Addendum to Appendix B: Outcome-based Quality Improvement Reports: Technical Documentation of Measures

Modification of Selected Risk Factors due to V and E Codes in M0230/M0240 and New Item M0245

Department of Health and Human Services
Centers for Medicare & Medicaid Services
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The following range references apply for the ANYDIAG_1 through ANYDIAG_18 transformations.

ICD-9 Codes 001-139 140-239 240-279 280-289 290-319 320-389 390-459 460-519 520-579 580-629 630-676 680-709 710-739 740-759	Reference RANGE1 RANGE2 RANGE3 RANGE4 RANGE5 RANGE6 RANGE7 RANGE8 RANGE9 RANGE10 RANGE11 RANGE11 RANGE12 RANGE13 RANGE13
680-709	RANGE12
710-739	RANGE13
780-799	RANGE15
800-848	RANGE16
850-854	RANGE17
860-959	RANGE18

IF M0190_14_DAY_INP1_ICD IS IN RANGE1 OR M0190_14_DAY_INP2_ICD IS IN RANGE1 OR

M0210_CHGREG_ICD1 IS IN RANGE1 OR M0210_CHGREG_ICD2 IS IN RANGE1 OR

M0210_CHGREG_ICD3 IS IN RANGE1 OR M0210_CHGREG_ICD4 IS IN RANGE1 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE1 OR M0240_OTH_DIAG1_ICD IS IN RANGE1 OR

M0240_OTH_DIAG2_ICD IS IN RANGE1 OR M0240_OTH-DIAG3_ICD IS IN RANGE1 OR

M0240_OTH_DIAG4_ICD IS IN RANGE1 OR M0240_OTH-DIAG5_ICD IS IN RANGE1 OR

M0245_PMT_ICD1 IS IN RANGE1 OR M0245_PMT_ICD2 IS IN RANGE1
THEN ANYDIAG_1 = 1

ELSE ANYDIAG_1 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE2 OR M0190_14_DAY_INP2_ICD IS IN RANGE2 OR

M0210_CHGREG_ICD1 IS IN RANGE2 OR M0210_CHGREG_ICD2 IS IN RANGE2 OR

M0210_CHGREG_ICD3 IS IN RANGE2 OR M0210_CHGREG_ICD4 IS IN RANGE2 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE2 OR M0240_OTH_DIAG1_ICD IS IN RANGE2 OR

M0240_OTH_DIAG2_ICD IS IN RANGE2 OR M0240_OTH-DIAG3_ICD IS IN RANGE2 OR

M0240_OTH_DIAG4_ICD IS IN RANGE2 OR M0240_OTH-DIAG5_ICD IS IN RANGE2 OR

M0245_PMT_ICD1 IS IN RANGE2 OR M0245_PMT_ICD2 IS IN RANGE2
THEN ANYDIAG_2 = 1

ELSE ANYDIAG $_2 = 0$

IF M0190_14_DAY_INP1_ICD IS IN RANGE3 OR M0190_14_DAY_INP2_ICD IS IN RANGE3 OR

M0210_CHGREG_ICD1 IS IN RANGE3 OR M0210_CHGREG_ICD2 IS IN RANGE3 OR

M0210_CHGREG_ICD3 IS IN RANGE3 OR M0210_CHGREG_ICD4 IS IN RANGE3 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE3 OR M0240_OTH_DIAG1_ICD IS IN RANGE3 OR

M0240_OTH_DIAG2_ICD IS IN RANGE3 OR M0240_OTH-DIAG3_ICD IS IN RANGE3 OR

M0240_OTH_DIAG4_ICD IS IN RANGE3 OR M0240_OTH-DIAG5_ICD IS IN RANGE3 OR

M0245_PMT_ICD1 IS IN RANGE3 OR M0245_PMT_ICD2 IS IN RANGE3 THEN ANYDIAG_3 = 1

ELSE ANYDIAG 3 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE4 OR M0190_14_DAY_INP2_ICD IS IN RANGE4 OR

M0210_CHGREG_ICD1 IS IN RANGE4 OR M0210_CHGREG_ICD2 IS IN RANGE4 OR

M0210_CHGREG_ICD3 IS IN RANGE4 OR M0210_CHGREG_ICD4 IS IN RANGE4 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE4 OR M0240_OTH_DIAG1_ICD IS IN RANGE4 OR

M0240_OTH_DIAG2_ICD IS IN RANGE4 OR M0240_OTH-DIAG3_ICD IS IN RANGE4

M0240_OTH_DIAG4_ICD IS IN RANGE4 OR M0240_OTH-DIAG5_ICD IS IN RANGE4 OR

M0245_PMT_ICD1 IS IN RANGE4 OR M0245_PMT_ICD2 IS IN RANGE4
THEN ANYDIAG_4 = 1

ELSE ANYDIAG $_4 = 0$

IF M0190_14_DAY_INP1_ICD IS IN RANGE5 OR M0190_14_DAY_INP2_ICD IS IN RANGE5 OR

M0210_CHGREG_ICD1 IS IN RANGE5 OR M0210_CHGREG_ICD2 IS IN RANGE5 OR

M0210_CHGREG_ICD3 IS IN RANGE5 OR M0210_CHGREG_ICD4 IS IN RANGE5 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE5 OR M0240_OTH_DIAG1_ICD IS IN RANGE5 OR

M0240_OTH_DIAG2_ICD IS IN RANGE5 OR M0240_OTH-DIAG3_ICD IS IN RANGE5 OR

M0240_OTH_DIAG4_ICD IS IN RANGE5 OR M0240_OTH-DIAG5_ICD IS IN RANGE5 OR

M0245_PMT_ICD1 IS IN RANGE5 OR M0245_PMT_ICD2 IS IN RANGE5
THEN ANYDIAG_5 = 1

ELSE ANYDIAG $_5 = 0$

IF M0190_14_DAY_INP1_ICD IS IN RANGE6 OR M0190_14_DAY_INP2_ICD IS IN RANGE6 OR

M0210_CHGREG_ICD1 IS IN RANGE6 OR M0210_CHGREG_ICD2 IS IN RANGE6 OR

M0210_CHGREG_ICD3 IS IN RANGE6 OR M0210_CHGREG_ICD4 IS IN RANGE6 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE6 OR M0240_OTH_DIAG1_ICD IS IN RANGE6 OR

M0240_OTH_DIAG2_ICD IS IN RANGE6 OR M0240_OTH-DIAG3_ICD IS IN RANGE6 OR

M0240_OTH_DIAG4_ICD IS IN RANGE6 OR M0240_OTH-DIAG5_ICD IS IN RANGE6 OR

M0245_PMT_ICD1 IS IN RANGE6 OR M0245_PMT_ICD2 IS IN RANGE6 THEN ANYDIAG_6 = 1

ELSE ANYDIAG 6 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE7 OR M0190_14_DAY_INP2_ICD IS IN RANGE7 OR

M0210_CHGREG_ICD1 IS IN RANGE7 OR M0210_CHGREG_ICD2 IS IN RANGE7 OR

M0210_CHGREG_ICD3 IS IN RANGE7 OR M0210_CHGREG_ICD4 IS IN RANGE7 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE7 OR M0240_OTH_DIAG1_ICD IS IN RANGE7 OR

M0240_OTH_DIAG2_ICD IS IN RANGE7 OR M0240_OTH-DIAG3_ICD IS IN RANGE7 OR

M0240_OTH_DIAG4_ICD IS IN RANGE7 OR M0240_OTH-DIAG5_ICD IS IN RANGE7 OR

M0245_PMT_ICD1 IS IN RANGE7 OR M0245_PMT_ICD2 IS IN RANGE7
THEN ANYDIAG_7 = 1

ELSE ANYDIAG_7 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE8 OR M0190_14_DAY_INP2_ICD IS IN RANGE8 OR

M0210_CHGREG_ICD1 IS IN RANGE8 OR M0210_CHGREG_ICD2 IS IN RANGE8 OR

M0210_CHGREG_ICD3 IS IN RANGE8 OR M0210_CHGREG_ICD4 IS IN RANGE8 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE8 OR M0240_OTH_DIAG1_ICD IS IN RANGE8 OR

M0240_OTH_DIAG2_ICD IS IN RANGE8 OR M0240_OTH-DIAG3_ICD IS IN RANGE8 OR

M0240_OTH_DIAG4_ICD IS IN RANGE8 OR M0240_OTH-DIAG5_ICD IS IN RANGE8 OR

M0245_PMT_ICD1 IS IN RANGE8 OR M0245_PMT_ICD2 IS IN RANGE8
THEN ANYDIAG_8 = 1

ELSE ANYDIAG $_8 = 0$

IF M0190_14_DAY_INP1_ICD IS IN RANGE9 OR M0190_14_DAY_INP2_ICD IS IN RANGE9 OR

M0210_CHGREG_ICD1 IS IN RANGE9 OR M0210_CHGREG_ICD2 IS IN RANGE9 OR

M0210_CHGREG_ICD3 IS IN RANGE9 OR M0210_CHGREG_ICD4 IS IN RANGE9 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE9 OR M0240_OTH_DIAG1_ICD IS IN RANGE9 OR

M0240_OTH_DIAG2_ICD IS IN RANGE9 OR M0240_OTH-DIAG3_ICD IS IN RANGE9 OR

M0240_OTH_DIAG4_ICD IS IN RANGE9 OR M0240_OTH-DIAG5_ICD IS IN RANGE9 OR

M0245_PMT_ICD1 IS IN RANGE9 OR M0245_PMT_ICD2 IS IN RANGE9
THEN ANYDIAG_9 = 1

ELSE ANYDIAG 9 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE10 OR M0190_14_DAY_INP2_ICD IS IN RANGE10 OR

M0210_CHGREG_ICD1 IS IN RANGE10 OR M0210_CHGREG_ICD2 IS IN RANGE10 OR

M0210_CHGREG_ICD3 IS IN RANGE10 OR M0210_CHGREG_ICD4 IS IN RANGE10 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE10 OR M0240_OTH_DIAG1_ICD IS IN RANGE10 OR

M0240_OTH_DIAG2_ICD IS IN RANGE10 OR M0240_OTH-DIAG3_ICD IS IN RANGE10 OR

M0240_OTH_DIAG4_ICD IS IN RANGE10 OR M0240_OTH-DIAG5_ICD IS IN RANGE10 OR

M0245_PMT_ICD1 IS IN RANGE10 OR M0245_PMT_ICD2 IS IN RANGE10
THEN ANYDIAG_10 = 1

ELSE ANYDIAG_10 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE11 OR M0190_14_DAY_INP2_ICD IS IN RANGE11 OR

M0210_CHGREG_ICD1 IS IN RANGE11 OR M0210_CHGREG_ICD2 IS IN RANGE11 OR

M0210_CHGREG_ICD3 IS IN RANGE11 OR M0210_CHGREG_ICD4 IS IN RANGE11 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE11 OR M0240_OTH_DIAG1_ICD IS IN RANGE11 OR

M0240_OTH_DIAG2_ICD IS IN RANGE11 OR M0240_OTH-DIAG3_ICD IS IN RANGE11 OR

M0240_OTH_DIAG4_ICD IS IN RANGE11 OR M0240_OTH-DIAG5_ICD IS IN RANGE11 OR

M0245_PMT_ICD1 IS IN RANGE11 OR M0245_PMT_ICD2 IS IN RANGE11 THEN ANYDIAG_11 = 1

ELSE ANYDIAG_11 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE12 OR M0190_14_DAY_INP2_ICD IS IN RANGE12 OR

M0210_CHGREG_ICD1 IS IN RANGE12 OR M0210_CHGREG_ICD2 IS IN RANGE12 OR

M0210_CHGREG_ICD3 IS IN RANGE12 OR M0210_CHGREG_ICD4 IS IN RANGE12 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE12 OR M0240_OTH_DIAG1_ICD IS IN RANGE12 OR

M0240_OTH_DIAG2_ICD IS IN RANGE12 OR M0240_OTH-DIAG3_ICD IS IN RANGE12 OR

M0240_OTH_DIAG4_ICD IS IN RANGE12 OR M0240_OTH-DIAG5_ICD IS IN RANGE12 OR

M0245_PMT_ICD1 IS IN RANGE12 OR M0245_PMT_ICD2 IS IN RANGE12 THEN ANYDIAG_12 = 1

ELSE ANYDIAG 12 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE13 OR M0190_14_DAY_INP2_ICD IS IN RANGE13 OR

M0210_CHGREG_ICD1 IS IN RANGE13 OR M0210_CHGREG_ICD2 IS IN RANGE13 OR

M0210_CHGREG_ICD3 IS IN RANGE13 OR M0210_CHGREG_ICD4 IS IN RANGE13 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE13 OR M0240_OTH_DIAG1_ICD IS IN RANGE13 OR

M0240_OTH_DIAG2_ICD IS IN RANGE13 OR M0240_OTH-DIAG3_ICD IS IN RANGE13 OR

M0240_OTH_DIAG4_ICD IS IN RANGE13 OR M0240_OTH-DIAG5_ICD IS IN RANGE13 OR

M0245_PMT_ICD1 IS IN RANGE13 OR M0245_PMT_ICD2 IS IN RANGE13
THEN ANYDIAG_13 = 1

ELSE ANYDIAG_13 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE14 OR M0190_14_DAY_INP2_ICD IS IN RANGE14 OR

M0210_CHGREG_ICD1 IS IN RANGE14 OR M0210_CHGREG_ICD2 IS IN RANGE14 OR

M0210_CHGREG_ICD3 IS IN RANGE14 OR M0210_CHGREG_ICD4 IS IN RANGE14 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE14 OR M0240_OTH_DIAG1_ICD IS IN RANGE14 OR

M0240_OTH_DIAG2_ICD IS IN RANGE14 OR M0240_OTH-DIAG3_ICD IS IN RANGE14 OR

M0240_OTH_DIAG4_ICD IS IN RANGE14 OR M0240_OTH-DIAG5_ICD IS IN RANGE14 OR

M0245_PMT_ICD1 IS IN RANGE14 OR M0245_PMT_ICD2 IS IN RANGE14
THEN ANYDIAG_14 = 1

ELSE ANYDIAG_14 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE15 OR M0190_14_DAY_INP2_ICD IS IN RANGE15 OR

M0210_CHGREG_ICD1 IS IN RANGE15 OR M0210_CHGREG_ICD2 IS IN RANGE15 OR

M0210_CHGREG_ICD3 IS IN RANGE15 OR M0210_CHGREG_ICD4 IS IN RANGE15 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE15 OR M0240_OTH_DIAG1_ICD IS IN RANGE15 OR

M0240_OTH_DIAG2_ICD IS IN RANGE15 OR M0240_OTH-DIAG3_ICD IS IN RANGE15 OR

M0240_OTH_DIAG4_ICD IS IN RANGE15 OR M0240_OTH-DIAG5_ICD IS IN RANGE15 OR

M0245_PMT_ICD1 IS IN RANGE15 OR M0245_PMT_ICD2 IS IN RANGE15 THEN ANYDIAG_15 = 1

ELSE ANYDIAG 15 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE16 OR M0190_14_DAY_INP2_ICD IS IN RANGE16 OR

M0210_CHGREG_ICD1 IS IN RANGE16 OR M0210_CHGREG_ICD2 IS IN RANGE16 OR

M0210_CHGREG_ICD3 IS IN RANGE16 OR M0210_CHGREG_ICD4 IS IN RANGE16 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE16 OR M0240_OTH_DIAG1_ICD IS IN RANGE16 OR

M0240_OTH_DIAG2_ICD IS IN RANGE16 OR M0240_OTH-DIAG3_ICD IS IN RANGE16 OR

M0240_OTH_DIAG4_ICD IS IN RANGE16 OR M0240_OTH-DIAG5_ICD IS IN RANGE16 OR

M0245_PMT_ICD1 IS IN RANGE16 OR M0245_PMT_ICD2 IS IN RANGE16
THEN ANYDIAG_16 = 1

ELSE ANYDIAG_16 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE17 OR M0190_14_DAY_INP2_ICD IS IN RANGE17 OR

M0210_CHGREG_ICD1 IS IN RANGE17 OR M0210_CHGREG_ICD2 IS IN RANGE17 OR

M0210_CHGREG_ICD3 IS IN RANGE17 OR M0210_CHGREG_ICD4 IS IN RANGE17 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE17 OR M0240_OTH_DIAG1_ICD IS IN RANGE17 OR

M0240_OTH_DIAG2_ICD IS IN RANGE17 OR M0240_OTH-DIAG3_ICD IS IN RANGE17 OR

M0240_OTH_DIAG4_ICD IS IN RANGE17 OR M0240_OTH-DIAG5_ICD IS IN RANGE17 OR

M0245_PMT_ICD1 IS IN RANGE17 OR M0245_PMT_ICD2 IS IN RANGE17
THEN ANYDIAG_17 = 1

ELSE ANYDIAG_17 = 0

IF M0190_14_DAY_INP1_ICD IS IN RANGE18 OR M0190_14_DAY_INP2_ICD IS IN RANGE18 OR

M0210_CHGREG_ICD1 IS IN RANGE18 OR M0210_CHGREG_ICD2 IS IN RANGE18 OR

M0210_CHGREG_ICD3 IS IN RANGE18 OR M0210_CHGREG_ICD4 IS IN RANGE18 OR

M0230_PRIMARY_DIAG_ICD IS IN RANGE18 OR M0240_OTH_DIAG1_ICD IS IN RANGE18 OR

M0240_OTH_DIAG2_ICD IS IN RANGE18 OR M0240_OTH-DIAG3_ICD IS IN RANGE18 OR

M0240_OTH_DIAG4_ICD IS IN RANGE18 OR M0240_OTH-DIAG5_ICD IS IN RANGE18 OR

M0245_PMT_ICD1 IS IN RANGE18 OR M0245_PMT_ICD2 IS IN RANGE18 THEN ANYDIAG_18 = 1

ELSE ANYDIAG 18 = 0

NOTE: For diagnoses, INVALID means that the format of the diagnosis code does not meet the following criteria

For M0230, the pattern must be:

- -Character 1 must be a space.
- -Character 2 must be a 0 (zero) thru 9 or a "V".
- -Characters 3 thru 4 must be 0 thru 9.
- -Character 5 must be a decimal point.
- -Characters 6 and 7 must be 0 (zero) thru 9 or space.
- -If character 6 is a space, then character 7 must be a space.

For M0240, the pattern must be one of the following two forms (Pattern A or Pattern B):

Pattern A:

- -Character 1 must be a space or "E".
- -Character 2 must be a 0 (zero) thru 9.
- -Characters 3 thru 4 must be 0 thru 9.
- -Character 5 must be a decimal point.

- -Characters 6 and 7 must be 0 (zero) thru 9 or space.
- -If character 6 is a space, then character 7 must be a space.

Pattern B:

- -Character 1 must be a space.
- -Character 2 must be "V".
- -Characters 3 thru 4 must be 0 thru 9.
- -Character 5 must be a decimal point.
- -Characters 6 and 7 must be 0 (zero) thru 9 or space.
- -If character 6 is a space, then character 7 must be a space.

For M0245, the pattern must be:

- -Character 1 must be a space.
- -Character 2 must be a 0 (zero) thru 9.
- -Characters 3 thru 4 must be 0 thru 9.
- -Character 5 must be a decimal point.
- -Characters 6 and 7 must be 0 (zero) thru 9 or space.
- -If character 6 is a space, then character 7 must be a space.

IF (M0230_PRIMARY_DIAG_ICD = BLANK, INVALID) OR (M0240_OTH_DIAG1_ICD = INVALID) OR (M0240_OTH_DIAG2_ICD = INVALID) OR (M0240_OTH_DIAG3_ICD = INVALID) OR (M0240_OTH_DIAG4_ICD = INVALID) OR (M0240_OTH_DIAG5_ICD = INVALID) OR (M0245_PMT_ICD1 = INVALID) OR (M0245_PMT_ICD2 = INVALID)

THEN

ANYDIAG_1 = MISSING ANYDIAG_2 = MISSING ANYDIAG_3 = MISSING ANYDIAG_4 = MISSING ANYDIAG_5 = MISSING ANYDIAG_6 = MISSING ANYDIAG_7 = MISSING ANYDIAG 8 = MISSING

 $ANYDIAG_8 = MISSING$ $ANYDIAG_9 = MISSING$

ANYDIAG_10 = MISSING

ANYDIAG_11 = MISSING ANYDIAG 12 = MISSING

ANYDIAG_12 = MISSING ANYDIAG 13 = MISSING

ANYDIAG_13 = MISSING

 $ANYDIAG_15 = MISSING$

ANYDIAG_16 = MISSING ANYDIAG 17 = MISSING

ANYDIAG 18 = MISSING

(ISHOULD NEVER OCCUR)