: and brought back both U and W claims for those HICN’S. All were included in the test file. The MAXCLAIM record is RIC W, not splittable.

‘**Y0X4** 650 HCPC NOT VALID FOR SVC DATE'.

Altered one claim HCPC to an invalid value. Show MQANHCPC call works.

‘**Y0X5** 300 BENE AGE >=115'.

Altered one bene RIC W DOB to > 115: Test FUNCTION CURRENT-DATE compatibility: used throughout MQR, MQA, NCH etc

‘**0419** 250 RICV,W;U VAL 62/63;XX-Y-Z MISSING'. Embedded in essential code

block

‘**0014** 400 DEMO NUM INVALID FOR CLAIM'. Triggered in MAXCLAIM

‘**46#V** 150 TOB 32/33X VC62/63 <> RC42-44+55-57'. Triggered in MAXCLAIM

‘**61XH** 600 MEDICARE PAYMENT AMT ERROR'. Triggered in MAXCLAIM

‘**6101** 200 REV COMPUTED CHARGES INCORRECT'. Embedded in essential code

block

‘**6102** 200 REV COMPUTED NON-COVERED/NON-COV'. Embedded in essential code

block

‘**6106** 300 TOB 3X2, RC0023 CHG <> RC0001 CHG'. Embedded in essential code

block

‘**8904** 250 HHA A/B SPLIT BYP'. Posts for all split claims

‘**XXXX** 999 UNKNOWN ERROR CODE'. If DEMO posts an error that is not in the

hard-coded MQAPHHAB list, this will set a 999 rank. A test display shows ‘UNKNOWN ERROR’

DATA CHANGED: HICN **111000333 RIC U**

**RVNU HCPC(53): ~~G0156~~ A0500 NB: INVALID HCPC # (R2019400)**

**Invokes error Y0X4 ‘HCPC NOT VALID FOR SVC DATE’** – prove MQANHCPC called correctly, accessing the linked list: over and above any SYSOUT DISPLAYs, which DEMO guys may not produce. No way to tell, otherwise.

DATA CHANGED: HICN **111000777 RIC W**

File-AID - Browse - B1D9.@BGI5001.DAILY.SEG1.H190729

COMMAND ===>

RECORD: 18 OSDM-LEADER

---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1---

5 QAR5-HIMA-ZIP 9/AN 78643

5 QAR5-HIMA-SEX 1/AN 1

5 QAR5-HIMA-RACE 1/AN 1

5 QAR5-HIMA-DOB 8/NUM 19040629

\* Y0X5 AGE => 115

MOVE FUNCTION CURRENT-DATE(1:8) TO SYSTEM-DAY. < Test FUNCTION convert

MOVE SYSTEM-DAY TO CURRENT-DAY.

\* CCYYMMDD - CCYYMMDD

IF QAR5-HIMA-DOB > ZERO

COMPUTE Y0X5-AGE = CURRENT-DAY - QAR5-HIMA-DOB

IF Y0X5-AGE >= 01150000

ADD +01 TO ERR

MOVE 'Y0X5' TO ERROR-CODE (ERR)

MOVE '#' TO ERROR-ITEM (ERR)

END-IF.