

**OUTCOME-BASED QUALITY IMPROVEMENT REPORTS:  
TECHNICAL DOCUMENTATION OF MEASURES**

Department of Health and Human Services

Centers for Medicare & Medicaid Services

June 2008

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## **OUTCOME-BASED QUALITY IMPROVEMENT REPORTS: TECHNICAL DOCUMENTATION OF MEASURES**

### **INTRODUCTION**

This document provides definitions of measures that appear in Outcome-Based Quality Improvement Reports, including detailed specifications for calculating these measures based on OASIS assessment data. For a complete description of these reports, including how to interpret and use the information presented, refer to the Outcome-Based Quality Improvement Manual, which is available from the Centers for Medicare & Medicaid Services (CMS) in three parts:

1. Outcome-Based Quality Improvement (OBQI) Implementation Manual;
2. Accessing OBQI & OBQM Reports - Using the CASPER Reporting System;
3. Supplement to the OBQI Manual - Interpreting and Using the 3-Bar Outcome Reports.

(The three sections of the OBQI manual are available for download from the CMS web site at: [http://www.cms.hhs.gov/HomeHealthQualityInits/16\\_HHQIOASISOBQI.asp#TopOfPage](http://www.cms.hhs.gov/HomeHealthQualityInits/16_HHQIOASISOBQI.asp#TopOfPage) )

### **Episodes of Care Included in Outcome and Case Mix Reports**

The unit of analysis for both outcome and case mix reports is an episode of care, defined as starting with an admission to home health care (M0100 Reason for assessment = 01 or 02) or resumption of home health care after an inpatient facility stay (M0100 Reason for assessment = 03), and ending with a discharge from home health care, including discharge due to death, or admission to inpatient facility for 24 hours or more (M0100 Reason for assessment = 06, 07, 08, or 09). The data upon which these reports are based consist of OASIS assessments submitted by home health agencies to the states, which are then transmitted to a national OASIS repository residing on a secure database server maintained by CMS. Analysis records corresponding to episodes of care are constructed by matching up assessments for each individual served by a home health agency, sorting those assessments by effective date, then pairing up assessments that mark the beginning and end of an episode of care. Episodes of care for which either the beginning or end assessment is missing, or for which assessments are out of sequence, are not included in these reports.

### **Assumptions and Conventions**

The following transformations result in measures with numeric values. Where a measure represents presence of an attribute or occurrence of an event, "1" indicates that the attribute is present or the event occurred, while "0" indicates the attribute is absent or the event did not occur. Where a measure represents a relative amount, degree, or severity of a patient characteristic or condition, a numeric scale value is assigned. The range of scale values for a particular measure is determined by the OASIS item(s) used to calculate that measure. A code of 'MISSING' indicates that the case is excluded from analysis for that particular measure, either because the measure is not applicable or because the data item on which that measure is based has been indicated as "unknown". In some circumstances, an entire case will be excluded from analysis because the data submitted do not meet the published data specifications for OASIS. This usually occurs only for data submitted prior to rigorous automated enforcement of data specifications (resulting in rejection of non-compliant data records) implemented in April of 2000.

OASIS data items are referred to in this documentation use field names specified in OASIS Data Submission Specifications published by CMS (Version 1.04 for pre-PPS

submissions, Version 1.20 for post-PPS submissions). As field names are the same across assessment time points, presence of [2] at the end of a field name indicates that this data item is taken from the end point assessment for an episode. For example, M0640\_CUR\_GROOMING refers to the 'Ability to Groom Oneself' item assessed at start or resumption of care. The field name M0100\_ASSMT\_REASON[2] refers to the 'Reason for Assessment' item at discharge (including death) or transfer to inpatient facility. Although some data items are collected at only one of the two time points, the [2] convention is used for all items that refer to the end point assessment to avoid possible misinterpretation. Note that for all Case Mix measures except those related to length of stay, data from the beginning assessment only are used. A few outcome measures are calculated using data from the episode of care end point assessment only, while most outcome measures use data from both the beginning and end point assessments.

### **Utilization and Calculation of Measures in Case Mix and as Risk Factors**

There are some measures that are used for only the Case Mix reports, some measures that are used only as risk factors in the development of predictive models, and some measures that are used for both Case Mix and as risk factors. In most cases, if a measure is used for both Case Mix and as a risk factor, the computation is identical. However, there are a small number of measures where the computation has slight differences. The Crosswalk of Variable Label, Item Name, Case Mix/Risk Factor Usage, and Computation provides a summary of these various usages and computations.

### **Organization of Technical Documentation**

The remainder of this document is divided into four sections:

- Crosswalk of Variable Label, Item Name, Case Mix/Risk Factor Usage, and Computation
- Outcome Measure Transformation Specifications
- Case Mix and Adverse Event Transformation Specifications
- Risk Factor Transformation Specifications

The first section provides a crosswalk among the variable label, data item name, usage in case mix and/or as risk factor, and location where computation is shown. This section should serve as an index for the remaining sections of the document. The second section provides the specifications for each of the 41 Outcome Measures presented in the OBQI Report. These transformations are unchanged from those described in Appendix B: Outcome Based Quality Improvement Reports: Technical Documentation of Measures (2003), although titles for each of the 41 Outcome Measures were inserted for ease of reference. The third section provides specifications for each of the 132 Case Mix variables and 13 Adverse Event outcomes. There were only two minor changes in these transformations, both involving including new ICD9 codes in the computation of acute conditions groupings.

The fourth section describes the calculation of risk factor values that comprise the measures that are used for risk adjustment of outcome reports. The number of risk factors considered for inclusion in the measures increased from 149 for the 2002 measures to 329 in the 2006 measures, all derived from the same OASIS items as the 2002 measures. The dramatic increase in risk factors is the result of four general changes from the 2002 measure development methodology. First, two demographics (age and payment method) were categorized differently in the 2006 than in 2002. Second, many new V and E codes were made available in October 2003 as either primary or secondary diagnoses and included in M0230/M0240 in OASIS. Risk factors

were constructed to reflect these additions. Third, for each End Result Outcome, each level of the associated baseline variable was dichotomized. For example, in 2002 the measure for Improvement in Bathing had a single, scale baseline variable "BATHING." However, with this change the 2006 measure for Improvement in Bathing had five baseline variables--one for each level in item M0670--represented as dichotomies ("BATHING\_1", ...."BATHING\_5"). Fourth, when a variable from this group was not the baseline variable for a measure, additional dichotomous variables representing "unknown" or "missing due to skip pattern" conditions were created for possible inclusion in the measure in combination with the scale variable. These measures are used to calculate predicted outcome values using statistical risk models. Detailed descriptions of these measures are included in Appendix C: Documentation of Prediction Models Used for Risk Adjustment of Home Health Agency Outcome Reports, available at <http://www.cms.hhs.gov/HomeHealthQualityInits/downloads/HHQIOASISOBQIAppendixC.pdf>.

**Crosswalk of Variable Label, Item Name,  
Case Mix/Risk Factor Usage, and Computation**

<b>Variable Label</b>	<b>Data Item Name</b>	<b>Case Mix?</b>	<b>Risk Factor?</b>	<b>Page #</b>
Acute orthopedic condition	ACUTE_1	Yes	Yes	66
Acute urinary incont./catheter	ACUTE_10	Yes	Yes	68
Acute mental/emotional condition	ACUTE_11	Yes	Yes	68
Oxygen therapy	ACUTE_12	Yes	Yes	68
IV/infusion therapy	ACUTE_13	Yes	Yes	69
Enteral/parenteral nutrition	ACUTE_14	Yes	Yes	69
Ventilator	ACUTE_15	Yes	Yes	69
Other acute condition	ACUTE_16	No	Yes <sup>4</sup>	113
Acute neurologic condition	ACUTE_2	Yes	Yes	66
Acute open wounds/lesions	ACUTE_3	Yes	Yes	67
Acute terminal condition	ACUTE_4	Yes	Yes	67
Acute cardiac/peripheral vascular condition	ACUTE_5	Yes	Yes	67
Acute pulmonary condition	ACUTE_6	Yes	Yes	67
Acute diabetes mellitus	ACUTE_7	Yes	Yes	67
Acute gastrointestinal disorder	ACUTE_8	Yes	Yes	67
Acute contagious/communicable disease	ACUTE_9	Yes	Yes	67
Age	AGE	Yes	No	46
Age less than 65	AGE_LT65	No	Yes	98
Age between 65 and 74 inclusive	AGE_65_74	No	Yes	98
Age between 75 and 84 inclusive	AGE_75_84	No	Yes	98
Age greater than or equal to 85	AGE_GE85	No	Yes	98
Ambulation at SOC	AMBULATION	Yes	Yes <sup>2</sup>	54
Ambulation, level 2	AMBULATION_2	No	Yes <sup>3</sup>	120
Ambulation, level 3	AMBULATION_3	No	Yes <sup>3</sup>	120
Ambulation, level 4	AMBULATION_4	No	Yes <sup>3</sup>	120
Ambulation, level 5	AMBULATION_5	No	Yes <sup>3</sup>	120
Anxiety Level Severe (CM)	ANXIETY	Yes	No	63
Anxiety Level (RF)	ANXIETYLEVEL	No	Yes <sup>2</sup>	116
Anxiety Level, level 1	ANXIETYLEVEL_1	No	Yes <sup>3</sup>	117
Anxiety Level, level 2	ANXIETYLEVEL_2	No	Yes <sup>3</sup>	117
Anxiety Level, level 3	ANXIETYLEVEL_3	No	Yes <sup>3</sup>	117
Diagnosis: Infectious/parasitic diseases (CM)	DIAG1	Yes <sup>1</sup>	No	78
Diagnosis: Infectious/parasitic diseases (RF)	ANYDIAG_1	No	Yes <sup>1</sup>	104



<b>Variable Label</b>	<b>Data Item Name</b>	<b>Case Mix?</b>	<b>Risk Factor?</b>	<b>Page #</b>
Diagnosis: Genitourinary sys. Diseases (CM)	DIAG_10	Yes <sup>1</sup>	No	79
Diagnosis: Genitourinary sys. Diseases (RF)	ANYDIAG_10	No	Yes <sup>1</sup>	107
Diagnosis: Pregnancy problems (CM)	DIAG_11	Yes <sup>1</sup>	No	79
Diagnosis: Pregnancy problems (RF)	ANYDIAG_11	No	Yes <sup>1</sup>	108
Diagnosis: Skin/subcutaneous diseases (CM)	DIAG_12	Yes <sup>1</sup>	No	79
Diagnosis: Skin/subcutaneous diseases (RF)	ANYDIAG_12	No	Yes <sup>1</sup>	108
Diagnosis: Musculoskeletal sys. Diseases (CM)	DIAG_13	Yes <sup>1</sup>	No	80
Diagnosis: Musculoskeletal sys. Diseases (RF)	ANYDIAG_13	No	Yes <sup>1</sup>	108
Diagnosis: Congenital anomalies (CM)	DIAG_14	Yes <sup>1</sup>	No	80
Diagnosis: Congenital anomalies (RF)	ANYDIAG_14	No	Yes <sup>1</sup>	109
Diagnosis: Ill-defined conditions (CM)	DIAG_15	Yes <sup>1</sup>	No	80
Diagnosis: Ill-defined conditions (RF)	ANYDIAG_15	No	Yes <sup>1</sup>	109
Diagnosis: Fractures (CM)	DIAG_16	Yes <sup>1</sup>	No	80
Diagnosis: Fractures (RF)	ANYDIAG_16	No	Yes <sup>1</sup>	109
Diagnosis: Intracranial injury (CM)	DIAG_17	Yes <sup>1</sup>	No	80
Diagnosis: Intracranial injury (RF)	ANYDIAG_17	No	Yes <sup>1</sup>	109
Diagnosis: Other injury (CM)	DIAG_18	Yes <sup>1</sup>	No	80
Diagnosis: Other injury (RF)	ANYDIAG_18	No	Yes <sup>1</sup>	110
Diagnosis: Iatrogenic conditions	DIAG_19	Yes	No	80
Diagnosis: Neoplasms (CM)	DIAG_2	Yes <sup>1</sup>	No	78
Diagnosis: Neoplasms (RF)	ANYDIAG_2	No	Yes <sup>1</sup>	105
Diagnosis: Endocrine/nutrit./metabolic (CM)	DIAG_3	Yes <sup>1</sup>	No	79
Diagnosis: Endocrine/nutrit./metabolic (RF)	ANYDIAG_3	No	Yes <sup>1</sup>	105
Diagnosis: Blood diseases (CM)	DIAG_4	Yes <sup>1</sup>	No	79
Diagnosis: Blood diseases (RF)	ANYDIAG_4	No	Yes <sup>1</sup>	105
Diagnosis: Mental diseases (CM)	DIAG_5	Yes <sup>1</sup>	No	79
Diagnosis: Mental diseases (RF)	ANYDIAG_5	No	Yes <sup>1</sup>	106

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Diagnosis: Nervous system diseases (CM)	DIAG_6	Yes <sup>1</sup>	No	79
Diagnosis: Nervous system diseases (RF)	ANYDIAG_6	No	Yes <sup>1</sup>	106
Diagnosis: Circulatory system diseases (CM)	DIAG_7	Yes <sup>1</sup>	No	79
Diagnosis: Circulatory system diseases (RF)	ANYDIAG_7	No	Yes <sup>1</sup>	106
Diagnosis: Respiratory system diseases (CM)	DIAG_8	Yes <sup>1</sup>	No	79
Diagnosis: Respiratory system diseases (RF)	ANYDIAG_8	No	Yes <sup>1</sup>	107
Diagnosis: Digestive system diseases (CM)	DIAG_9	Yes <sup>1</sup>	No	79
Diagnosis: Digestive system diseases (RF)	ANYDIAG_9	No	Yes <sup>1</sup>	107
Presence of a primary caregiver	ANYPRIMARY	No	Yes	100
Primary caregiver, skip pattern	ANYPRIMARY_SK	No	Yes	100
Primary caregiver, unknown	ANYPRIMARY_UK	No	Yes	100
Number of acute condition	AQUIGN	No	Yes	114
Bathing at SOC	BATHING	Yes	Yes <sup>2</sup>	53
Bathing, level 1	BATHING_1	No	Yes <sup>3</sup>	119
Bathing, level 2	BATHING_2	No	Yes <sup>3</sup>	119
Bathing, level 3	BATHING_3	No	Yes <sup>3</sup>	119
Bathing, level 4	BATHING_4	No	Yes <sup>3</sup>	119
Bathing, level 5	BATHING_5	No	Yes <sup>3</sup>	119
Memory deficit	BEHAVE_1	No	Yes	114
Impaired decision-making	BEHAVE_2	No	Yes	114
Verbal disruption	BEHAVE_3	No	Yes	114
Inappropriate behavior	BEHAVE_4	No	Yes	114
Behavior probs > twice weekly	BEHBROB	Yes	No	63
Bowel incontinence (CM)	BOWEL	Yes <sup>1</sup>	No	65
Bowel incontinence (RF)	BOWEL_OUT	No	Yes <sup>2</sup>	117
Bowel incont. Level 2	BOWEL_OUT_2	No	Yes <sup>3</sup>	117
Bowel incont. Level 3	BOWEL_OUT_3	No	Yes <sup>3</sup>	117
Bowel incont. Level 4	BOWEL_OUT_4	No	Yes <sup>3</sup>	117
Bowel incont. Level 5	BOWEL_OUT_5	No	Yes <sup>3</sup>	117
Bowel incont. Unknown	BOWEL_OUT_UK	No	Yes <sup>2</sup>	117
Spouse/Significant other	CARE_1	Yes	No	49
Daughter/Son	CARE_2	Yes	No	49
Paid help	CARE_3	Yes	No	49
No one person	CARE_4	Yes	No	49
ADL Assistance	CAREGIVER_1	No	Yes	98
IADL Assistance	CAREGIVER_2	No	Yes	98

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Caregiver Assistance Unknown	CAREGIVER_UK	No	Yes	99
Caregiver Assistance, skip pattern	CAREGIVER_SK	No	Yes	99
Urinary catheter	CATHETER	Yes	Yes	64
Chronic dependence in living skills	CHRONIC_1	Yes	Yes	70
Chronic dependence in personal care	CHRONIC_2	Yes	Yes	71
Chronic impaired ambulation/mobility	CHRONIC_3	Yes	Yes	71
Chronic eating disability	CHRONIC_4	Yes	Yes	71
Chronic urinary incontinence/catheter	CHRONIC_5	Yes	Yes	68
Chronic dependence in med. admin.	CHRONIC_6	Yes	Yes	71
Chronic pain	CHRONIC_7	Yes	Yes	68
Chronic cognitive/mental/behavioral condition	CHRONIC_8	Yes	Yes	68
Chronic pt. with caregiver	CHRONIC_9	Yes	Yes	72
Cognitive moderate disability (CM)	COGNITIVE	Yes	No	62
Cognitive functioning	COGNITIVEFUNC	No	Yes <sup>2</sup>	115
Cognitive functioning, level 1	COGNITIVEFUNC_1	No	Yes <sup>3</sup>	115
Cognitive functioning, level 2	COGNITIVEFUNC_2	No	Yes <sup>3</sup>	115
Cognitive functioning, level 3	COGNITIVEFUNC_3	No	Yes <sup>3</sup>	115
Cognitive functioning, level 4	COGNITIVEFUNC_4	No	Yes <sup>3</sup>	115
Confusion severe disability (CM)	CONFUSION	Yes	No	62
Confusion frequency	CONFUSIONFREQ	No	Yes <sup>2</sup>	116
Confusion frequency, level 2	CONFUSIONFREQ_2	No	Yes <sup>3</sup>	116
Confusion frequency, level 3	CONFUSIONFREQ_3	No	Yes <sup>3</sup>	116
Confusion frequency, level 4	CONFUSIONFREQ_4	No	Yes <sup>3</sup>	116
Number of chronic conditions	CQUIGN	No	Yes	114
Depression scale	DEPRESSION	No	Yes	116
Dual payment (Medicare/Medicaid)	DUALPAY	No	Yes	98
Dyspnea	DYSPNEA	Yes	Yes <sup>2</sup>	60
Dyspnea, level 2	DYSPNEA_2	No	Yes <sup>3</sup>	119
Dyspnea, level 3	DYSPNEA_3	No	Yes <sup>3</sup>	119
Dyspnea, level 4	DYSPNEA_4	No	Yes <sup>3</sup>	119
Unspecified Fall	E888	No	Yes	132
Eating at SOC	EATING	Yes	Yes <sup>2</sup>	54
Eating, level 2	EATING_2	No	Yes <sup>3</sup>	120
Eating, level 3	EATING_3	No	Yes <sup>3</sup>	120
Eating, level 4	EATING_4	No	Yes <sup>3</sup>	120

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Eating, level 5	EATING_5	No	Yes <sup>3</sup>	120
Freq. of assistance (CM)	FREQASST	Yes	No	50
Freq. of assistance (RF)	FREQASST_OUT	No	Yes	100
Freq. of assistance, skip pattern	FREQASST_SK	No	Yes	100
Freq. of assistance, unknown	FREQASST_UK	No	Yes	100
Gender	GENDER	Yes	Yes	46
Grooming at SOC	GROOMING	Yes	Yes <sup>2</sup>	52
Grooming, level 1	GROOMING_1	No	Yes <sup>3</sup>	120
Grooming, level 2	GROOMING_2	No	Yes <sup>3</sup>	120
Grooming, level 3	GROOMING_3	No	Yes <sup>3</sup>	120
Hearing impairment	HEARING	Yes	Yes	61
Person residing in home	HELP_1	Yes	No	49
Person residing outside home	HELP_2	Yes	No	49
With paid help	HELP_3	Yes	No	49
Housekeeping at SOC	HOUSEKEEPING	Yes	Yes <sup>2</sup>	58
Housekeeping, level 1	HOUSEKEEPING_1	No	Yes <sup>3</sup>	122
Housekeeping, level 2	HOUSEKEEPING_2	No	Yes <sup>3</sup>	122
Housekeeping, level 3	HOUSEKEEPING_3	No	Yes <sup>3</sup>	122
Housekeeping, level 4	HOUSEKEEPING_4	No	Yes <sup>3</sup>	122
Incontinent day and night	INCONT	Yes	Yes	64
Baseline urinary incontinence	INCONTBASE	No	Yes <sup>2</sup>	118
Baseline urinary incontinence, level 2	INCONTBASE_2	No	Yes <sup>3</sup>	118
Baseline urinary incontinence, level 3	INCONTBASE_3	No	Yes <sup>3</sup>	118
Baseline urinary incontinence, level 4	INCONTBASE_4	No	Yes <sup>3</sup>	118
Incontinent	INCONTCATH	No	Yes	118
Urinary incontinence severity scale	INCONTSEV	No	Yes	118
Inpt. Discharge from hospital	INPT_1	Yes	Yes	50
Inpt. Discharge from rehab facility	INPT_2	Yes	Yes	50
Inpt. Discharge from nursing home	INPT_3	Yes	Yes	50
Intractable pain	INTPAIN	Yes	Yes	62
IV/Infusion therapy	IVTHER_1	Yes	No	61
Parenteral nutrition	IVTHER_2	Yes	No	61
Enteral nutrition	IVTHER_3	Yes	No	61
Laundry at SOC	LAUNDRY	Yes	Yes <sup>2</sup>	57
Laundry, level 1	LAUNDRY_1	No	Yes <sup>3</sup>	122
Laundry, level 2	LAUNDRY_2	No	Yes <sup>3</sup>	122
Patient lives alone	LIVE_1	Yes	Yes	48
Patient lives with family member	LIVE_2	Yes	Yes	48

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Patient lives with friend	LIVE_3	Yes	No	48
Patient lives with paid help	LIVE_4	Yes	No	48
LOS (average in days)	LOS_DAYS	Yes	No	82
LOS more than 124 days	LOS_4MO	Yes	No	82
LOS from 1 to 31 days	LOS_1MO	Yes	No	82
LOS from 32 to 62 days	LOS_2MO	Yes	No	82
LOS from 63 to 124 days	LOS_3MO	Yes	No	82
Dress lower body at SOC	LOWERDRESS	Yes	Yes <sup>2</sup>	52
Dress lower body, level 2	LOWERDRESS_2	Yes	Yes <sup>3</sup>	121
Dress lower body, level 3	LOWERDRESS_3	Yes	Yes <sup>3</sup>	121
Maximum diagnosis severity rating	MAXIMUMSEV	No	Yes	103
Medicaid only	MDCDONLY	No	Yes	98
Light meal prep at SOC	MEALPREP	Yes	Yes <sup>2</sup>	57
Light meal prep, level 1	MEALPREP_1	No	Yes <sup>3</sup>	122
Light meal prep, level 2	MEALPREP_2	No	Yes <sup>3</sup>	122
Medical regimen change	MEDREG	Yes	Yes	51
Patient has unpaid live-in help	NEWASSIST	No	Yes	101
Patient help unknown	NEWASSIST_UK	No	Yes	101
Mgmt. Oral meds (CM)	ORALMEDS	Yes	No	58
Mgmt. Oral meds (RF)	ORALMEDS_OUT	No	Yes <sup>2</sup>	122
Mgmt. Oral meds NA	ORALMEDS_OUTNA	No	Yes <sup>2</sup>	122
Mgmt. Oral meds level 1	ORALMEDS_OUT_1	No	Yes <sup>3</sup>	122
Mgmt. Oral meds level 2	ORALMEDS_OUT_2	No	Yes <sup>3</sup>	122
Patient has ostomy	OSTOMY	No	Yes	119
Ambulation prior to SOC (CM)	P_AMBULATION;	Yes <sup>1</sup>	No	56
Ambulation prior to SOC (RF)	P_AMBULATION_OUT	No	Yes <sup>1</sup>	121
Bathing prior to SOC (CM)	P_BATHING	Yes <sup>1</sup>	No	55
Bathing prior to SOC (RF)	P_BATHING_OUT	No	Yes <sup>1</sup>	121
Eating prior to SOC (CM)	P_EATING	Yes <sup>1</sup>	No	57
Eating prior to SOC (RF)	P_EATING_OUT	No	Yes <sup>1</sup>	121
Grooming prior to SOC (CM)	P_GROOMING	Yes <sup>1</sup>	No	54
Grooming prior to SOC (RF)	P_GROOMING_OUT	No	Yes <sup>1</sup>	121
Housekeeping prior to SOC (CM)	P_HOUSEKEEPING	Yes <sup>1</sup>	No	59
Housekeeping prior to SOC (RF)	P_HOUSEKEEPING_OUT	No	Yes <sup>1</sup>	123
Laundry prior to SOC (CM)	P_LAUNDRY	Yes <sup>1</sup>	No	59
Laundry prior to SOC (RF)	P_LAUNDRY_OUT	No	Yes <sup>1</sup>	123
Dress lower body prior to SOC (CM)	P_LOWERDRESS	Yes <sup>1</sup>	No	55
Dress lower body prior to SOC (RF)	P_LOWERDRESS_OUT	No	Yes <sup>1</sup>	121
Light meal prep prior to SOC (CM)	P_MEALPREP	Yes <sup>1</sup>	No	59

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Light meal prep prior to SOC (RF)	P_MEALPREP_OUT	No	Yes <sup>1</sup>	123
Mgmt. Oral meds prior to SOC (CM)	P_ORALMEDS	Yes <sup>1</sup>	No	60
Mgmt. Oral meds prior to SOC (RF)	P_ORALMEDS_OUT	No	Yes <sup>1</sup>	123
Mgmt. Oral meds prior, NA	P_ORALMEDS_OUTNA	No	Yes	123
Phone use prior to SOC (CM)	P_PHONEUSE	Yes <sup>1</sup>	No	60
Phone use prior to SOC (RF)	P_PHONEUSE_OUT	No	Yes <sup>1</sup>	124
Phone use prior, NA	P_PHONEUSE_OUTNA	No	Yes <sup>1</sup>	124
Shopping prior to SOC (CM)	P_SHOPPING	Yes <sup>1</sup>	No	60
Shopping prior to SOC (RF)	P_SHOPPING_OUT	No	Yes <sup>1</sup>	124
Toileting prior to SOC (CM)	P_TOILETING	Yes <sup>1</sup>	No	56
Toileting prior to SOC (RF)	P_TOILETING_OUT	No	Yes <sup>1</sup>	121
Transferring prior to SOC (CM)	P_TRANSFERRING	Yes <sup>1</sup>	No	56
Transferring prior to SOC (RF)	P_TRANSFERRING_OUT	No	Yes <sup>1</sup>	121
Transportation prior to SOC (CM)	P_TRANSPORT	Yes <sup>1</sup>	No	59
Transportation prior to SOC (RF)	P_TRANSPORT_OUT	No	Yes <sup>1</sup>	121
Dress upper body prior to SOC (CM)	P_UPPERDRESS	Yes <sup>1</sup>	No	55
Dress upper body prior to SOC (RF)	P_UPPERDRESS_OUT	No	Yes <sup>1</sup>	121
Pain interfer. w/activity	PAIN	Yes	Yes <sup>2</sup>	62
Pain, level 2	PAIN_2	No	Yes <sup>3</sup>	129
Pain, level 3	PAIN_3	No	Yes <sup>3</sup>	129
Any Medicare payment source	PAY_1	Yes	Yes	47
Any Medicaid	PAY_2	Yes	No	47
Any HMO	PAY_3	Yes	Yes	47
Medicare HMO	PAY_4	Yes	No	47
Private third party	PAY_5	Yes	No	47
Phone use	PHONEUSE	Yes	No	58
Phone use at SOC	PHONEUSE_OUT	No	Yes <sup>2</sup>	122
Phone use level 1	PHONEUSE_OUT_1	No	Yes <sup>3</sup>	123
Phone use level 2	PHONEUSE_OUT_2	No	Yes <sup>3</sup>	123
Phone use level 3	PHONEUSE_OUT_3	No	Yes <sup>3</sup>	123
Phone use level 4	PHONEUSE_OUT_4	No	Yes <sup>3</sup>	123
Phone use level 5	PHONEUSE_OUT_5	No	Yes <sup>3</sup>	123
Phone use, not applicable	PHONEUSE_NA	No	Yes <sup>2</sup>	122
Pressure ulcer(s) present	PRESSURE	Yes	Yes	64
Status of pressure ulcer	PRESSURESTATUS	No	Yes	129
Status of pressure ulcer NA	PRESSURESTATUS_NA	No	Yes	129
Stage of most problematic pressure ulcer	PRESSUREULCER	No	Yes	129

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Stage of most prob. pressure ulcer NA	PRESSUREULCER_NA	No	Yes	130
Prior condition: Urinary incontinence	PRIOR_1	No	Yes	124
Prior condition: Catheter	PRIOR_2	No	Yes	124
Prior condition: Intractable pain	PRIOR_3	No	Yes	124
Prior condition: Impaired decision-making	PRIOR_4	No	Yes	124
Prior condition: Inappropriate behavior	PRIOR_5	No	Yes	124
Prior condition: Memory loss	PRIOR_6	No	Yes	124
Prior condition: Unknown	PRIOR_UK	No	Yes	125
Frequency of behavior problems	PROBFREQ	No	Yes <sup>2</sup>	117
Frequency of behavior problems, level 2	PROBFREQ_2	No	Yes <sup>3</sup>	117
Frequency of behavior problems, level 3	PROBFREQ_3	No	Yes <sup>3</sup>	117
Frequency of behavior problems, level 4	PROBFREQ_4	No	Yes <sup>3</sup>	117
Frequency of behavior problems, level 5	PROBFREQ_5	No	Yes <sup>3</sup>	117
Moderate recovery prognosis (CM)	PROG	Yes <sup>1</sup>	No	51
Moderate recovery prognosis (RF)	PROGRF	No	Yes <sup>1</sup>	126
Recovery prognosis unknown	PROGUK	No	Yes <sup>1</sup>	126
Race: Black	RACE_1	Yes	No	46
Race: White	RACE_2	Yes	No	46
Race: Other	RACE_3	Yes	No	46
Good rehab prognosis (CM)	REHAB	Yes <sup>1</sup>	No	52
Good rehab prognosis (RF)	REHABRF	No	Yes <sup>1</sup>	127
Rehab prognosis unknown	REHABUK	No	Yes <sup>1</sup>	127
Patient resides in own home	RESIDE_1	Yes	Yes	48
Resides in family member home	RESIDE_2	Yes	No	48
Risk factor: Smoking	RISK_1	No	Yes	127
Risk factor: Obesity	RISK_2	No	Yes	127
Risk factor: Alcohol	RISK_3	No	Yes	127
Risk factor: Drugs	RISK_4	No	Yes	127
Risk factor: Unknown	RISK_UK	No	Yes	128
Intervening inpatient care	ROCIND	No	Yes	128
Severity rating of primary diagnosis	SEVERITY	No	Yes	103
Number of severity ratings >= 2	SEVERITY2	No	Yes	103
Shopping at SOC	SHOPPING	Yes	Yes <sup>2</sup>	58
Shopping, level 1	SHOPPING_1	No	Yes <sup>3</sup>	123

Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Shopping, level 2	SHOPPING_2	No	Yes <sup>3</sup>	123
Shopping, level 3	SHOPPING_3	No	Yes <sup>3</sup>	123
Speech/language	SPEECH	Yes	Yes <sup>2</sup>	62
Speech, level 1	SPEECH_1	No	Yes <sup>3</sup>	129
Speech, level 2	SPEECH_2	No	Yes <sup>3</sup>	129
Speech, level 3	SPEECH_3	No	Yes <sup>3</sup>	129
Speech, level 4	SPEECH_4	No	Yes <sup>3</sup>	129
Speech, level 5	SPEECH_5	No	Yes <sup>3</sup>	129
Stasis ulcer(s) present	STASIS	Yes	Yes	63
Status of pressure ulcer	STASISSTATUS	No	Yes	130
Status of pressure ulcer, NA	STASISSTATUS_NA	No	Yes	130
Number of stasis ulcers	STASISULCER	No	Yes	130
Surgical wound(s) present	SURGICAL	Yes	Yes	63
Status of surgical wound	SURGICALSTATUS	No	Yes <sup>2</sup>	131
Status of surgical wound NA	SURGICALSTATUS_NA	No	Yes <sup>2</sup>	131
Status of surgical wound, level 2	SURGICALSTATUS_2	No	Yes <sup>3</sup>	131
Status of surgical wound, level 3	SURGICALSTATUS_3	No	Yes <sup>3</sup>	131
Number of surgical wounds	SURGICALWOUND	No	Yes <sup>2</sup>	131
Number of surgical wounds, 2	SURGICALWOUND_2	No	Yes <sup>3</sup>	132
Number of surgical wounds, 3	SURGICALWOUND_3	No	Yes <sup>3</sup>	132
Number of surgical wounds, 4 or more	SURGICALWOUND_4	No	Yes <sup>3</sup>	132
Toileting at SOC	TOILETING	Yes	Yes <sup>2</sup>	53
Toileting, level 2	TOILETING_2	No	Yes <sup>3</sup>	120
Toileting, level 3	TOILETING_3	No	Yes <sup>3</sup>	120
Toileting, level 4	TOILETING_4	No	Yes <sup>3</sup>	120
Transferring at SOC	TRANSFERRING	Yes	Yes <sup>2</sup>	53
Transferring, level 1	TRANSFERRING_1	No	Yes <sup>3</sup>	120
Transferring, level 2	TRANSFERRING_2	No	Yes <sup>3</sup>	120
Transferring, level 3	TRANSFERRING_3	No	Yes <sup>3</sup>	120
Transferring, level 4	TRANSFERRING_4	No	Yes <sup>3</sup>	120
Transferring, level 5	TRANSFERRING_5	No	Yes <sup>3</sup>	120
Transportation at SOC	TRANSPORT	Yes	Yes	57
Stage 2-4 ulcer(s) present	ULC_1	Yes	Yes	63
Stage 3-4 ulcer(s) present	ULC_2	Yes	Yes	63
Dress upper body at SOC	UPPERDRESS	Yes	Yes <sup>2</sup>	52
Dress upper body, level 2	UPPERDRESS_2	No	Yes <sup>3</sup>	120
Dress upper body, level 3	UPPERDRESS_3	No	Yes <sup>3</sup>	120
Urinary incontinence (CM)	URINARY	Yes	No	64
UTI within past 14 days (CM)	UTI	Yes <sup>1</sup>	No	64
UTI within past 14 days (RF)	UTI_OUT	No	Yes <sup>1</sup>	119
UTI unknown	UTI_OUT_UK	No	Yes <sup>1</sup>	119
Rehabilitation procedures: Other, not PT	V571	No	Yes	132



Variable Label	Data Item Name	Case Mix?	Risk Factor?	Page #
Infection with microorganism resistant to penicillins	V09	No	Yes	133
Rehabilitation procedures: Other PT	V57	No	Yes	133
Aftercare following surgery	V58	No	Yes	133
Aftercare following hip, joint replacement or fracture	V54	No	Yes	133
Long term use of therapeutic pharmaceuticals	V586	No	Yes	133
Attention to artificial openings: Gastro, Colostomy	V55	No	Yes	133
Attention to artificial openings: Urinary	V53	No	Yes	133
Vision impairment	VISION	Yes	Yes	61
Presence of wound/lesion	WOUND	Yes	No	63

<sup>1</sup> "Yes" means that the computation for this value as a Case Mix (*CM*) variable differs from the computation for this value as a risk factor (*RF*). The computation as a Case Mix variable does not include any adjustment for missing data, while the computation as a Risk Factor variable includes substitution of a "0" when the value is missing.

<sup>2</sup> "Yes" means that this is the risk factor used in measures where the variable is not the baseline for the measure, e.g., "GROOMING" is used for "IMP\_BATHING" or "STAB\_BATHING".

<sup>3</sup> "Yes" means that this risk factor is used when the variable is the baseline for the measure, e.g., "GROOMING\_1" is used for "IMP\_GROOMING" or "STAB\_GROOMING".

<sup>4</sup> "Yes" means that this item is used in the computation of another risk factor, but is not used as a risk factor itself.

# OUTCOME MEASURE TRANSFORMATION SPECIFICATIONS

This document includes pseudo-code for transformation of raw OASIS data into the measures that will appear on the Outcome Report.

## Assumptions and Conventions

- The following transformations result in data items with numeric values. A code of 'MISSING' indicates that the data item should be given a null value and be excluded from analyses. Where the phrase '**[SHOULD NEVER OCCUR]**' appears, it indicates that the data submitted do not meet the published data specifications, and, in addition to excluding the case from the calculation of summary statistics for that particular measure, the entire case should be considered for exclusion from the analyses.
- Assessments must have already been matched, i.e., first time point of SOC/ROC (RFA = 01, 02, 03) with second time point of Transfer/DC (RFA = 06, 07, 08, 09) before these transformations are applied.
- As field names are the same across assessment types, presence of [2] at the end of a field name indicates that this data item is taken from the second time point. For example, M0100\_ASSMT\_REASON refers to the 'Reason for Assessment' item at the first time point. M0640\_CUR\_GROOMING[2] refers to the 'Ability to Groom Oneself' item at the second time point. Although some data items are collected at only one of the two time-points, the [2] convention is used for all items to avoid confusion and possible misinterpretation. Note, however, that for all Case Mix measures except those related to length of stay, data from the second time point are not used.
- Where multiple values can result in the same transformation, a comma is used in place of a logical 'OR', e.g., IF ITEM1 = 0,1 is the equivalent of IF ITEM1 = 0 OR ITEM1 = 1.

## Outcome Measures

Throughout the remainder of this document, the measures for inclusion in the Outcome Report that are computed using OASIS data are referred to as follows (critical measures must have valid data for a case to be included in analyses):

### END RESULT OUTCOMES

Improvement in Grooming	IMP_GROOMING
Stabilization in Grooming	STAB_GROOMING
Improvement in Upper Body Dressing	IMP_UPPERDRESS
Improvement in Lower Body Dressing	IMP_LOWERDRESS
Improvement in Bathing	IMP_BATHING
Stabilization in Bathing	STAB_BATHING
Improvement in Toileting	IMP_TOILETING
Improvement in Transferring	IMP_TRANSFERRING
Stabilization in Transferring	STAB_TRANSFERRING
Improvement in Ambulation/Locomotion	IMP_AMBULATION

Improvement in Eating	IMP_EATING
Improvement in Light Meal Preparation	IMP_LIGHTMEAL
Stabilization in Light Meal Preparation	STAB_LIGHTMEAL
Improvement in Laundry	IMP_LAUNDRY
Stabilization in Laundry	STAB_LAUNDRY
Improvement in Housekeeping	IMP_HOUSEKEEP
Stabilization in Housekeeping	STAB_HOUSEKEEP
Improvement in Shopping	IMP_SHOPPING
Stabilization in Shopping	STAB_SHOPPING
Improvement in Phone Use	IMP_PHONE
Stabilization in Phone Use	STAB_PHONE
Improvement in Management of Oral Medications	IMP_ORALMEDS
Stabilization in Management of Oral Medications	STAB_ORALMEDS
Improvement in Speech and Language	IMP_SPEECH
Stabilization in Speech and Language	STAB_SPEECH
Improvement in Pain Interfering with Activity	IMP_PAIN
Improvement in Number of Surgical Wounds	IMP_NUMBERWOUNDS
Improvement in Status of Surgical Wounds	IMP_STATUSWOUNDS
Improvement in Dyspnea	IMP_DYSPNEA
Improvement in Urinary Tract Infection	IMP_UTI
Improvement in Urinary Incontinence	IMP_INCONT
Improvement in Bowel Incontinence	IMP_BOWELINCONT
Improvement in Cognitive Functioning	IMP_COGNITIVE
Stabilization in Cognitive Functioning	STAB_COGNITIVE
Improvement in Confusion Frequency	IMP_CONFUSION
Improvement in Anxiety Level	IMP_ANXIETY
Stabilization in Anxiety Level	STAB_ANXIETY
Improvement in Behavior Problem Frequency	IMP_BEHAVIOR

## **UTILIZATION OUTCOMES**

Any Emergent Care	UTIL_EMERGENT
Discharged to Community	UTIL_DCCOMM
Acute Care Hospitalization	UTIL_HOSP

**END RESULT OUTCOME MEASURES DATA TRANSFORMATION PSEUDO-CODE**

**(NOTE: *Italicized text is not part of code*)**

**(NOTE THAT END RESULT OUTCOMES ARE NOT COMPUTED FOR PATIENTS WHO WERE TRANSFERRED TO INPATIENT FACILITY [RFA = 06, 07] OR FOR PATIENTS WHO DIED [RFA = 08]).**

**Improvement in Grooming / Stabilization in Grooming**

**IF M0100\_ASSMT\_REASON[2] = 09  
THEN**

**IF M0640\_CUR\_GROOMING NOT = 00, 01, 02, 03 OR  
M0640\_CUR\_GROOMING[2] NOT = 00, 01, 02, 03**

**THEN**

**IMP\_GROOMING = MISSING**

**STAB\_GROOMING = MISSING**

**'[SHOULD NEVER OCCUR]**

**ELSE IF (M0640\_CUR\_GROOMING = 01 AND M0640\_CUR\_GROOMING[2] = 00) OR**

**(M0640\_CUR\_GROOMING = 02 AND M0640\_CUR\_GROOMING[2] = 00, 01) OR  
(M0640\_CUR\_GROOMING = 03 AND M0640\_CUR\_GROOMING[2] = 00, 01, 02)**

**THEN IMP\_GROOMING = 1**

**ELSE IF (M0640\_CUR\_GROOMING = 01 AND M0640\_CUR\_GROOMING[2] = 01, 02, 03) OR**

**(M0640\_CUR\_GROOMING = 02 AND M0640\_CUR\_GROOMING[2] = 02, 03) OR  
(M0640\_CUR\_GROOMING = 03 AND M0640\_CUR\_GROOMING[2] = 03)**

**THEN IMP\_GROOMING = 0**

**ELSE IF M0640\_CUR\_GROOMING = 00**

**THEN IMP\_GROOMING = MISSING**

**ELSE IF (M0640\_CUR\_GROOMING = 00 AND M0640\_CUR\_GROOMING[2] = 00) OR**

**(M0640\_CUR\_GROOMING = 01 AND M0640\_CUR\_GROOMING[2] = 00, 01) OR**

**(M0640\_CUR\_GROOMING = 02 AND M0640\_CUR\_GROOMING[2] = 00, 01, 02)**

**THEN STAB\_GROOMING = 1**

ELSE IF (M0640\_CUR\_GROOMING = 00 AND M0640\_CUR\_GROOMING[2] = 01, 02, 03) OR  
(M0640\_CUR\_GROOMING = 01 AND M0640\_CUR\_GROOMING[2] = 02, 03) OR  
(M0640\_CUR\_GROOMING = 02 AND M0640\_CUR\_GROOMING[2] = 03)  
    **THEN** STAB\_GROOMING = 0

**ELSE IF** M0640\_CUR\_GROOMING = 03  
    **THEN** STAB\_GROOMING = MISSING

**Improvement in Upper Body Dressing**

**IF** M0650\_CUR\_DRESS\_UPPER NOT = 00, 01, 02, 03 OR  
M0650\_CUR\_DRESS\_UPPER[2] NOT = 00, 01, 02, 03  
**THEN**  
    IMP\_UPPERDRESS = MISSING                   **'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0650\_CUR\_DRESS\_UPPER = 01 AND  
M0650\_CUR\_DRESS\_UPPER[2] = 00) OR  
  
(M0650\_CUR\_DRESS\_UPPER = 02 AND M0650\_CUR\_DRESS\_UPPER[2] = 00,  
01) OR  
(M0650\_CUR\_DRESS\_UPPER = 03 AND M0650\_CUR\_DRESS\_UPPER[2] = 00,  
01, 02)  
    **THEN** IMP\_UPPERDRESS = 1

**ELSE IF** (M0650\_CUR\_DRESS\_UPPER = 01 AND  
M0650\_CUR\_DRESS\_UPPER[2] = 01, 02, 03) OR  
(M0650\_CUR\_DRESS\_UPPER = 02 AND M0650\_CUR\_DRESS\_UPPER[2] = 02,  
03) OR  
(M0650\_CUR\_DRESS\_UPPER = 03 AND M0650\_CUR\_DRESS\_UPPER[2] = 03)  
    **THEN** IMP\_UPPERDRESS = 0

**ELSE IF** M0650\_CUR\_DRESS\_UPPER = 00  
    **THEN** IMP\_UPPERDRESS = MISSING

**Improvement in Lower Body Dressing**

**IF** M0660\_CUR\_DRESS\_LOWER NOT = 00, 01, 02, 03 OR  
M0660\_CUR\_DRESS\_LOWER[2] NOT = 00, 01, 02, 03  
**THEN**  
    IMP\_LOWERDRESS = MISSING                   **'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0660\_CUR\_DRESS\_LOWER = 01 AND  
M0660\_CUR\_DRESS\_LOWER[2] = 00) OR

(M0660\_CUR\_DRESS\_LOWER = 02 AND M0660\_CUR\_DRESS\_LOWER[2] =  
00, 01) OR

(M0660\_CUR\_DRESS\_LOWER = 03 AND M0660\_CUR\_DRESS\_LOWER[2] =  
00, 01, 02)

**THEN** IMP\_LOWERDRESS = 1

**ELSE IF** (M0660\_CUR\_DRESS\_LOWER = 01 AND  
M0660\_CUR\_DRESS\_LOWER[2] = 01,02,03) OR

(M0660\_CUR\_DRESS\_LOWER = 02 AND M0660\_CUR\_DRESS\_LOWER[2] =  
02, 03) OR

(M0660\_CUR\_DRESS\_LOWER = 03 AND M0660\_CUR\_DRESS\_LOWER[2] =  
03)

**THEN** IMP\_LOWERDRESS = 0

**ELSE IF** M0660\_CUR\_DRESS\_LOWER = 00

**THEN** IMP\_LOWERDRESS = MISSING

**Improvement in Bathing / Stabilization in Bathing**

**IF** M0670\_CUR\_BATHING NOT = 00, 01, 02, 03, 04, 05 OR  
M0670\_CUR\_BATHING[2] NOT = 00, 01, 02, 03, 04, 05

**THEN**

IMP\_BATHING = MISSING

STAB\_BATHING = MISSING

**{[SHOULD NEVER OCCUR]}**

**ELSE IF** (M0670\_CUR\_BATHING = 01 AND M0670\_CUR\_BATHING[2] = 00) OR

(M0670\_CUR\_BATHING = 02 AND M0670\_CUR\_BATHING[2] = 00, 01) OR

(M0670\_CUR\_BATHING = 03 AND M0670\_CUR\_BATHING[2] = 00, 01, 02) OR

(M0670\_CUR\_BATHING = 04 AND M0670\_CUR\_BATHING[2] = 00, 01, 02, 03)

OR

(M0670\_CUR\_BATHING = 05 AND M0670\_CUR\_BATHING[2] = 00, 01, 02, 03,  
04)

**THEN** IMP\_BATHING = 1

**ELSE IF** (M0670\_CUR\_BATHING = 01 AND M0670\_CUR\_BATHING[2] = 01, 02,  
03, 04, 05) OR (M0670\_CUR\_BATHING = 02 AND M0670\_CUR\_BATHING[2] =  
02, 03, 04, 05) OR

(M0670\_CUR\_BATHING = 03 AND M0670\_CUR\_BATHING[2] = 03, 04, 05) OR

(M0670\_CUR\_BATHING = 04 AND M0670\_CUR\_BATHING[2] = 04, 05) OR

(M0670\_CUR\_BATHING = 05 AND M0670\_CUR\_BATHING[2] = 05)

**THEN** IMP\_BATHING = 0

**ELSE IF** M0670\_CUR\_BATHING = 00

**THEN** IMP\_BATHING = MISSING

**ELSE IF** (M0670\_CUR\_BATHING = 00 AND M0670\_CUR\_BATHING[2] = 00) OR

(M0670\_CUR\_BATHING = 01 AND M0670\_CUR\_BATHING[2] = 00, 01) OR

(M0670\_CUR\_BATHING = 02 AND M0670\_CUR\_BATHING[2] = 00, 01, 02) OR  
(M0670\_CUR\_BATHING = 03 AND M0670\_CUR\_BATHING[2] = 00, 01, 02, 03)  
OR  
(M0670\_CUR\_BATHING = 04 AND M0670\_CUR\_BATHING[2] = 00, 01, 02, 03,  
04)  
**THEN** STAB\_BATHING = 1

**ELSE IF** (M0670\_CUR\_BATHING = 00 AND M0670\_CUR\_BATHING[2] = 01, 02,  
03, 04, 05) OR

(M0670\_CUR\_BATHING = 01 AND M0670\_CUR\_BATHING[2] = 02, 03, 04, 05)  
OR  
(M0670\_CUR\_BATHING = 02 AND M0670\_CUR\_BATHING[2] = 03, 04, 05) OR  
(M0670\_CUR\_BATHING = 03 AND M0670\_CUR\_BATHING[2] = 04, 05) OR  
(M0670\_CUR\_BATHING = 04 AND M0670\_CUR\_BATHING[2] = 05)  
**THEN** STAB\_BATHING = 0

**ELSE IF** M0670\_CUR\_BATHING = 05  
**THEN** STAB\_BATHING = MISSING

**Improvement in Toileting**

**IF** M0680\_CUR\_TOILETING NOT = 00, 01, 02, 03, 04 OR  
M0680\_CUR\_TOILETING[2] NOT = 00, 01, 02, 03, 04  
**THEN**  
IMP\_TOILETING = MISSING **{[SHOULD NEVER OCCUR]}**

**ELSE IF** (M0680\_CUR\_TOILETING = 01 AND M0680\_CUR\_TOILETING[2] = 00)  
OR

(M0680\_CUR\_TOILETING = 02 AND M0680\_CUR\_TOILETING[2] = 00, 01) OR  
(M0680\_CUR\_TOILETING = 03 AND M0680\_CUR\_TOILETING[2] = 00, 01, 02)  
OR  
(M0680\_CUR\_TOILETING = 04 AND M0680\_CUR\_TOILETING[2] = 00, 01, 02,  
03) OR  
**THEN** IMP\_TOILETING = 1

**ELSE IF** (M0680\_CUR\_TOILETING = 01 AND M0680\_CUR\_TOILETING[2] = 01,  
02, 03, 04) OR (M0680\_CUR\_TOILETING = 02 AND M0680\_CUR\_TOILETING[2]  
= 02, 03, 04) OR  
(M0680\_CUR\_TOILETING = 03 AND M0680\_CUR\_TOILETING[2] = 03, 04) OR  
(M0680\_CUR\_TOILETING = 04 AND M0680\_CUR\_TOILETING[2] = 04)  
**THEN** IMP\_TOILETING = 0

**ELSE IF** M0680\_CUR\_TOILETING = 00  
**THEN** IMP\_TOILETING = MISSING

**Improvement in Transferring / Stabilization in Transferring**

**IF** M0690\_CUR\_TRANSFERRING NOT = 00, 01, 02, 03, 04, 05 OR  
M0690\_CUR\_TRANSFERRING[2] NOT = 00, 01, 02, 03, 04, 05

**THEN**

IMP\_TRANSFERRING = MISSING  
STAB\_TRANSFERRING = MISSING           **‘[SHOULD NEVER OCCUR]**

**ELSE IF** (M0690\_CUR\_TRANSFERRING = 01 AND  
M0690\_CUR\_TRANSFERRING[2] = 00) OR

(M0690\_CUR\_TRANSFERRING = 02 AND M0690\_CUR\_TRANSFERRING[2] =  
00, 01) OR

(M0690\_CUR\_TRANSFERRING = 03 AND M0690\_CUR\_TRANSFERRING[2] =  
00, 01, 02) OR

(M0690\_CUR\_TRANSFERRING = 04 AND M0690\_CUR\_TRANSFERRING[2] =  
00,01,02,03) OR

(M0690\_CUR\_TRANSFERRING = 05 AND M0690\_CUR\_TRANSFERRING[2] =  
00,01,02,03,04)

**THEN** IMP\_TRANSFERRING = 1

**ELSE IF** (M0690\_CUR\_TRANSFERRING = 01 AND  
M0690\_CUR\_TRANSFERRING[2] = 01, 02, 03, 04, 05) OR

(M0690\_CUR\_TRANSFERRING = 02 AND M0690\_CUR\_TRANSFERRING[2] =  
02,03,04,05) OR

(M0690\_CUR\_TRANSFERRING = 03 AND M0690\_CUR\_TRANSFERRING[2] =  
03, 04, 05) OR

(M0690\_CUR\_TRANSFERRING = 04 AND M0690\_CUR\_TRANSFERRING[2] =  
04, 05) OR

(M0690\_CUR\_TRANSFERRING = 05 AND M0690\_CUR\_TRANSFERRING[2] =  
05)

**THEN** IMP\_TRANSFERRING = 0

**ELSE IF** M0690\_CUR\_TRANSFERRING = 00

**THEN** IMP\_TRANSFERRING = MISSING

**ELSE IF** (M0690\_CUR\_TRANSFERRING = 00 AND  
M0690\_CUR\_TRANSFERRING[2] = 00) OR

(M0690\_CUR\_TRANSFERRING = 01 AND M0690\_CUR\_TRANSFERRING[2] =  
00, 01) OR

(M0690\_CUR\_TRANSFERRING = 02 AND M0690\_CUR\_TRANSFERRING[2] =  
00, 01, 02) OR

(M0690\_CUR\_TRANSFERRING = 03 AND M0690\_CUR\_TRANSFERRING[2] =  
00,01,02,03) OR

(M0690\_CUR\_TRANSFERRING = 04 AND M0690\_CUR\_TRANSFERRING[2] =  
00,01,02,03,04)

**THEN** STAB\_TRANSFERRING = 1



**ELSE IF** (M0690\_CUR\_TRANSFERRING = 00 AND  
M0690\_CUR\_TRANSFERRING[2] = 01, 02, 03, 04, 05) OR  
(M0690\_CUR\_TRANSFERRING = 01 AND M0690\_CUR\_TRANSFERRING[2] =  
02,03,04,05) OR  
(M0690\_CUR\_TRANSFERRING = 02 AND M0690\_CUR\_TRANSFERRING[2] =  
03, 04, 05) OR  
(M0690\_CUR\_TRANSFERRING = 03 AND M0690\_CUR\_TRANSFERRING[2] =  
04, 05) OR  
(M0690\_CUR\_TRANSFERRING = 04 AND M0690\_CUR\_TRANSFERRING[2] =  
05)  
**THEN** STAB\_TRANSFERRING = 0

**ELSE IF** M0690\_CUR\_TRANSFERRING = 05  
**THEN** STAB\_TRANSFERRING = MISSING

**Improvement in Ambulation / Locomotion**

**IF** M0700\_CUR\_AMBULATION NOT = 00, 01, 02, 03, 04, 05 OR  
M0700\_CUR\_AMBULATION[2] NOT = 00, 01, 02, 03, 04, 05  
**THEN**  
IMP\_AMBULATION = MISSING                                   **[SHOULD NEVER OCCUR]**

**ELSE IF** (M0700\_CUR\_AMBULATION = 01 AND M0700\_CUR\_AMBULATION[2]  
= 00) OR  
  
(M0700\_CUR\_AMBULATION = 02 AND M0700\_CUR\_AMBULATION[2] = 00, 01)  
OR  
(M0700\_CUR\_AMBULATION = 03 AND M0700\_CUR\_AMBULATION[2] = 00, 01,  
02) OR  
(M0700\_CUR\_AMBULATION = 04 AND M0700\_CUR\_AMBULATION[2] = 00, 01,  
02, 03) OR  
(M0700\_CUR\_AMBULATION = 05 AND M0700\_CUR\_AMBULATION[2] = 00, 01,  
02, 03, 04)  
**THEN** IMP\_AMBULATION = 1

**ELSE IF** (M0700\_CUR\_AMBULATION = 01 AND  
M0700\_CUR\_AMBULATION[2] = 01, 02, 03, 04, 05) OR  
(M0700\_CUR\_AMBULATION = 02 AND M0700\_CUR\_AMBULATION[2] = 02, 03,  
04, 05) OR  
(M0700\_CUR\_AMBULATION = 03 AND M0700\_CUR\_AMBULATION[2] = 03, 04,  
05) OR  
(M0700\_CUR\_AMBULATION = 04 AND M0700\_CUR\_AMBULATION[2] = 04, 05)  
OR  
(M0700\_CUR\_AMBULATION = 05 AND M0700\_CUR\_AMBULATION[2] = 05)  
**THEN** IMP\_AMBULATION = 0

**ELSE IF** M0700\_CUR\_AMBULATION = 00  
**THEN** IMP\_AMBULATION = MISSING

**Improvement in Eating**

**IF** M0710\_CUR\_FEEDING NOT = 00, 01, 02, 03, 04, 05 OR  
M0710\_CUR\_FEEDING[2] NOT = 00, 01, 02, 03, 04, 05

**THEN**

IMP\_EATING = MISSING

**{[SHOULD NEVER OCCUR]}**

**ELSE IF** (M0710\_CUR\_FEEDING = 01 AND M0710\_CUR\_FEEDING[2] = 00) OR

(M0710\_CUR\_FEEDING = 02 AND M0710\_CUR\_FEEDING[2] = 00, 01) OR

(M0710\_CUR\_FEEDING = 03 AND M0710\_CUR\_FEEDING[2] = 00, 01, 02) OR

(M0710\_CUR\_FEEDING = 04 AND M0710\_CUR\_FEEDING[2] = 00, 01, 02, 03)

OR

(M0710\_CUR\_FEEDING = 05 AND M0710\_CUR\_FEEDING[2] = 00, 01, 02, 03,  
04)

**THEN** IMP\_EATING = 1

**ELSE IF** (M0710\_CUR\_FEEDING = 01 AND

M0710\_CUR\_FEEDING[2] = 01, 02, 03, 04, 05) OR

(M0710\_CUR\_FEEDING = 02 AND M0710\_CUR\_FEEDING[2] = 02, 03, 04, 05)

OR

(M0710\_CUR\_FEEDING = 03 AND M0710\_CUR\_FEEDING[2] = 03, 04, 05) OR

(M0710\_CUR\_FEEDING = 04 AND M0710\_CUR\_FEEDING[2] = 04, 05) OR

(M0710\_CUR\_FEEDING = 05 AND M0710\_CUR\_FEEDING[2] = 05)

**THEN** IMP\_EATING = 0

**ELSE IF** M0710\_CUR\_FEEDING = 00

**THEN** IMP\_EATING = MISSING

**Improvement in Light Meal Preparation / Stabilization in Light Meal Preparation**

**IF** M0720\_CUR\_PREP\_LT\_MEALS NOT = 00, 01, 02 OR

M0720\_CUR\_PREP\_LT\_MEALS[2] NOT = 00, 01, 02

**THEN**

IMP\_LIGHTMEAL = MISSING

STAB\_LIGHTMEAL = MISSING

**{[SHOULD NEVER OCCUR]}**

**ELSE IF** (M0720\_CUR\_PREP\_LT\_MEALS = 01 AND

M0720\_CUR\_PREP\_LT\_MEALS[2] = 00) OR

(M0720\_CUR\_PREP\_LT\_MEALS = 02 AND M0720\_CUR\_PREP\_LT\_MEALS[2] =  
00, 01)

**THEN** IMP\_LIGHTMEAL = 1

**ELSE IF** (M0720\_CUR\_PREP\_LT\_MEALS = 01 AND

M0720\_CUR\_PREP\_LT\_MEALS[2] = 01,02) OR

(M0720\_CUR\_PREP\_LT\_MEALS = 02 AND M0720\_CUR\_PREP\_LT\_MEALS[2] = 02)

THEN IMP\_LIGHTMEAL = 0

ELSE IF M0720\_PREP\_LT\_MEALS = 00

THEN IMP\_LIGHTMEAL = MISSING

ELSE IF (M0720\_CUR\_PREP\_LT\_MEALS = 00 AND

M0720\_CUR\_PREP\_LT\_MEALS[2] = 00) OR

(M0720\_CUR\_PREP\_LT\_MEALS = 01 AND M0720\_CUR\_PREP\_LT\_MEALS[2] = 00, 01)

THEN STAB\_LIGHTMEAL = 1

ELSE IF (M0720\_CUR\_PREP\_LT\_MEALS = 00 AND

M0720\_CUR\_PREP\_LT\_MEALS[2] = 01,02) OR

(M0720\_CUR\_PREP\_LT\_MEALS = 01 AND M0720\_CUR\_PREP\_LT\_MEALS[2] = 02)

THEN STAB\_LIGHTMEAL = 0

ELSE IF M0720\_PREP\_LT\_MEALS = 02

THEN STAB\_LIGHTMEAL = MISSING

**Improvement in Laundry / Stabilization in Laundry**

IF M0740\_CUR\_LAUNDRY NOT = 00, 01, 02 OR

M0740\_CUR\_LAUNDRY[2] NOT = 00, 01, 02

THEN

IMP\_LAUNDRY = MISSING

STAB\_LAUNDRY = MISSING

**‘[SHOULD NEVER OCCUR]**

ELSE IF (M0740\_CUR\_LAUNDRY = 01 AND M0740\_CUR\_LAUNDRY[2] = 00)

OR

(M0740\_CUR\_LAUNDRY = 02 AND M0740\_CUR\_LAUNDRY[2] = 00, 01)

THEN IMP\_LAUNDRY = 1

ELSE IF (M0740\_CUR\_LAUNDRY = 01 AND M0740\_CUR\_LAUNDRY[2] = 01,02)

OR

(M0740\_CUR\_LAUNDRY = 02 AND M0740\_CUR\_LAUNDRY[2] = 02)

THEN IMP\_LAUNDRY = 0

ELSE IF M0740\_CUR\_LAUNDRY = 00

THEN IMP\_LAUNDRY = MISSING

**ELSE IF** (M0740\_CUR\_LAUNDRY = 00 AND M0740\_CUR\_LAUNDRY[2] = 00)  
**OR**

(M0740\_CUR\_LAUNDRY = 01 AND M0740\_CUR\_LAUNDRY[2] = 00, 01)  
**THEN** STAB\_LAUNDRY = 1

**ELSE IF** (M0740\_CUR\_LAUNDRY = 00 AND M0740\_CUR\_LAUNDRY[2] = 01,02)  
**OR**

(M0740\_CUR\_LAUNDRY = 01 AND M0740\_CUR\_LAUNDRY[2] = 02)  
**THEN** STAB\_LAUNDRY = 0

**ELSE IF** M0740\_CUR\_LAUNDRY = 02  
**THEN** STAB\_LAUNDRY = MISSING

**Improvement in Housekeeping / Stabilization in Housekeeping**

**IF** M0750\_CUR\_HOUSEKEEPING NOT = 00, 01, 02, 03, 04 **OR**  
M0750\_CUR\_HOUSEKEEPING[2] NOT = 00, 01, 02, 03, 04

**THEN**

IMP\_HOUSEKEEP = MISSING

STAB\_HOUSEKEEP = MISSING

**‘[SHOULD NEVER OCCUR]**

**ELSE IF** (M0750\_CUR\_HOUSEKEEPING = 01 AND  
M0750\_CUR\_HOUSEKEEPING[2] = 00) **OR**

(M0750\_CUR\_HOUSEKEEPING = 02 AND M0750\_CUR\_HOUSEKEEPING[2] =  
00, 01) **OR**

(M0750\_CUR\_HOUSEKEEPING = 03 AND M0750\_CUR\_HOUSEKEEPING[2] =  
00, 01, 02) **OR**

(M0750\_CUR\_HOUSEKEEPING = 04 AND M0750\_CUR\_HOUSEKEEPING[2] =  
00, 01, 02, 03)

**THEN** IMP\_HOUSEKEEP = 1

**ELSE IF** (M0750\_CUR\_HOUSEKEEPING = 01 AND  
M0750\_CUR\_HOUSEKEEPING[2] = 01, 02, 03, 04) **OR**

(M0750\_CUR\_HOUSEKEEPING = 02 AND M0750\_CUR\_HOUSEKEEPING[2] =  
02, 03, 04) **OR**

(M0750\_CUR\_HOUSEKEEPING = 03 AND M0750\_CUR\_HOUSEKEEPING[2] =  
03, 04) **OR**

(M0750\_CUR\_HOUSEKEEPING = 04 AND M0750\_CUR\_HOUSEKEEPING[2] =  
04)

**THEN** IMP\_HOUSEKEEP = 0

**ELSE IF** M0750\_CUR\_HOUSEKEEPING = 00

**THEN** IMP\_HOUSEKEEP = MISSING

**ELSE IF** (M0750\_CUR\_HOUSEKEEPING = 00 AND  
M0750\_CUR\_HOUSEKEEPING[2] = 00) OR

(M0750\_CUR\_HOUSEKEEPING = 01 AND M0750\_CUR\_HOUSEKEEPING[2] =  
00, 01) OR

(M0750\_CUR\_HOUSEKEEPING = 02 AND M0750\_CUR\_HOUSEKEEPING[2] =  
00, 01, 02) OR

(M0750\_CUR\_HOUSEKEEPING = 03 AND M0750\_CUR\_HOUSEKEEPING[2] =  
00, 01, 02, 03)

**THEN** STAB\_HOUSEKEEP = 1

**ELSE IF** (M0750\_CUR\_HOUSEKEEPING = 00 AND  
M0750\_CUR\_HOUSEKEEPING[2] = 01, 02, 03, 04) OR

(M0750\_CUR\_HOUSEKEEPING = 01 AND M0750\_CUR\_HOUSEKEEPING[2] =  
02, 03, 04) OR

(M0750\_CUR\_HOUSEKEEPING = 02 AND M0750\_CUR\_HOUSEKEEPING[2] =  
03, 04) OR

(M0750\_CUR\_HOUSEKEEPING = 03 AND M0750\_CUR\_HOUSEKEEPING[2] =  
04)

**THEN** STAB\_HOUSEKEEP = 0

**ELSE IF** M0750\_CUR\_HOUSEKEEPING = 04

**THEN** STAB\_HOUSEKEEP = MISSING

**Improvement in Shopping / Stabilization in Shopping**

**IF** M0760\_CUR\_SHOPPING NOT = 00, 01, 02, 03 OR

M0760\_CUR\_SHOPPING[2] NOT = 00, 01, 02, 03

**THEN**

IMP\_SHOPPING = MISSING

STAB\_SHOPPING = MISSING

**[SHOULD NEVER OCCUR]**

**ELSE IF** (M0760\_CUR\_SHOPPING = 01 AND M0760\_CUR\_SHOPPING[2] = 00)  
OR

(M0760\_CUR\_SHOPPING = 02 AND M0760\_CUR\_SHOPPING[2] = 00, 01) OR

(M0760\_CUR\_SHOPPING = 03 AND M0760\_CUR\_SHOPPING[2] = 00, 01, 02)

**THEN** IMP\_SHOPPING = 1

**ELSE IF** (M0760\_CUR\_SHOPPING = 01 AND M0760\_CUR\_SHOPPING[2] = 01,  
02, 03) OR

(M0760\_CUR\_SHOPPING = 02 AND M0760\_CUR\_SHOPPING[2] = 02, 03) OR

(M0760\_CUR\_SHOPPING = 03 AND M0760\_CUR\_SHOPPING[2] = 03)

**THEN** IMP\_SHOPPING = 0

**ELSE IF** M0760\_CUR\_SHOPPING = 00

**THEN** IMP\_SHOPPING = MISSING

**ELSE IF** (M0760\_CUR\_SHOPPING = 00 AND M0760\_CUR\_SHOPPING[2] = 00)

OR

(M0760\_CUR\_SHOPPING = 01 AND M0760\_CUR\_SHOPPING[2] = 00, 01) OR  
(M0760\_CUR\_SHOPPING = 02 AND M0760\_CUR\_SHOPPING[2] = 00, 01, 02)  
**THEN** STAB\_SHOPPING = 1

**ELSE IF** (M0760\_CUR\_SHOPPING = 00 AND M0760\_CUR\_SHOPPING[2] = 01,  
02, 03) OR  
(M0760\_CUR\_SHOPPING = 01 AND M0760\_CUR\_SHOPPING[2] = 02, 03) OR  
(M0760\_CUR\_SHOPPING = 02 AND M0760\_CUR\_SHOPPING[2] = 03)  
**THEN** STAB\_SHOPPING = 0

**ELSE IF** M0760\_CUR\_SHOPPING = 03  
**THEN** STAB\_SHOPPING = MISSING

**Improvement in Phone Use / Stabilization in Phone Use**

**IF** M0770\_CUR\_PHONE\_USE NOT = 00, 01, 02, 03, 04, 05, NA OR  
M0770\_CUR\_PHONE\_USE[2] NOT = 00, 01, 02, 03, 04, 05, NA  
**THEN**

IMP\_PHONE = MISSING  
STAB\_PHONE = MISSING **'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0770\_CUR\_PHONE\_USE = 01 AND M0770\_CUR\_PHONE\_USE[2] =  
00) OR

(M0770\_CUR\_PHONE\_USE = 02 AND M0770\_CUR\_PHONE\_USE[2] = 00, 01)  
OR

(M0770\_CUR\_PHONE\_USE = 03 AND M0770\_CUR\_PHONE\_USE[2] = 00, 01,  
02) OR

(M0770\_CUR\_PHONE\_USE = 04 AND M0770\_CUR\_PHONE\_USE[2] =  
00,01,02,03) OR

(M0770\_CUR\_PHONE\_USE = 05 AND M0770\_CUR\_PHONE\_USE[2] =  
00,01,02,03,04)

**THEN** IMP\_PHONE = 1

**ELSE IF** (M0770\_CUR\_PHONE\_USE = 01 AND  
M0770\_CUR\_PHONE\_USE[2] = 01, 02, 03, 04, 05) OR  
(M0770\_CUR\_PHONE\_USE = 02 AND M0770\_CUR\_PHONE\_USE[2] =  
02,03,04,05) OR

(M0770\_CUR\_PHONE\_USE = 03 AND M0770\_CUR\_PHONE\_USE[2] = 03, 04,  
05) OR

(M0770\_CUR\_PHONE\_USE = 04 AND M0770\_CUR\_PHONE\_USE[2] = 04, 05)  
OR

(M0770\_CUR\_PHONE\_USE = 05 AND M0770\_CUR\_PHONE\_USE[2] = 05)

**THEN** IMP\_PHONE = 0

**ELSE IF** M0770\_CUR\_PHONE\_USE = 00, NA OR M0770\_CUR\_PHONE\_USE[2]  
= NA

**THEN** IMP\_PHONE = MISSING

**ELSE IF** (M0770\_CUR\_PHONE\_USE = 00 AND M0770\_CUR\_PHONE\_USE[2] = 00) OR

(M0770\_CUR\_PHONE\_USE = 01 AND M0770\_CUR\_PHONE\_USE[2] = 00, 01) OR

(M0770\_CUR\_PHONE\_USE = 02 AND M0770\_CUR\_PHONE\_USE[2] = 00, 01, 02) OR

(M0770\_CUR\_PHONE\_USE = 03 AND M0770\_CUR\_PHONE\_USE[2] = 00,01,02,03) OR

(M0770\_CUR\_PHONE\_USE = 04 AND M0770\_CUR\_PHONE\_USE[2] = 00,01,02,03,04)

**THEN** STAB\_PHONE = 1

**ELSE IF** (M0770\_CUR\_PHONE\_USE = 00 AND

M0770\_CUR\_PHONE\_USE[2] = 01, 02, 03, 04, 05) OR

(M0770\_CUR\_PHONE\_USE = 01 AND M0770\_CUR\_PHONE\_USE[2] = 02,03,04,05) OR

(M0770\_CUR\_PHONE\_USE = 02 AND M0770\_CUR\_PHONE\_USE[2] = 03, 04, 05) OR

(M0770\_CUR\_PHONE\_USE = 03 AND M0770\_CUR\_PHONE\_USE[2] = 04, 05) OR

(M0770\_CUR\_PHONE\_USE = 04 AND M0770\_CUR\_PHONE\_USE[2] = 05)

**THEN** STAB\_PHONE = 0

**ELSE IF** M0770\_CUR\_PHONE\_USE = 05, NA OR M0770\_CUR\_PHONE\_USE[2] = NA

**THEN** STAB\_PHONE = MISSING

**Improvement in Management of Oral Medications /  
Stabilization in Management of Oral Medication**

**IF** M0780\_CUR\_ORAL\_MEDS NOT = 00, 01, 02, NA OR

M0780\_CUR\_ORAL\_MEDS[2] NOT = 00, 01, 02, NA

**THEN**

IMP\_ORALMEDS = MISSING

STAB\_ORALMEDS = MISSING

**[SHOULD NEVER OCCUR]**

**ELSE IF** (M0780\_CUR\_ORAL\_MEDS = 01 AND M0780\_CUR\_ORAL\_MEDS[2] = 00) OR

(M0780\_CUR\_ORAL\_MEDS = 02 AND M0780\_CUR\_ORAL\_MEDS[2] = 00, 01)

**THEN** IMP\_ORALMEDS = 1

**ELSE IF** (M0780\_CUR\_ORAL\_MEDS = 01 AND M0780\_CUR\_ORAL\_MEDS[2] = 01, 02) OR  
(M0780\_CUR\_ORAL\_MEDS = 02 AND M0780\_CUR\_ORAL\_MEDS[2] = 02)  
**THEN** IMP\_ORALMEDS = 0

**ELSE IF** M0780\_CUR\_ORAL\_MEDS = 00, NA OR M0780\_CUR\_ORAL\_MEDS[2]  
= NA  
**THEN** IMP\_ORALMEDS = MISSING

**ELSE IF** (M0780\_CUR\_ORAL\_MEDS = 00 AND M0780\_CUR\_ORAL\_MEDS[2] = 00) OR

(M0780\_CUR\_ORAL\_MEDS = 01 AND M0780\_CUR\_ORAL\_MEDS[2] = 00, 01)  
**THEN** STAB\_ORALMEDS = 1

**ELSE IF** (M0780\_CUR\_ORAL\_MEDS = 00 AND M0780\_CUR\_ORAL\_MEDS[2] = 01, 02) OR  
(M0780\_CUR\_ORAL\_MEDS = 01 AND M0780\_CUR\_ORAL\_MEDS[2] = 02)  
**THEN** STAB\_ORALMEDS = 0

**ELSE IF** M0780\_CUR\_ORAL\_MEDS = 02, NA OR M0780\_CUR\_ORAL\_MEDS[2]  
= NA  
**THEN** STAB\_ORALMEDS = MISSING

**Improvement in Speech and Language / Stabilization in Speech and Language**

**IF** M0410\_SPEECH NOT = 00, 01, 02, 03, 04, 05 OR  
M0410\_SPEECH[2] NOT = 00, 01, 02, 03, 04, 05

**THEN**

IMP\_SPEECH = MISSING  
STAB\_SPEECH = MISSING

**‘[SHOULD NEVER OCCUR]**

**ELSE IF** (M0410\_SPEECH = 01 AND M0410\_SPEECH[2] = 00) OR

(M0410\_SPEECH = 02 AND M0410\_SPEECH[2] = 00, 01) OR  
(M0410\_SPEECH = 03 AND M0410\_SPEECH[2] = 00, 01, 02) OR  
(M0410\_SPEECH = 04 AND M0410\_SPEECH[2] = 00, 01, 02, 03) OR  
(M0410\_SPEECH = 05 AND M0410\_SPEECH[2] = 00, 01, 02, 03, 04)  
**THEN** IMP\_SPEECH = 1

**ELSE IF** (M0410\_SPEECH = 01 AND M0410\_SPEECH[2] = 01, 02, 03, 04, 05)  
OR

(M0410\_SPEECH = 02 AND M0410\_SPEECH[2] = 02,03,04,05) OR  
(M0410\_SPEECH = 03 AND M0410\_SPEECH[2] = 03, 04, 05) OR  
(M0410\_SPEECH = 04 AND M0410\_SPEECH[2] = 04, 05) OR  
(M0410\_SPEECH = 05 AND M0410\_SPEECH[2] = 05)  
**THEN** IMP\_SPEECH = 0

**ELSE IF** M0410\_SPEECH = 00  
**THEN** IMP\_SPEECH = MISSING



**ELSE IF** (M0410\_SPEECH = 00 AND M0410\_SPEECH[2] = 00) OR  
(M0410\_SPEECH = 01 AND M0410\_SPEECH[2] = 00, 01) OR  
(M0410\_SPEECH = 02 AND M0410\_SPEECH[2] = 00, 01, 02) OR  
(M0410\_SPEECH = 03 AND M0410\_SPEECH[2] = 00, 01, 02, 03) OR  
(M0410\_SPEECH = 04 AND M0410\_SPEECH[2] = 00, 01, 02, 03, 04)  
**THEN** STAB\_SPEECH = 1

**ELSE IF** (M0410\_SPEECH = 00 AND M0410\_SPEECH[2] = 01, 02, 03, 04, 05)  
OR  
(M0410\_SPEECH = 01 AND M0410\_SPEECH[2] = 02, 03, 04, 05) OR  
(M0410\_SPEECH = 02 AND M0410\_SPEECH[2] = 03, 04, 05) OR  
(M0410\_SPEECH = 03 AND M0410\_SPEECH[2] = 04, 05) OR  
(M0410\_SPEECH = 04 AND M0410\_SPEECH[2] = 05)  
**THEN** STAB\_SPEECH = 0

**ELSE IF** M0410\_SPEECH = 05  
**THEN** STAB\_SPEECH = MISSING

**Improvement in Pain Interfering with Activity**

**IF** M0420\_FREQ\_PAIN NOT = 00, 01, 02, 03 OR M0420\_FREQ\_PAIN[2]  
NOT = 00, 01, 02, 03  
**THEN**  
IMP\_PAIN = MISSING **[SHOULD NEVER OCCUR]**

**ELSE IF** (M0420\_FREQ\_PAIN = 01 AND M0420\_FREQ\_PAIN[2] = 00) OR  
(M0420\_FREQ\_PAIN = 02 AND M0420\_FREQ\_PAIN[2] = 00, 01) OR  
(M0420\_FREQ\_PAIN = 03 AND M0420\_FREQ\_PAIN[2] = 00, 01, 02)  
**THEN** IMP\_PAIN = 1

**ELSE IF** (M0420\_FREQ\_PAIN = 01 AND M0420\_FREQ\_PAIN[2] = 01, 02, 03) OR  
(M0420\_FREQ\_PAIN = 02 AND M0420\_FREQ\_PAIN[2] = 02, 03) OR  
(M0420\_FREQ\_PAIN = 03 AND M0420\_FREQ\_PAIN[2] = 03)  
**THEN** IMP\_PAIN = 0

**ELSE IF** M0420\_FREQ\_PAIN = 00  
**THEN** IMP\_PAIN = MISSING

**Improvement in Number of Surgical Wounds /**  
**Improvement in Status of Surgical Wounds**

**IF** ((M0488\_STAT\_PRB\_SURGWND = NA) AND  
(M0486\_UNOBS\_SURGWND NOT = 1 OR M0484\_NBR\_SURGWND NOT = 00))  
**OR**  
((M0488\_STAT\_PRB\_SURGWND[2] = NA) AND  
(M0486\_UNOBS\_SURGWND[2] NOT = 1 OR M0484\_NBR\_SURGWND[2] NOT =  
00))

**THEN**

IMP\_NUMBERWOUNDS = MISSING  
IMP\_STATUSWOUNDS = MISSING           **'[SHOULD NEVER OCCUR]'**

**IF** M0440\_LESION\_OPEN\_WND = 0 OR M0482\_SURG\_WOUND = 0  
**THEN** NBR\_INT1 = 00

**ELSE IF** M0482\_SURG\_WOUND = 1  
**THEN** NBR\_INT1 = M0484\_NBR\_SURGWND

**IF** M0440\_LESION\_OPEN\_WND[2] = 0 OR M0482\_SURG\_WOUND[2] = 0  
**THEN** NBR\_INT2 = 00

**ELSE IF** M0482\_SURG\_WOUND[2] = 1  
**THEN** NBR\_INT2 = M0484\_NBR\_SURGWND[2]

**IF** ((M0440\_LESION\_OPEN\_WND = 1 OR M0482\_SURG\_WOUND = 1) AND  
NBR\_INT1 NOT = 00, 01, 02, 03, 04) OR  
((M0440\_LESION\_OPEN\_WND[2] = 1 OR M0482\_SURG\_WOUND[2] = 1) AND  
NBR\_INT2 NOT = 00, 01, 02, 03, 04)

**THEN**

IMP\_NUMBERWOUNDS = MISSING           **'[SHOULD NEVER OCCUR]'**

**ELSE IF** (NBR\_INT1 = 01 AND NBR\_INT2 = 00) OR

(NBR\_INT1 = 02 AND NBR\_INT2 = 00, 01) OR  
(NBR\_INT1 = 03 AND NBR\_INT2 = 00, 01, 02) OR  
(NBR\_INT1 = 04 AND NBR\_INT2 = 00, 01, 02, 03)  
**THEN** IMP\_NUMBERWOUNDS = 1

**ELSE IF** (NBR\_INT1 = 01 AND  
NBR\_INT2 = 01, 02, 03, 04) OR  
(NBR\_INT1 = 02 AND NBR\_INT2 = 02, 03, 04) OR  
(NBR\_INT1 = 03 AND NBR\_INT2 = 03, 04) OR  
(NBR\_INT1 = 04 AND NBR\_INT2 = 04)  
**THEN** IMP\_NUMBERWOUNDS = 0

**ELSE IF** NBR\_INT1 = 00  
**THEN** IMP\_NUMBERWOUNDS = MISSING

```

IF M0440_LESION_WND = 0 OR M0482_SURG_WOUND = 0
    THEN STAT_INT1 = 00
ELSE IF M0482_SURG_WOUND = 1
    THEN STAT_INT1 = M0488_STAT_PRB_SURGWND
IF M0440_LESION_WND[2] = 0 OR M0482_SURG_WOUND[2] = 0
    THEN STAT_INT2 = 00
ELSE IF M0482_SURG_WOUND[2] = 1
    THEN STAT_INT2 = M0488_STAT_PRB_SURGWND[2]

IF ((M0440_LESION_OPEN_WND = 1 OR M0482_SURG_WOUND = 1) AND
STAT_INT1 NOT = 00, 01, 02, 03, NA) OR
IF ((M0440_LESION_OPEN_WND[2] = 1 OR M0482_SURG_WOUND[2] = 1)
AND
STAT_INT2 NOT = 00, 01, 02, 03, NA)

THEN
    IMP_STATUSWOUNDS = MISSING          '[SHOULD NEVER OCCUR]'

ELSE IF (STAT_INT1 = 01 AND STAT_INT2 = 00) OR
(STAT_INT1 = 02 AND STAT_INT2 = 00, 01) OR
(STAT_INT1 = 03 AND STAT_INT2 = 00, 01, 02)
    THEN IMP_STATUSWOUNDS = 1

ELSE IF (STAT_INT1 = 01 AND STAT_INT2 = 01, 02, 03) OR
(STAT_INT1 = 02 AND STAT_INT2 = 02, 03) OR
(STAT_INT1 = 03 AND STAT_INT2 = 03)
    THEN IMP_STATUSWOUNDS = 0

ELSE IF (STAT_INT1 = 00, NA) OR (STAT_INT2 = NA)
    THEN IMP_STATUSWOUNDS = MISSING

```

**Improvement in Dyspnea**

```

IF M0490_WHEN_DYSPNEIC NOT = 00, 01, 02, 03, 04 OR
M0490_WHEN_DYSPNEIC[2] NOT = 00, 01, 02, 03, 04
THEN
    IMP_DYSPNEA = MISSING          '[SHOULD NEVER OCCUR]'

ELSE IF (M0490_WHEN_DYSPNEIC = 01 AND M0490_WHEN_DYSPNEIC[2] =
00) OR
(M0490_WHEN_DYSPNEIC = 02 AND M0490_WHEN_DYSPNEIC[2] = 00, 01)
OR
(M0490_WHEN_DYSPNEIC = 03 AND M0490_WHEN_DYSPNEIC[2] = 00, 01,
02) OR
(M0490_WHEN_DYSPNEIC = 04 AND M0490_WHEN_DYSPNEIC[2] = 00, 01,
02, 03)
    THEN IMP_DYSPNEA = 1

```

**ELSE IF** (M0490\_WHEN\_DYSPNEIC = 01 AND  
M0490\_WHEN\_DYSPNEIC[2] = 01, 02, 03, 04) OR  
(M0490\_WHEN\_DYSPNEIC = 02 AND M0490\_WHEN\_DYSPNEIC[2] = 02, 03,  
04) OR  
(M0490\_WHEN\_DYSPNEIC = 03 AND M0490\_WHEN\_DYSPNEIC[2] = 03, 04)  
OR  
(M0490\_WHEN\_DYSPNEIC = 04 AND M0490\_WHEN\_DYSPNEIC[2] = 04)  
**THEN** IMP\_DYSPNEA = 0

**ELSE IF** M0490\_WHEN\_DYSPNEIC = 00  
**THEN** IMP\_DYSPNEA = MISSING

**Improvement in Urinary Tract Infection**

**IF** M0510\_UTI NOT = 00, 01, NA, UK OR M0510\_UTI[2] NOT = 00, 01, NA, UK  
**THEN**  
IMP\_UTI = MISSING **'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0510\_UTI = 01 AND M0510\_UTI[2] = 00)  
**THEN** IMP\_UTI = 1

**ELSE IF** (M0510\_UTI = 01 AND M0510\_UTI[2] = 01)  
**THEN** IMP\_UTI = 0

**ELSE IF** M0510\_UTI = 00, NA, UK OR M0510\_UTI[2] = NA, UK  
**THEN** IMP\_UTI = MISSING

**Improvement in Urinary Incontinence**

**IF** M0520\_UR\_INCONT NOT = 00, 01, 02 OR  
(M0520\_UR\_INCONT = 01 AND M0530\_UR\_INCONT\_OCCURS NOT = 00, 01,  
02)  
**THEN**  
OUT\_INTERIM1 = MISSING **'[SHOULD NEVER OCCUR]**

**IF** M0520\_UR\_INCONT = 00,02 AND M0530\_UR\_INCONT\_OCCURS = 00,01,02  
**THEN**  
OUT\_INTERIM1 = MISSING **'[SHOULD NEVER OCCUR]**

```

ELSE IF M0520_UR_INCONT = 00
    THEN OUT_INTERIM1 = 0
ELSE IF M0530_UR_INCONT_OCCURS = 00
    THEN OUT_INTERIM1 = 1
ELSE IF M0530_UR_INCONT_OCCURS = 01
    THEN OUT_INTERIM1 = 2
ELSE IF M0530_UR_INCONT_OCCURS = 02
    THEN OUT_INTERIM1 = 3
ELSE IF M0520_UR_INCONT = 02
    THEN OUT_INTERIM1 = 4

```

```

IF M0520_UR_INCONT[2] NOT = 00, 01, 02 OR
(M0520_UR_INCONT[2] = 01 AND M0530_UR_INCONT_OCCURS[2] NOT = 00,
01, 02)
THEN

```

```

    OUT_INTERIM2 = MISSING                '[SHOULD NEVER OCCUR]'

```

```

IF M0520_UR_INCONT[2] = 00,02 AND M0530_UR_INCONT_OCCURS[2] =
00,01,02
THEN

```

```

    OUT_INTERIM2 = MISSING                '[SHOULD NEVER OCCUR]'

```

```

ELSE IF M0520_UR_INCONT[2] = 00
    THEN OUT_INTERIM2 = 0
ELSE IF M0530_UR_INCONT_OCCURS[2] = 00
    THEN OUT_INTERIM2 = 1
ELSE IF M0530_UR_INCONT_OCCURS[2] = 01
    THEN OUT_INTERIM2 = 2
ELSE IF M0530_UR_INCONT_OCCURS[2] = 02
    THEN OUT_INTERIM2 = 3
ELSE IF M0520_UR_INCONT[2] = 02
    THEN OUT_INTERIM2 = 4

```

```

IF OUT_INTERIM1 NOT = 0, 1, 2, 3, 4 OR OUT_INTERIM2 NOT = 0, 1, 2, 3, 4
THEN

```

```

    IMP_INCONT = MISSING                '[SHOULD NEVER OCCUR]'

```

```

ELSE IF (OUT_INTERIM1 = 1 AND OUT_INTERIM2 = 0) OR

```

```

(OUT_INTERIM1 = 2 AND OUT_INTERIM2 = 0, 1) R

```

```

(OUT_INTERIM1 = 3 AND OUT_INTERIM2 = 0, 1, 2) OR

```

```

(OUT_INTERIM1 = 4 AND OUT_INTERIM2 = 0, 1, 2, 3) OR

```

```

    THEN IMP_INCONT = 1

```

**ELSE IF** (OUT\_INTERIM1 = 1 AND OUT\_INTERIM2 = 1, 2, 3, 4) OR  
(OUT\_INTERIM1 = 2 AND OUT\_INTERIM2 = 2, 3, 4) OR  
(OUT\_INTERIM1 = 3 AND OUT\_INTERIM2 = 3, 4) OR  
(OUT\_INTERIM1 = 4 AND OUT\_INTERIM2 = 4)  
**THEN** IMP\_INCONT = 0

**ELSE IF** OUT\_INTERIM1 = 0  
**THEN** IMP\_INCONT = MISSING

### **Improvement in Bowel Incontinence**

**IF** M0540\_BWL\_INCONT NOT = 00, 01, 02, 03, 04, 05, NA, UK OR  
M0540\_BWL\_INCONT[2] NOT = 00, 01, 02, 03, 04, 05, NA, UK  
**THEN**  
IMP\_BOWELINCONT = MISSING **'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0540\_BWL\_INCONT = 01 AND M0540\_BWL\_INCONT[2] = 00) OR  
  
(M0540\_BWL\_INCONT = 02 AND M0540\_BWL\_INCONT[2] = 00, 01) OR  
(M0540\_BWL\_INCONT = 03 AND M0540\_BWL\_INCONT[2] = 00, 01, 02) OR  
(M0540\_BWL\_INCONT = 04 AND M0540\_BWL\_INCONT[2] = 00,01,02,03) OR  
(M0540\_BWL\_INCONT = 05 AND M0540\_BWL\_INCONT[2] = 00,01,02,03,04)  
**THEN** IMP\_BOWELINCONT = 1

**ELSE IF** (M0540\_BWL\_INCONT = 01 AND M0540\_BWL\_INCONT[2] = 01, 02, 03,  
04, 05) OR  
(M0540\_BWL\_INCONT = 02 AND M0540\_BWL\_INCONT[2] = 02,03,04,05) OR  
(M0540\_BWL\_INCONT = 03 AND M0540\_BWL\_INCONT[2] = 03, 04, 05) OR  
(M0540\_BWL\_INCONT = 04 AND M0540\_BWL\_INCONT[2] = 04, 05) OR  
(M0540\_BWL\_INCONT = 05 AND M0540\_BWL\_INCONT[2] = 05)  
**THEN** IMP\_BOWELINCONT = 0

**ELSE IF** M0540\_BWL\_INCONT = 00, NA, UK OR M0540\_BWL\_INCONT[2] = NA,  
UK  
**THEN** IMP\_BOWELINCONT = MISSING

### **Improvement in Cognitive Functioning / Stabilization in Cognitive Functioning**

**IF** M0560\_COG\_FUNCTION NOT = 00, 01, 02, 03, 04 OR  
M0560\_COG\_FUNCTION[2] NOT = 00, 01, 02, 03, 04  
**THEN**  
IMP\_COGNITIVE = MISSING  
STAB\_COGNITIVE = MISSING **'[SHOULD NEVER OCCUR]**  
**ELSE IF** (M0560\_COG\_FUNCTION = 01 AND M0560\_COG\_FUNCTION[2] = 00)  
OR  
  
(M0560\_COG\_FUNCTION = 02 AND M0560\_COG\_FUNCTION[2] = 00, 01) OR  
(M0560\_COG\_FUNCTION = 03 AND M0560\_COG\_FUNCTION[2] = 00, 01, 02)  
OR

(M0560\_COG\_FUNCTION = 04 AND M0560\_COG\_FUNCTION[2] = 00, 01, 02, 03)

**THEN IMP\_COGNITIVE = 1**

**ELSE IF** (M0560\_COG\_FUNCTION = 01 AND M0560\_COG\_FUNCTION[2] = 01, 02, 03, 04) OR

(M0560\_COG\_FUNCTION = 02 AND M0560\_COG\_FUNCTION[2] = 02, 03, 04) OR

(M0560\_COG\_FUNCTION = 03 AND M0560\_COG\_FUNCTION[2] = 03, 04) OR

(M0560\_COG\_FUNCTION = 04 AND M0560\_COG\_FUNCTION[2] = 04)

**THEN IMP\_COGNITIVE = 0**

**ELSE IF** M0560\_COG\_FUNCTION = 00

**THEN IMP\_COGNITIVE = MISSING**

**ELSE IF** (M0560\_COG\_FUNCTION = 00 AND M0560\_COG\_FUNCTION[2] = 00)

OR

(M0560\_COG\_FUNCTION = 01 AND M0560\_COG\_FUNCTION[2] = 00, 01) OR

(M0560\_COG\_FUNCTION = 02 AND M0560\_COG\_FUNCTION[2] = 00, 01, 02)

OR

(M0560\_COG\_FUNCTION = 03 AND M0560\_COG\_FUNCTION[2] = 00, 01, 02, 03)

**THEN STAB\_COGNITIVE = 1**

**ELSE IF** (M0560\_COG\_FUNCTION = 00 AND M0560\_COG\_FUNCTION[2] = 01, 02, 03, 04) OR

(M0560\_COG\_FUNCTION = 01 AND M0560\_COG\_FUNCTION[2] = 02, 03, 04)

OR

(M0560\_COG\_FUNCTION = 02 AND M0560\_COG\_FUNCTION[2] = 03, 04) OR

(M0560\_COG\_FUNCTION = 03 AND M0560\_COG\_FUNCTION[2] = 04)

**THEN STAB\_COGNITIVE = 0**

**ELSE IF** M0560\_COG\_FUNCTION = 04

**THEN STAB\_COGNITIVE = MISSING**

### **Improvement in Confusion Frequency**

**IF** M0570\_WHEN\_CONFUSED NOT = 00, 01, 02, 03, 04, NA OR

M0570\_WHEN\_CONFUSED[2] NOT = 00, 01, 02, 03, 04, NA

**THEN**

IMP\_CONFUSION = MISSING

**'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0570\_WHEN\_CONFUSED = 01 AND M0570\_WHEN\_CONFUSED[2] = 00) OR

(M0570\_WHEN\_CONFUSED = 02 AND M0570\_WHEN\_CONFUSED[2] = 00, 01)

OR

(M0570\_WHEN\_CONFUSED = 03 AND M0570\_WHEN\_CONFUSED[2] = 00, 01, 02) OR

(M0570\_WHEN\_CONFUSED = 04 AND M0570\_WHEN\_CONFUSED[2] = 00, 01, 02, 03)

**THEN** IMP\_CONFUSION = 1

**ELSE IF** (M0570\_WHEN\_CONFUSED = 01 AND  
M0570\_WHEN\_CONFUSED[2] = 01, 02, 03, 04) OR  
(M0570\_WHEN\_CONFUSED = 02 AND M0570\_WHEN\_CONFUSED[2] = 02, 03,  
04) OR  
(M0570\_WHEN\_CONFUSED = 03 AND M0570\_WHEN\_CONFUSED[2] = 03, 04)  
OR  
(M0570\_WHEN\_CONFUSED = 04 AND M0570\_WHEN\_CONFUSED[2] = 04)

**THEN** IMP\_CONFUSION = 0

**ELSE IF** M0570\_WHEN\_CONFUSED = 00, NA OR  
M0570\_WHEN\_CONFUSED[2] = NA

**THEN** IMP\_CONFUSION = MISSING

**Improvement in Anxiety Level / Stabilization in Anxiety Level**

**IF** M0580\_WHEN\_ANXIOUS NOT = 00, 01, 02, 03, NA OR  
M0580\_WHEN\_ANXIOUS[2] NOT = 00, 01, 02, 03, NA

**THEN**

IMP\_ANXIETY = MISSING

STAB\_ANXIETY = MISSING

**'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0580\_WHEN\_ANXIOUS = 01 AND M0580\_WHEN\_ANXIOUS[2] = 00)  
OR

(M0580\_WHEN\_ANXIOUS = 02 AND M0580\_WHEN\_ANXIOUS[2] = 00, 01) OR  
(M0580\_WHEN\_ANXIOUS = 03 AND M0580\_WHEN\_ANXIOUS[2] = 00, 01, 02)

**THEN** IMP\_ANXIETY = 1

**ELSE IF** (M0580\_WHEN\_ANXIOUS = 01 AND M0580\_WHEN\_ANXIOUS[2] = 01,  
02, 03) OR

(M0580\_WHEN\_ANXIOUS = 02 AND M0580\_WHEN\_ANXIOUS[2] = 02, 03) OR

(M0580\_WHEN\_ANXIOUS = 03 AND M0580\_WHEN\_ANXIOUS[2] = 03)

**THEN** IMP\_ANXIETY = 0

**ELSE IF** M0580\_WHEN\_ANXIOUS = 00, NA OR M0580\_WHEN\_ANXIOUS[2] =  
NA

**THEN** IMP\_ANXIETY = MISSING

**ELSE IF** (M0580\_WHEN\_ANXIOUS = 00 AND M0580\_WHEN\_ANXIOUS[2] = 00)  
OR

(M0580\_WHEN\_ANXIOUS = 01 AND M0580\_WHEN\_ANXIOUS[2] = 00, 01) OR  
(M0580\_WHEN\_ANXIOUS = 02 AND M0580\_WHEN\_ANXIOUS[2] = 00, 01, 02)

**THEN** STAB\_ANXIETY = 1



**ELSE IF** (M0580\_WHEN\_ANXIOUS = 00 AND M0580\_WHEN\_ANXIOUS[2] = 01, 02, 03) OR  
(M0580\_WHEN\_ANXIOUS = 01 AND M0580\_WHEN\_ANXIOUS[2] = 02, 03) OR  
(M0580\_WHEN\_ANXIOUS = 02 AND M0580\_WHEN\_ANXIOUS[2] = 03)  
**THEN** STAB\_ANXIETY = 0

**ELSE IF** M0580\_WHEN\_ANXIOUS = 03, NA OR M0580\_WHEN\_ANXIOUS[2] = NA  
**THEN** STAB\_ANXIETY = MISSING

**Improvement in Behavior Problem Frequency**

**IF** M0620\_BEH\_PROB\_FREQ NOT = 00, 01, 02, 03, 04, 05 OR  
M0620\_BEH\_PROB\_FREQ[2] NOT = 00, 01, 02, 03, 04, 05  
**THEN**

IMP\_BEHAVIOR = MISSING **'[SHOULD NEVER OCCUR]**

**ELSE IF** (M0620\_BEH\_PROB\_FREQ = 01 AND M0620\_BEH\_PROB\_FREQ[2] = 00) OR

(M0620\_BEH\_PROB\_FREQ = 02 AND M0620\_BEH\_PROB\_FREQ[2] = 00, 01) OR

(M0620\_BEH\_PROB\_FREQ = 03 AND M0620\_BEH\_PROB\_FREQ[2] = 00, 01, 02) OR

(M0620\_BEH\_PROB\_FREQ = 04 AND M0620\_BEH\_PROB\_FREQ[2] = 00, 01, 02, 03) OR

(M0620\_BEH\_PROB\_FREQ = 05 AND M0620\_BEH\_PROB\_FREQ[2] = 00, 01, 02, 03, 04)

**THEN** IMP\_BEHAVIOR = 1

**ELSE IF** (M0620\_BEH\_PROB\_FREQ = 01 AND M0620\_BEH\_PROB\_FREQ[2] = 01, 02, 03, 04, 05) OR

(M0620\_BEH\_PROB\_FREQ = 02 AND M0620\_BEH\_PROB\_FREQ[2] = 02,03,04,05) OR

(M0620\_BEH\_PROB\_FREQ = 03 AND M0620\_BEH\_PROB\_FREQ[2] = 03, 04, 05) OR

(M0620\_BEH\_PROB\_FREQ = 04 AND M0620\_BEH\_PROB\_FREQ[2] = 04, 05) OR

(M0620\_BEH\_PROB\_FREQ = 05 AND M0620\_BEH\_PROB\_FREQ[2] = 05)

**THEN** IMP\_BEHAVIOR = 0

**ELSE IF** M0620\_BEH\_PROB\_FREQ = 00

**THEN** IMP\_BEHAVIOR = MISSING





**Exclusions for All Outcome Measures**

**IF** ((AGE < 18) OR (AGE > 120)) OR (M0570\_WHEN\_CONFUSED = NA) OR  
(M0580\_WHEN\_ANXIOUS = NA)

**THEN**

IMP\_GROOMING = MISSING  
STAB\_GROOMING = MISSING  
IMP\_UPPERDRESS = MISSING  
IMP\_LOWERDRESS = MISSING  
IMP\_BATHING = MISSING  
STAB\_BATHING = MISSING  
IMP\_TOILETING = MISSING  
IMP\_TRANSFERRING = MISSING  
STAB\_TRANSFERRING = MISSING  
IMP\_AMBULATION = MISSING  
IMP\_EATING = MISSING  
IMP\_LIGHTMEAL = MISSING  
STAB\_LIGHTMEAL = MISSING  
IMP\_LAUNDRY = MISSING  
STAB\_LAUNDRY = MISSING  
IMP\_HOUSEKEEP = MISSING  
SSTAB\_HOUSEKEEP = MISSING  
IMP\_SHOPPING = MISSING  
STAB\_SHOPPING = MISSING  
IMP\_PHONE = MISSING  
STAB\_PHONE = MISSING  
IMP\_ORALMEDS = MISSING  
STAB\_ORALMEDS = MISSING  
IMP\_SPEECH = MISSING  
STAB\_SPEECH = MISSING  
IMP\_PAIN = MISSING  
IMP\_NUMBERWOUNDS = MISSING  
IMP\_STATUSWOUNDS = MISSING  
IMP\_DYSPNEA = MISSING  
IMP\_UTI = MISSING  
IMP\_INCONT = MISSING  
IMP\_BOWELINCONT = MISSING  
IMP\_COGNITIVE = MISSING  
STAB\_COGNITIVE = MISSING  
IMP\_CONFUSION = MISSING  
IMP\_ANXIETY = MISSING  
STAB\_ANXIETY = MISSING  
IMP\_BEHAVIOR = MISSING  
UTIL\_EMERGENT = MISSING  
UTIL\_DCCOMM = MISSING  
UTIL\_HOSP = MISSING

# CASE MIX AND ADVERSE EVENT TRANSFORMATION SPECIFICATIONS

This appendix includes pseudo-code for transformation of raw OASIS data into measures that will appear on the

## Assumptions and Conventions

- The following transformations result in data items with numeric values. A code of 'MISSING' indicates that the data item should be given a null value and be excluded from analyses. Where the phrase '**[SHOULD NEVER OCCUR]**' appears, it indicates that the data submitted do not meet the published data specifications, and, in addition to excluding the case from the calculation of summary statistics for that particular measure, the entire case should be considered for exclusion based on the following criteria:
  - If any of the measures designated as **[CRITICAL]** in the list below cannot be calculated because one or more of the '**[SHOULD NEVER OCCUR]**' conditions is met, the entire case should be excluded from all analyses.
  - For the remaining measures (not designated as **[CRITICAL]**) count the number of measures that cannot be calculated because one of the '**[SHOULD NEVER OCCUR]**' conditions is met. If several related measures are calculated from the same OASIS item (e.g., RACE\_1, RACE\_2, and RACE\_3 all depend upon M0140) those measures together should count as one. If the total count is five or more, the entire case should be excluded from all analyses.
- Assessments must have already been matched, i.e., first timepoint of SOC/ROC (RFA = 01, 02, 03) with second timepoint of Transfer/DC (RFA = 06,07,08,09, 10) before these transformations are applied.
- As field names are the same across assessment types, presence of [2] at the end of a field name indicates that this data item is taken from the second timepoint. For example, M0100\_ASSMT\_REASON refers to the 'Reason for Assessment' item at the first timepoint. M0640\_CUR\_GROOMING[2] refers to the 'Ability to Groom Oneself' item at the second timepoint. Although some data items are collected at only one of the two timepoints, the [2] convention is used for all items to avoid confusion and possible misinterpretation. Note, however, that for all Case Mix measures except those related to length of stay, data from the second time point are not used.
- Where multiple values can result in the same transformation, a comma is used in place of a logical 'OR', e.g., IF ITEM1 = 0,1 is the equivalent of IF ITEM1 = 0 OR ITEM1 = 1.

## **Case Mix Measures**

The measures included in the Case Mix Profile are listed in this section. Those measures that are identified as critical measures must have valid data for a case to be included in analyses.

### **DEMOGRAPHICS**

Age (average in years)	AGE.....[CRITICAL]
Gender: Female (%)	GENDER.....[CRITICAL]
Race: Black (%)	RACE_1
Race: White (%)	RACE_2
Race: Other (%)	RACE_3

### **PAYMENT SOURCE**

Any Medicare (%)	PAY_1
Any Medicaid (%)	PAY_2
Any HMO (%)	PAY_3
Medicare HMO (%)	PAY_4
Any third party (%)	PAY_5

### **CURRENT RESIDENCE**

Own home (%)	RESIDE_1
Family member home (%)	RESIDE_2

### **CURRENT LIVING SITUATION**

Lives alone (%)	LIVE_1
With family member (%)	LIVE_2
With friend (%)	LIVE_3
With paid help (%)	LIVE_4

### **ASSISTING PERSONS**

Person residing in home (%)	HELP_1
Person residing outside home (%)	HELP_2
Paid help (%)	HELP_3

### **PRIMARY CAREGIVER**

Spouse/significant other (%)	CARE_1
Daughter/son (%)	CARE_2
Paid help (%)	CARE_3
No one person (%)	CARE_4

### **PRIMARY CAREGIVER ASSISTANCE**

Freq. of assistance (0-6, scale avg.)	FREQASST
---------------------------------------	----------

### **INPATIENT DC WITHIN 14 DAYS OF SOC**

From hospital (%)	INPT_1.....[CRITICAL]
From rehab facility (%)	INPT_2
From nursing home (%)	INPT_3

### **MED. REG. CHG. W/IN 14 DAYS OF SOC**

Medical regimen change (%)	MEDREG.....[CRITICAL]
----------------------------	-----------------------

**PROGNOSES**

Moderate recovery prognosis (%)                    PROG  
Good rehab prognosis (%)                            REHAB

**ADL DISABILITIES AT SOC**

Grooming (0-3, scale average)                    GROOMING  
Dress upper body (0-3, scale avg.)                UPPERDRESS  
Dress lower body (0-3, scale avg.)                LOWERDRESS  
Bathing (0-5, scale average)                    BATHING  
Toileting (0-4, scale average)                    TOILETING  
Transferring (0-5, scale average)                TRANSFERRING  
Ambulation (0-5, scale average)                 AMBULATION  
Eating (0-5, scale average)                      EATING

**ADL STATUS PRIOR TO SOC**

Grooming (0-3, scale average)                    P\_GROOMING  
Dress upper body (0-3, scale avg.)                P\_UPPERDRESS  
Dress lower body (0-3, scale avg.)                P\_LOWERDRESS  
Bathing (0-5, scale average)                    P\_BATHING  
Toileting (0-4, scale average)                    P\_TOILETING  
Transferring (0-5, scale average)                P\_TRANSFERRING  
Ambulation (0-5, scale average)                 P\_AMBULATION  
Eating (0-5, scale average)                      P\_EATING

**IADL DISABILITIES AT SOC**

Light meal prep (0-2, scale avg.)                MEALPREP  
Transportation (0-2, scale avg.)                 TRANSPORT  
Laundry (0-2, scale average)                    LAUNDRY  
Housekeeping (0-4, scale avg.)                 HOUSEKEEPING  
Shopping (0-3, scale average)                    SHOPPING  
Phone use (0-5, scale average)                 PHONEUSE  
Mgmt. oral meds (0-2, scale avg.)                ORALMEDS

**IADL STATUS PRIOR TO SOC**

Light meal prep (0-2, scale avg.)                P\_MEALPREP  
Transportation (0-2, scale avg.)                 P\_TRANSPORT  
Laundry (0-2, scale average)                    P\_LAUNDRY  
Housekeeping (0-4, scale avg.)                 P\_HOUSEKEEPING  
Shopping (0-3, scale average)                    P\_SHOPPING  
Phone use (0-5, scale average)                 P\_PHONEUSE  
Mgmt. oral meds (0-2, scale avg.)                P\_ORALMEDS

**RESPIRATORY STATUS**

Dyspnea (0-4, scale average)                    DYSPNEA

**THERAPIES RECEIVED AT HOME**

IV/infusion therapy (%)                         IVTHER\_1  
Parenteral nutrition (%)                         IVTHER\_2  
Enteral nutrition (%)                              IVTHER\_3

**SENSORY STATUS**

Vision impairment (0-2, scale avg.)	VISION
Hearing impair. (0-4, scale avg.)	HEARING
Speech/language (0-5, scale avg.)	SPEECH

**PAIN**

Pain interfer. w/activity (0-3, scale avg.)	PAIN
Intractable pain (%)	INTPAIN

**NEURO/EMOTIONAL/BEHAVIORAL STATUS**

Moderate cognitive disability (%)	COGNITIVE
Severe confusion disability (%)	CONFUSION
Severe anxiety level (%)	ANXIETY
Behav probs > twice a week (%)	BEHPROB

**INTEGUMENTARY STATUS**

Presence of wound/lesion (%)	WOUND.....[CRITICAL]
Stasis ulcer(s) present (%)	STASIS
Surgical wound(s) present (%)	SURGICAL
Pressure ulcer(s) present (%)	PRESSURE
Stage 2-4 ulcer(s) present (%)	ULC_1
Stage 3-4 ulcer(s) present (%)	ULC_2

**ELIMINATION STATUS**

UTI within past 14 days (%)	UTI
Urinary incont./catheter present (%)	URINARY
Incontinent day and night (%)	INCONT
Urinary catheter (%)	CATHETER
Bowel incont. (0-5, scale avg.)	BOWEL

**ACUTE CONDITIONS**

Orthopedic (%)	ACUTE_1
Neurologic (%)	ACUTE_2
Open wounds/lesions (%)	ACUTE_3
Terminal condition (%)	ACUTE_4
Cardiac/peripheral vascular (%)	ACUTE_5
Pulmonary (%)	ACUTE_6
Diabetes mellitus (%)	ACUTE_7
Gastrointestinal disorder (%)	ACUTE_8
Contagious/communicable (%)	ACUTE_9
Urinary incont./catheter (%)	ACUTE_10 .....[CRITICAL]
Mental/emotional (%)	ACUTE_11
Oxygen therapy (%)	ACUTE_12
IV/infusion therapy (%)	ACUTE_13
Enteral/parenteral nutrition (%)	ACUTE_14
Ventilator (%)	ACUTE_15



**CHRONIC CONDITIONS**

Dependence in living skills (%)	CHRONIC_1
Dependence in personal care (%)	CHRONIC_2
Impaired ambulation/mobility (%)	CHRONIC_3
Eating disability (%)	CHRONIC_4
Urinary incontinence/catheter (%)	CHRONIC_5
Dependence in med. admin. (%)	CHRONIC_6
Chronic pain (%)	CHRONIC_7
Cognitive/mental/behavioral (%)	CHRONIC_8
Chronic pt. with caregiver (%)	CHRONIC_9

**DIAGNOSES FOR WHICH PATIENTS ARE RECEIVING HOME CARE**

Infectious/parasitic diseases (%)	DIAG_1.....[CRITICAL]
Neoplasms (%)	DIAG_2.....[CRITICAL]
Endocrine/nutrit./metabolic (%)	DIAG_3.....[CRITICAL]
Blood diseases (%)	DIAG_4.....[CRITICAL]
Mental diseases (%)	DIAG_5.....[CRITICAL]
Nervous system diseases (%)	DIAG_6.....[CRITICAL]
Circulatory system diseases (%)	DIAG_7.....[CRITICAL]
Respiratory system diseases (%)	DIAG_8.....[CRITICAL]
Digestive system diseases (%)	DIAG_9.....[CRITICAL]
Genitourinary sys. diseases (%)	DIAG_10.....[CRITICAL]
Pregnancy problems (%)	DIAG_11.....[CRITICAL]
Skin/subcutaneous diseases (%)	DIAG_12.....[CRITICAL]
Musculoskeletal sys. diseases (%)	DIAG_13.....[CRITICAL]
Congenital anomalies (%)	DIAG_14.....[CRITICAL]
Ill-defined conditions (%)	DIAG_15.....[CRITICAL]
Fractures (%)	DIAG_16.....[CRITICAL]
Intracranial injury (%)	DIAG_17.....[CRITICAL]
Other injury (%)	DIAG_18.....[CRITICAL]
Iatrogenic conditions (%)	DIAG_19.....[CRITICAL]

**LENGTH OF STAY**

LOS until discharge (avg. in days)	LOS_DAYS.....[CRITICAL]
LOS from 1 to 31 days (%)	LOS_1MO
LOS from 32 to 62 days (%)	LOS_2MO
LOS from 63 to 124 days (%)	LOS_3MO
LOS more than 124 days (%)	LOS_4MO

## **CASE MIX DATA TRANSFORMATION PSEUDO-CODE**

**(NOTE: *Italicized text is not part of code*)**

### **Demographics**

**IF** M0090\_INFO\_COMPLETED\_DT[**YEAR**] = **INVALID** OR M0066\_PAT\_BIRTH\_DT[**YEAR**] = **INVALID**

**THEN** AGE = **MISSING** **['SHOULD NEVER OCCUR']**

**ELSE IF** M0090\_INFO\_COMPLETED\_DT[**MONTH**] > M0066\_PAT\_BIRTH\_DT[**MONTH**] OR  
(M0090\_INFO\_COMPLETED\_DT[**MONTH**] = M0066\_PAT\_BIRTH\_DT[**MONTH**] AND  
M0090\_INFO\_COMPLETED\_DT[**DAY**] – M0066\_PAT\_BIRTH\_DT[**DAY**])

**THEN**

AGE = M0090\_INFO\_COMPLETED\_DT[**YEAR**] – M0066\_PAT\_BIRTH\_DT[**YEAR**]

**ELSE**

AGE = (M0090\_INFO\_COMPLETED\_DT[**YEAR**] – M0066\_PAT\_BIRTH\_DT[**YEAR**]) - 1

**IF** M0069\_PAT\_GENDER = 2

**THEN** GENDER = 1

**ELSE IF** M0069\_PAT\_GENDER = 1

**THEN** GENDER = 0

**ELSE** GENDER = **MISSING** **['SHOULD NEVER OCCUR']**

**IF** M0140\_ETHNIC\_AI\_AN NOT = 0,1 OR M0140\_ETHNIC\_ASIAN NOT = 0,1 OR  
M0140\_ETHNIC\_BLACK NOT = 0,1 OR M0140\_ETHNIC\_HISP NOT = 0,1 OR  
M0140\_ETHNIC\_NH\_PI NOT = 0,1 OR M0140\_ETHNIC\_WHITE NOT = 0,1

**THEN**

RACE\_1 = **MISSING**

RACE\_2 = **MISSING**

RACE\_3 = **MISSING**

**['SHOULD NEVER OCCUR']**

**ELSE IF** M0140\_ETHNIC\_UK = 1

**THEN**

RACE\_1 = **MISSING**

RACE\_2 = **MISSING**

RACE\_3 = **MISSING**

**ELSE**

**IF** M0140\_ETHNIC\_BLACK = 1

**THEN** RACE\_1 = 1

**ELSE IF** M0140\_ETHNIC\_BLACK = 0

**THEN** RACE\_1 = 0

**IF** M0140\_ETHNIC\_WHITE = 1

**THEN** RACE\_2 = 1

**ELSE IF** M0140\_ETHNIC\_WHITE = 0

**THEN** RACE\_2 = 0

**IF** M0140\_ETHNIC\_BLACK = 0 AND M0140\_ETHNIC\_WHITE = 0

**THEN** RACE\_3 = 1

**ELSE IF** M0140\_ETHNIC\_BLACK = 1 OR M0140\_ETHNIC\_WHITE = 1

**THEN** RACE\_3 = 0

**Payment Source**

**IF** M0150\_CPAY\_MCARE\_FFS NOT = 0,1 OR M0150\_CPAY\_MCARE\_HMO NOT = 0,1 OR  
M0150\_CPAY\_MCAID\_FFS NOT = 0,1 OR M0150\_CPAY\_MCAID\_HMO NOT = 0,1 OR  
M0150\_CPAY\_PRIV\_HMO NOT = 0,1 OR M0150\_CPAY\_PRIV\_INS NOT = 0,1

**THEN**

PAY\_1 = MISSING  
PAY\_2 = MISSING  
PAY\_3 = MISSING  
PAY\_4 = MISSING  
PAY\_5 = MISSING

**[SHOULD NEVER OCCUR]**

**ELSE IF** M0150\_CPAY\_UNKNOWN = 1

**THEN**

PAY\_1 = MISSING  
PAY\_2 = MISSING  
PAY\_3 = MISSING  
PAY\_4 = MISSING  
PAY\_5 = MISSING

**ELSE**

**IF** M0150\_CPAY\_MCARE\_FFS = 1 OR M0150\_CPAY\_MCARE\_HMO = 1

**THEN** PAY\_1 = 1

**ELSE IF** M0150\_CPAY\_MCARE\_FFS = 0 AND M0150\_CPAY\_MCARE\_HMO = 0

**THEN** PAY\_1 = 0

**IF** M0150\_CPAY\_MCAID\_FFS = 1 OR M0150\_CPAY\_MCAID\_HMO = 1

**THEN** PAY\_2 = 1

**ELSE IF** M0150\_CPAY\_MCAID\_FFS = 0 AND M0150\_CPAY\_MCAID\_HMO = 0

**THEN** PAY\_2 = 0

**IF** M0150\_CPAY\_MCARE\_HMO = 1 OR M0150\_CPAY\_MCAID\_HMO = 1 OR  
M0150\_CPAY\_PRIV\_HMO = 1

**THEN** PAY\_3 = 1

**ELSE IF** M0150\_CPAY\_MCARE\_HMO = 0 AND M0150\_CPAY\_MCAID\_HMO = 0 AND  
M0150\_CPAY\_PRIV\_HMO = 0

**THEN** PAY\_3 = 0

**IF** M0150\_CPAY\_MCARE\_HMO = 1

**THEN** PAY\_4 = 1

**ELSE IF** M0150\_CPAY\_MCARE\_HMO = 0

**THEN** PAY\_4 = 0

**IF** M0150\_CPAY\_PRIV\_HMO = 1 OR M0150\_CPAY\_PRIV\_INS = 1

**THEN** PAY\_5 = 1

**ELSE IF** M0150\_CPAY\_PRIV\_HMO = 0 AND M0150\_CPAY\_PRIV\_INS = 0

**THEN** PAY\_5 = 0

**Current Residence**

IF M0300\_CURR\_RESIDENCE = 01  
    **THEN** RESIDE\_1 = 1  
**ELSE IF** M0300\_CURR\_RESIDENCE = 02, 03, 04, 05  
    **THEN** RESIDE\_1 = 0  
**ELSE** RESIDE\_1 = MISSING           **'[SHOULD NEVER OCCUR]**

IF M0300\_CURR\_RESIDENCE = 02  
    **THEN** RESIDE\_2 = 1  
**ELSE IF** M0300\_CURR\_RESIDENCE = 01, 03, 04, 05  
    **THEN** RESIDE\_2 = 0  
**ELSE** RESIDE\_2 = MISSING           **'[SHOULD NEVER OCCUR]**

IF (M0340\_LIV\_ALONE = 1) AND (M0340\_LIV\_SPOUSE = 1 OR M0340\_LIV\_OTH\_FAMILY = 1 OR M0340\_LIV\_FRIEND = 1 OR M0340\_LIV\_PD\_HELP = 1 OR M0340\_LIV\_OTHER = 1)  
    **THEN**  
        LIVE\_1 = MISSING  
        LIVE\_2 = MISSING  
        LIVE\_3 = MISSING  
        LIVE\_4 = MISSING  
   **'[SHOULD NEVER OCCUR]**

**Current Living Situation**

IF M0340\_LIV\_ALONE = 1  
    **THEN** LIVE\_1 = 1  
**ELSE IF** M0340\_LIV\_ALONE = 0  
    **THEN** LIVE\_1 = 0  
**ELSE** LIVE\_1 = MISSING           **'[SHOULD NEVER OCCUR]**

IF M0340\_LIV\_SPOUSE = 1 OR M0340\_LIV\_OTH\_FAMILY = 1  
    **THEN** LIVE\_2 = 1  
**ELSE IF** M0340\_LIV\_SPOUSE = 0 AND M0340\_LIV\_OTH\_FAMILY = 0  
    **THEN** LIVE\_2 = 0  
**ELSE** LIVE\_2 = MISSING           **'[SHOULD NEVER OCCUR]**

IF M0340\_LIV\_FRIEND = 1  
    **THEN** LIVE\_3 = 1  
**ELSE IF** M0340\_LIV\_FRIEND = 0  
    **THEN** LIVE\_3 = 0  
**ELSE** LIVE\_3 = MISSING           **'[SHOULD NEVER OCCUR]**

IF M0340\_LIV\_PD\_HELP = 1  
    **THEN** LIVE\_4 = 1  
**ELSE IF** M0340\_LIV\_PD\_HELP = 0  
    **THEN** LIVE\_4 = 0  
**ELSE** LIVE\_4 = MISSING           **'[SHOULD NEVER OCCUR]**

**Assisting Persons**

**IF** M0350\_AP\_HM\_RESIDENT NOT = 0,1 OR M0350\_AP\_REL\_FRIEND NOT = 0,1 OR  
M0350\_AP\_PD\_HELP NOT = 0,1

**THEN**

HELP\_1 = MISSING

HELP\_2 = MISSING

HELP\_3 = MISSING

**‘[SHOULD NEVER OCCUR]**

**ELSE IF** M0350\_AP\_UNKNOWN = 1

**THEN**

HELP\_1 = MISSING

HELP\_2 = MISSING

HELP\_3 = MISSING

**ELSE**

**IF** M0350\_AP\_HM\_RESIDENT = 1

**THEN** HELP\_1 = 1

**ELSE IF** M0350\_AP\_HM\_RESIDENT = 0

**THEN** HELP\_1 = 0

**IF** M0350\_AP\_REL\_FRIEND = 1

**THEN** HELP\_2 = 1

**ELSE IF** M0350\_AP\_REL\_FRIEND = 0

**THEN** HELP\_2 = 0

**IF** M0350\_AP\_PD\_HELP = 1

**THEN** HELP\_3 = 1

**ELSE IF** M0350\_AP\_PD\_HELP = 0

**THEN** HELP\_3 = 0

**Primary Caregiver**

**IF** M0360\_PRIMARY\_CAREGIVER NOT = 00,01,02,03,04,05,UK AND M0350\_AP\_NONE NOT  
= 1 AND M0350\_UNKNOWN NOT = 1

**THEN**

CARE\_1 = MISSING

CARE\_2 = MISSING

CARE\_3 = MISSING

CARE\_4 = MISSING

**‘[SHOULD NEVER OCCUR]**

**ELSE IF** M0360\_PRIMARY\_CAREGIVER = UK OR M0350\_UNKNOWN = 1

**THEN**

CARE\_1 = MISSING

CARE\_2 = MISSING

CARE\_3 = MISSING

CARE\_4 = MISSING

**ELSE**

**IF** M0360\_PRIMARY\_CAREGIVER = 01

**THEN** CARE\_1 = 1

**ELSE IF** (M0360\_PRIMARY\_CAREGIVER = 00,02,03,04,05) OR M0350\_AP\_NONE = 1

**THEN** CARE\_1 = 0

IF M0360\_PRIMARY\_CAREGIVER = 02  
 THEN CARE\_2 = 1  
 ELSE IF (M0360\_PRIMARY\_CAREGIVER = 00,01,03,04,05) OR M0350\_AP\_NONE = 1  
 THEN CARE\_2 = 0

IF M0360\_PRIMARY\_CAREGIVER = 05  
 THEN CARE\_3 = 1  
 ELSE IF (M0360\_PRIMARY\_CAREGIVER = 00,01,02,03,04) OR M0350\_AP\_NONE = 1  
 THEN CARE\_3 = 0

IF M0360\_PRIMARY\_CAREGIVER = 00 OR M0350\_AP\_NONE = 1  
 THEN CARE\_4 = 1  
 ELSE IF (M0360\_PRIMARY\_CAREGIVER = 01,02,03,04,05)  
 THEN CARE\_4 = 0

**Primary Caregiver Assistance**

IF M0360\_PRIMARY\_CAREGIVER = 00 OR M0350\_AP\_NONE = 1  
 THEN FREQASST = 0  
 ELSE IF M0370\_FREQ\_PRM\_ASSTANCE = 06  
 THEN FREQASST = 1  
 ELSE IF M0370\_FREQ\_PRM\_ASSTANCE = 05  
 THEN FREQASST = 2  
 ELSE IF M0370\_FREQ\_PRM\_ASSTANCE = 04  
 THEN FREQASST = 3  
 ELSE IF M0370\_FREQ\_PRM\_ASSTANCE = 03  
 THEN FREQASST = 4  
 ELSE IF M0370\_FREQ\_PRM\_ASSTANCE = 02  
 THEN FREQASST = 5  
 ELSE IF M0370\_FREQ\_PRM\_ASSTANCE = 01  
 THEN FREQASST = 6  
 ELSE IF M0360\_PRIMARY\_CAREGIVER = UK OR M0350\_UNKNOWN = 1 OR  
 M0370\_FREQ\_PRM\_ASSTANCE = UK  
 THEN FREQASST = MISSING  
 ELSE FREQASST = MISSING [SHOULD NEVER OCCUR]

**Inpatient Discharge within 14 Days of SOC**

IF VERSION\_CD2 = "01.10" THEN  
 IF M0175\_DC\_HOSP\_14\_DAYS NOT = 0,1 OR M0175\_REHAB\_14\_DAYS NOT = 0,1  
 OR M0175\_DC\_SNF\_14\_DAYS NOT = 0,1 OR M0175\_DC\_NH\_14\_DAYS NOT = 0,1  
 THEN  
 INPT\_1 = MISSING  
 INPT\_2 = MISSING  
 INPT\_3 = MISSING  
 [SHOULD NEVER OCCUR]  
 ELSE  
 IF M0175\_DC\_HOSP\_14\_DAYS = 1  
 THEN INPT\_1 = 1  
 ELSE IF M0175\_DC\_HOSP\_14\_DAYS = 0  
 THEN INPT\_1 = 0

```

IF M0175_REHAB_14_DAYS = 1
    THEN INPT_2 = 1
ELSE IF M0175_REHAB_14_DAYS = 0
    THEN INPT_2 = 0

IF M0175_DC_SNF_14_DAYS = 1 OR M0175_DC_NH_14_DAYS= 1
    THEN INPT_3 = 1
ELSE IF M0175_DC_SNF_14_DAYS = 0 AND M0175_DC_NH_14_DAYS= 0
    THEN INPT_3 = 0
ELSE
IF M0170_DC_HOSP_14_DAYS NOT = 0,1 OR M0170_REHAB_14_DAYS NOT = 0,1
OR M0170_NURS_HOME_14_DAYS NOT = 0,1
    THEN
        INPT_1 = MISSING
        INPT_2 = MISSING
        INPT_3 = MISSING
        '[SHOULD NEVER OCCUR]'
ELSE
IF M0170_DC_HOSP_14_DAYS = 1
    THEN INPT_1 = 1
ELSE IF M0170_DC_HOSP_14_DAYS = 0
    THEN INPT_1 = 0

IF M0170_REHAB_14_DAYS = 1
    THEN INPT_2 = 1
ELSE IF M0170_REHAB_14_DAYS = 0
    THEN INPT_2 = 0

IF M0170_NURS_HOME_14_DAYS = 1
    THEN INPT_3 = 1
ELSE IF M0170_NURS_HOME_14_DAYS = 0
    THEN INPT_3 = 0

```

**Medical Regimen Changewithin 14 Days of SOC**

```

IF M0200_REG_CHG_14_DAYS = 0
    THEN MEDREG = 0
IF M0200_REG_CHG_14_DAYS = 1
    THEN MEDREG = 1
ELSE MEDREG = MISSING        '[SHOULD NEVER OCCUR]'

```

**Prognoses**

```

IF M0260_OVERALL_PROGNOSIS = 00
    THEN PROG = 0
ELSE IF M0260_OVERALL_PROGNOSIS = 01
    THEN PROG = 1
ELSE IF M0260_OVERALL_PROGNOSIS = UK
    THEN PROG = MISSING
ELSE PROG = MISSING        '[SHOULD NEVER OCCUR]'

```

IF M0270\_REHAB\_PROGNOSIS = 00  
    **THEN** REHAB = 0  
**ELSE IF** M0270\_REHAB\_PROGNOSIS = 01  
    **THEN** REHAB = 1  
**ELSE IF** M0270\_REHAB\_PROGNOSIS = UK  
    **THEN** REHAB = MISSING  
**ELSE** REHAB = MISSING      **'[SHOULD NEVER OCCUR]**

**ADL Disabilities at SOC**

IF M0640\_CUR\_GROOMING = 00  
    **THEN** GROOMING = 0  
**ELSE IF** M0640\_CUR\_GROOMING = 01  
    **THEN** GROOMING = 1  
**ELSE IF** M0640\_CUR\_GROOMING = 02  
    **THEN** GROOMING = 2  
**ELSE IF** M0640\_CUR\_GROOMING = 03  
    **THEN** GROOMING = 3  
**ELSE** GROOMING = MISSING      **'[SHOULD NEVER OCCUR]**

IF M0650\_CUR\_DRESS\_UPPER = 00  
    **THEN** UPPERDRESS = 0  
**ELSE IF** M0650\_CUR\_DRESS\_UPPER = 01  
    **THEN** UPPERDRESS = 1  
**ELSE IF** M0650\_CUR\_DRESS\_UPPER = 02  
    **THEN** UPPERDRESS = 2  
**ELSE IF** M0650\_CUR\_DRESS\_UPPER = 03  
    **THEN** UPPERDRESS = 3  
**ELSE** UPPERDRESS = MISSING      **'[SHOULD NEVER OCCUR]**

IF M0660\_CUR\_DRESS\_LOWER = 00  
    **THEN** LOWERDRESS = 0  
**ELSE IF** M0660\_CUR\_DRESS\_LOWER = 01  
    **THEN** LOWERDRESS = 1  
**ELSE IF** M0660\_CUR\_DRESS\_LOWER = 02  
    **THEN** LOWERDRESS = 2  
**ELSE IF** M0660\_CUR\_DRESS\_LOWER = 03  
    **THEN** LOWERDRESS = 3  
**ELSE** LOWERDRESS = MISSING      **'[SHOULD NEVER OCCUR]**



**IF** M0670\_CUR\_BATHING = 00  
    **THEN** BATHING = 0  
**ELSE IF** M0670\_CUR\_BATHING = 01  
    **THEN** BATHING = 1  
**ELSE IF** M0670\_CUR\_BATHING = 02  
    **THEN** BATHING = 2  
**ELSE IF** M0670\_CUR\_BATHING = 03  
    **THEN** BATHING = 3  
**ELSE IF** M0670\_CUR\_BATHING = 04  
    **THEN** BATHING = 4  
**ELSE IF** M0670\_CUR\_BATHING = 05  
    **THEN** BATHING = 5  
**ELSE** BATHING = MISSING           **'[SHOULD NEVER OCCUR]**

**IF** M0680\_CUR\_TOILETING = 00  
    **THEN** TOILETING = 0  
**ELSE IF** M0680\_CUR\_TOILETING = 01  
    **THEN** TOILETING = 1  
**ELSE IF** M0680\_CUR\_TOILETING = 02  
    **THEN** TOILETING = 2  
**ELSE IF** M0680\_CUR\_TOILETING = 03  
    **THEN** TOILETING = 3  
**ELSE IF** M0680\_CUR\_TOILETING = 04  
    **THEN** TOILETING = 4  
**ELSE** TOILETING = MISSING           **'[SHOULD NEVER OCCUR]**

**IF** M0690\_CUR\_TRANSFERRING = 00  
    **THEN** TRANSFERRING = 0  
**ELSE IF** M0690\_CUR\_TRANSFERRING = 01  
    **THEN** TRANSFERRING = 1  
**ELSE IF** M0690\_CUR\_TRANSFERRING = 02  
    **THEN** TRANSFERRING = 2  
**ELSE IF** M0690\_CUR\_TRANSFERRING = 03  
    **THEN** TRANSFERRING = 3  
**ELSE IF** M0690\_CUR\_TRANSFERRING = 04  
    **THEN** TRANSFERRING = 4  
**ELSE IF** M0690\_CUR\_TRANSFERRING = 05  
    **THEN** TRANSFERRING = 5  
**ELSE** TRANSFERRING = MISSING           **'[SHOULD NEVER OCCUR]**

IF M0700\_CUR\_AMBULATION = 00  
    THEN AMBULATION = 0  
ELSE IF M0700\_CUR\_AMBULATION = 01  
    THEN AMBULATION = 1  
ELSE IF M0700\_CUR\_AMBULATION = 02  
    THEN AMBULATION = 2  
ELSE IF M0700\_CUR\_AMBULATION = 03  
    THEN AMBULATION = 3  
ELSE IF M0700\_CUR\_AMBULATION = 04  
    THEN AMBULATION = 4  
ELSE IF M0700\_CUR\_AMBULATION = 05  
    THEN AMBULATION = 5  
ELSE AMBULATION = MISSING     '[SHOULD NEVER OCCUR]

IF M0710\_CUR\_FEEDING = 00  
    THEN EATING = 0  
ELSE IF M0710\_CUR\_FEEDING = 01  
    THEN EATING = 1  
ELSE IF M0710\_CUR\_FEEDING = 02  
    THEN EATING = 2  
ELSE IF M0710\_CUR\_FEEDING = 03  
    THEN EATING = 3  
ELSE IF M0710\_CUR\_FEEDING = 04  
    THEN EATING = 4  
ELSE IF M0710\_CUR\_FEEDING = 05  
    THEN EATING = 5  
ELSE EATING = MISSING     '[SHOULD NEVER OCCUR]

**ADL Status Prior to SOC**

IF M0640\_PR\_GROOMING = 00  
    THEN P\_GROOMING = 0  
ELSE IF M0640\_PR\_GROOMING = 01  
    THEN P\_GROOMING = 1  
ELSE IF M0640\_PR\_GROOMING = 02  
    THEN P\_GROOMING = 2  
ELSE IF M0640\_PR\_GROOMING = 03  
    THEN P\_GROOMING = 3  
ELSE IF M0640\_PR\_GROOMING = UK  
    THEN P\_GROOMING = MISSING  
ELSE P\_GROOMING = MISSING     '[SHOULD NEVER OCCUR]

```
IF M0650_PR_DRESS_UPPER = 00
    THEN P_UPPERDRESS = 0
ELSE IF M0650_PR_DRESS_UPPER = 01
    THEN P_UPPERDRESS = 1
ELSE IF M0650_PR_DRESS_UPPER = 02
    THEN P_UPPERDRESS = 2
ELSE IF M0650_PR_DRESS_UPPER = 03
    THEN P_UPPERDRESS = 3
ELSE IF M0650_PR_DRESS_UPPER = UK
    THEN P_UPPERDRESS = MISSING
ELSE P_UPPERDRESS = MISSING      '[SHOULD NEVER OCCUR]
```

```
IF M0660_PR_DRESS_LOWER = 00
    THEN P_LOWERDRESS = 0
ELSE IF M0660_PR_DRESS_LOWER = 01
    THEN P_LOWERDRESS = 1
ELSE IF M0660_PR_DRESS_LOWER = 02
    THEN P_LOWERDRESS = 2
ELSE IF M0660_PR_DRESS_LOWER = 03
    THEN P_LOWERDRESS = 3
ELSE IF M0660_PR_DRESS_LOWER = UK
    THEN P_LOWERDRESS = MISSING
ELSE P_LOWERDRESS = MISSING      '[SHOULD NEVER OCCUR]
```

```
IF M0670_PR_BATHING = 00
    THEN P_BATHING = 0
ELSE IF M0670_PR_BATHING = 01
    THEN P_BATHING = 1
ELSE IF M0670_PR_BATHING = 02
    THEN P_BATHING = 2
ELSE IF M0670_PR_BATHING = 03
    THEN P_BATHING = 3
ELSE IF M0670_PR_BATHING = 04
    THEN P_BATHING = 4
ELSE IF M0670_PR_BATHING = 05
    THEN P_BATHING = 5
ELSE IF M0670_PR_BATHING = UK
    THEN P_BATHING = MISSING
ELSE P_BATHING = MISSING      '[SHOULD NEVER OCCUR]
```

```

IF M0680_PR_TOILETING = 00
    THEN P_TOILETING = 0
ELSE IF M0680_PR_TOILETING = 01
    THEN P_TOILETING = 1
ELSE IF M0680_PR_TOILETING = 02
    THEN P_TOILETING = 2
ELSE IF M0680_PR_TOILETING = 03
    THEN P_TOILETING = 3
ELSE IF M0680_PR_TOILETING = 04
    THEN P_TOILETING = 4
ELSE IF M0680_PR_TOILETING = UK
    THEN P_TOILETING = MISSING
ELSE P_TOILETING = MISSING      '[SHOULD NEVER OCCUR]'

```

```

IF M0690_PR_TRANSFERRING = 00
    THEN P_TRANSFERRING = 0
ELSE IF M0690_PR_TRANSFERRING = 01
    THEN P_TRANSFERRING = 1
ELSE IF M0690_PR_TRANSFERRING = 02
    THEN P_TRANSFERRING = 2
ELSE IF M0690_PR_TRANSFERRING = 03
    THEN P_TRANSFERRING = 3
ELSE IF M0690_PR_TRANSFERRING = 04
    THEN P_TRANSFERRING = 4
ELSE IF M0690_PR_TRANSFERRING = 05
    THEN P_TRANSFERRING = 5
ELSE IF M0690_PR_TRANSFERRING = UK
    THEN P_TRANSFERRING = MISSING
ELSE P_TRANSFERRING = MISSING      '[SHOULD NEVER OCCUR]'

```

```

IF M0700_PR_AMBULATION = 00
    THEN P_AMBULATION = 0
ELSE IF M0700_PR_AMBULATION = 01
    THEN P_AMBULATION = 1
ELSE IF M0700_PR_AMBULATION = 02
    THEN P_AMBULATION = 2
ELSE IF M0700_PR_AMBULATION = 03
    THEN P_AMBULATION = 3
ELSE IF M0700_PR_AMBULATION = 04
    THEN P_AMBULATION = 4
ELSE IF M0700_PR_AMBULATION = 05
    THEN P_AMBULATION = 5
ELSE IF M0700_PR_AMBULATION = UK
    THEN P_AMBULATION = MISSING
ELSE P_AMBULATION = MISSING      '[SHOULD NEVER OCCUR]'

```

```

IF M0710_PR_FEEDING = 00
    THEN P_EATING = 0
ELSE IF M0710_PR_FEEDING = 01
    THEN P_EATING = 1
ELSE IF M0710_PR_FEEDING = 02
    THEN P_EATING = 2
ELSE IF M0710_PR_FEEDING = 03
    THEN P_EATING = 3
ELSE IF M0710_PR_FEEDING = 04
    THEN P_EATING = 4
ELSE IF M0710_PR_FEEDING = 05
    THEN P_EATING = 5
ELSE IF M0710_PR_FEEDING = UK
    THEN P_EATING = MISSING
ELSE P_EATING = MISSING          '[SHOULD NEVER OCCUR]'

```

**IADL Disabilities at SOC**

```

IF M0720_CUR_PREP_LT_MEALS = 00
    THEN MEALPREP = 0
ELSE IF M0720_CUR_PREP_LT_MEALS = 01
    THEN MEALPREP = 1
ELSE IF M0720_CUR_PREP_LT_MEALS = 02
    THEN MEALPREP = 2
ELSE MEALPREP = MISSING          '[SHOULD NEVER OCCUR]'

```

```

IF M0730_CUR_TRANSPORTATION = 00
    THEN TRANSPORT = 0
ELSE IF M0730_CUR_TRANSPORTATION = 01
    THEN TRANSPORT = 1
ELSE IF M0730_CUR_TRANSPORTATION = 02
    THEN TRANSPORT = 2
ELSE TRANSPORT = MISSING          '[SHOULD NEVER OCCUR]'

```

```

IF M0740_CUR_LAUNDRY = 00
    THEN LAUNDRY = 0
ELSE IF M0740_CUR_LAUNDRY = 01
    THEN LAUNDRY = 1
ELSE IF M0740_CUR_LAUNDRY = 02
    THEN LAUNDRY = 2
ELSE LAUNDRY = MISSING          '[SHOULD NEVER OCCUR]'

```

```
IF M0750_CUR_HOUSEKEEPING = 00
  THEN HOUSEKEEPING = 0
ELSE IF M0750_CUR_HOUSEKEEPING = 01
  THEN HOUSEKEEPING = 1
ELSE IF M0750_CUR_HOUSEKEEPING = 02
  THEN HOUSEKEEPING = 2
ELSE IF M0750_CUR_HOUSEKEEPING = 03
  THEN HOUSEKEEPING = 3
ELSE IF M0750_CUR_HOUSEKEEPING = 04
  THEN HOUSEKEEPING = 4
ELSE HOUSEKEEPING = MISSING      '[SHOULD NEVER OCCUR]
```

```
IF M0760_CUR_SHOPPING = 00
  THEN SHOPPING = 0
ELSE IF M0760_CUR_SHOPPING = 01
  THEN SHOPPING = 1
ELSE IF M0760_CUR_SHOPPING = 02
  THEN SHOPPING = 2
ELSE IF M0760_CUR_SHOPPING = 03
  THEN SHOPPING = 3
ELSE SHOPPING = MISSING          '[SHOULD NEVER OCCUR]
```

```
IF M0770_CUR_PHONE_USE = 00
  THEN PHONEUSE = 0
ELSE IF M0770_CUR_PHONE_USE = 01
  THEN PHONEUSE = 1
ELSE IF M0770_CUR_PHONE_USE = 02
  THEN PHONEUSE = 2
ELSE IF M0770_CUR_PHONE_USE = 03
  THEN PHONEUSE = 3
ELSE IF M0770_CUR_PHONE_USE = 04
  THEN PHONEUSE = 4
ELSE IF M0770_CUR_PHONE_USE = 05
  THEN PHONEUSE = 5
ELSE IF M0770_CUR_PHONE_USE = NA
  THEN PHONEUSE = MISSING
ELSE PHONEUSE = MISSING          '[SHOULD NEVER OCCUR]
```

```
IF M0780_CUR_ORAL_MEDS = 00
  THEN ORALMEDS = 0
ELSE IF M0780_CUR_ORAL_MEDS = 01
  THEN ORALMEDS = 1
ELSE IF M0780_CUR_ORAL_MEDS = 02
  THEN ORALMEDS = 2
ELSE IF M0780_CUR_ORAL_MEDS = NA
  THEN ORALMEDS = MISSING
ELSE ORALMEDS = MISSING          '[SHOULD NEVER OCCUR]
```

**IADL Status Prior to SOC**

**IF M0720\_PR\_PREP\_LT\_MEALS = 00  
THEN P\_MEALPREP = 0  
ELSE IF M0720\_PR\_PREP\_LT\_MEALS = 01  
THEN P\_MEALPREP = 1  
ELSE IF M0720\_PR\_PREP\_LT\_MEALS = 02  
THEN P\_MEALPREP = 2  
ELSE IF M0720\_PR\_PREP\_LT\_MEALS = UK  
THEN P\_MEALPREP = MISSING  
ELSE P\_MEALPREP = MISSING     '**[SHOULD NEVER OCCUR]****

**IF M0730\_PR\_TRANSPORTATION = 00  
THEN P\_TRANSPORT = 0  
ELSE IF M0730\_PR\_TRANSPORTATION = 01  
THEN P\_TRANSPORT = 1  
ELSE IF M0730\_PR\_TRANSPORTATION = 02  
THEN P\_TRANSPORT = 2  
ELSE IF M0730\_PR\_TRANSPORTATION = UK  
THEN P\_TRANSPORT = MISSING  
ELSE P\_TRANSPORT = MISSING     '**[SHOULD NEVER OCCUR]****

**IF M0740\_PR\_LAUNDRY = 00  
THEN P\_LAUNDRY = 0  
ELSE IF M0740\_PR\_LAUNDRY = 01  
THEN P\_LAUNDRY = 1  
ELSE IF M0740\_PR\_LAUNDRY = 02  
THEN P\_LAUNDRY = 2  
ELSE IF M0740\_PR\_LAUNDRY = UK  
THEN P\_LAUNDRY = MISSING  
ELSE P\_LAUNDRY = MISSING     '**[SHOULD NEVER OCCUR]****

**IF M0750\_PR\_HOUSEKEEPING = 00  
THEN P\_HOUSEKEEPING = 0  
ELSE IF M0750\_PR\_HOUSEKEEPING = 01  
THEN P\_HOUSEKEEPING = 1  
ELSE IF M0750\_PR\_HOUSEKEEPING = 02  
THEN P\_HOUSEKEEPING = 2  
ELSE IF M0750\_PR\_HOUSEKEEPING = 03  
THEN P\_HOUSEKEEPING = 3  
ELSE IF M0750\_PR\_HOUSEKEEPING = 04  
THEN P\_HOUSEKEEPING = 4  
ELSE IF M0750\_PR\_HOUSEKEEPING = UK  
THEN P\_HOUSEKEEPING = MISSING  
ELSE P\_HOUSEKEEPING = MISSING     '**[SHOULD NEVER OCCUR]****

```

IF M0760_PR_SHOPPING = 00
  THEN P_SHOPPING = 0
ELSE IF M0760_PR_SHOPPING = 01
  THEN P_SHOPPING = 1
ELSE IF M0760_PR_SHOPPING = 02
  THEN P_SHOPPING = 2
ELSE IF M0760_PR_SHOPPING = 03
  THEN P_SHOPPING = 3
ELSE IF M0760_PR_SHOPPING = UK
  THEN P_SHOPPING = MISSING
ELSE P_SHOPPING = MISSING      '[SHOULD NEVER OCCUR]'

```

```

IF M0770_PR_PHONE_USE = 00
  THEN P_PHONEUSE = 0
ELSE IF M0770_PR_PHONE_USE = 01
  THEN P_PHONEUSE = 1
ELSE IF M0770_PR_PHONE_USE = 02
  THEN P_PHONEUSE = 2
ELSE IF M0770_PR_PHONE_USE = 03
  THEN P_PHONEUSE = 3
ELSE IF M0770_PR_PHONE_USE = 04
  THEN P_PHONEUSE = 4
ELSE IF M0770_PR_PHONE_USE = 05
  THEN P_PHONEUSE = 5
ELSE IF M0770_PR_PHONE_USE = NA,UK
  THEN P_PHONEUSE = MISSING
ELSE P_PHONEUSE = MISSING      '[SHOULD NEVER OCCUR]'

```

```

IF M0780_PR_ORAL_MEDS = 00
  THEN P_ORALMEDS = 0
ELSE IF M0780_PR_ORAL_MEDS = 01
  THEN P_ORALMEDS = 1
ELSE IF M0780_PR_ORAL_MEDS = 02
  THEN P_ORALMEDS = 2
ELSE IF M0780_PR_ORAL_MEDS = NA,UK
  THEN P_ORALMEDS = MISSING
ELSE P_ORALMEDS = MISSING      '[SHOULD NEVER OCCUR]'

```

**Respiratory Status**

```

IF M0490_WHEN_DYSPNEIC = 00
  THEN DYSPNEA = 0
ELSE IF M0490_WHEN_DYSPNEIC = 01
  THEN DYSPNEA = 1
ELSE IF M0490_WHEN_DYSPNEIC = 02
  THEN DYSPNEA = 2
ELSE IF M0490_WHEN_DYSPNEIC = 03
  THEN DYSPNEA = 3
ELSE IF M0490_WHEN_DYSPNEIC = 04
  THEN DYSPNEA = 4
ELSE DYSPNEA = MISSING      '[SHOULD NEVER OCCUR]'

```



**Therapies Received at Home**

**IF** M0250\_THH\_IV\_INFUSION NOT = 0,1 OR M0250\_THH\_PAR\_NUTRITION NOT = 0,1 OR  
M0250\_THH\_ENT\_NUTRITION NOT = 0,1

**THEN**

IVTHER\_1 = MISSING

IVTHER\_2 = MISSING

IVTHER\_3 = MISSING

**[SHOULD NEVER OCCUR]**

**ELSE**

**IF** M0250\_THH\_IV\_INFUSION = 1

**THEN** IVTHER\_1 = 1

**ELSE IF** M0250\_THH\_IV\_INFUSION = 0

**THEN** IVTHER\_1 = 0

**IF** M0250\_THH\_PAR\_NUTRITION = 1

**THEN** IVTHER\_2 = 1

**ELSE IF** M0250\_PAR\_NUTRITION = 0

**THEN** IVTHER\_2 = 0

**IF** M0250\_THH\_ENT\_NUTRITION = 1

**THEN** IVTHER\_3 = 1

**ELSE IF** M0250\_ENT\_NUTRITION = 0

**THEN** IVTHER\_3 = 0

**Sensory Status**

**IF** M0390\_VISION = 00

**THEN** VISION = 0

**ELSE IF** M0390\_VISION = 01

**THEN** VISION = 1

**ELSE IF** M0390\_VISION = 02

**THEN** VISION = 2

**ELSE** VISION = MISSING

**[SHOULD NEVER OCCUR]**

**IF** M0400\_HEARING = 00

**THEN** HEARING = 0

**ELSE IF** M0400\_HEARING = 01

**THEN** HEARING = 1

**ELSE IF** M0400\_HEARING = 02

**THEN** HEARING = 2

**ELSE IF** M0400\_HEARING = 03

**THEN** HEARING = 3

**ELSE IF** M0400\_HEARING = 04

**THEN** HEARING = 4

**ELSE** HEARING = MISSING

**[SHOULD NEVER OCCUR]**

```

IF M0410_SPEECH = 00
    THEN SPEECH = 0
ELSE IF M0410_SPEECH = 01
    THEN SPEECH = 1
ELSE IF M0410_SPEECH = 02
    THEN SPEECH = 2
ELSE IF M0410_SPEECH = 03
    THEN SPEECH = 3
ELSE IF M0410_SPEECH = 04
    THEN SPEECH = 4
ELSE IF M0410_SPEECH = 05
    THEN SPEECH = 5
ELSE SPEECH = MISSING      '[SHOULD NEVER OCCUR]'

```

**Pain**

```

IF M0420_FREQ_PAIN = 00
    THEN PAIN = 0
ELSE IF M0420_FREQ_PAIN = 01
    THEN PAIN = 1
ELSE IF M0420_FREQ_PAIN = 02
    THEN PAIN = 2
ELSE IF M0420_FREQ_PAIN = 03
    THEN PAIN = 3
ELSE PAIN = MISSING      '[SHOULD NEVER OCCUR]'

```

```

IF M0430_INTRACT_PAIN = 1
    THEN INTPAIN = 1
ELSE IF M0430_INTRACT_PAIN = 0
    THEN INTPAIN = 0
ELSE INTPAIN = MISSING   '[SHOULD NEVER OCCUR]'

```

**Neuro/Emotional/Behavioral Status**

```

IF M0560_COG_FUNCTION = 02,03,04
    THEN COGNITIVE = 1
ELSE IF M0560_COG_FUNCTION = 00,01
    THEN COGNITIVE = 0
ELSE COGNITIVE = MISSING '[SHOULD NEVER OCCUR]'

```

```

IF M0570_WHEN_CONFUSED = 03,04
    THEN CONFUSION = 1
ELSE IF M0570_WHEN_CONFUSED = 00,01,02
    THEN CONFUSION = 0
ELSE IF M0570_WHEN_CONFUSED = NA
    THEN CONFUSION = MISSING
ELSE CONFUSION = MISSING '[SHOULD NEVER OCCUR]'

```

**IF** M0580\_WHEN\_ANXIOUS = 02,03  
     **THEN** ANXIETY = 1  
**ELSE IF** M0580\_WHEN\_ANXIOUS = 00,01  
     **THEN** ANXIETY = 0  
**ELSE IF** M0580\_WHEN\_ANXIOUS = NA  
     **THEN** ANXIETY = MISSING  
**ELSE** ANXIETY = MISSING           **'[SHOULD NEVER OCCUR]**

**IF** M0620\_BEH\_PROB\_FREQ = 04,05  
     **THEN** BEHPROB = 1  
**ELSE IF** M0620\_BEH\_PROB\_FREQ = 00,01,02,03  
     **THEN** BEHPROB = 0  
**ELSE** BEHPROB = MISSING           **'[SHOULD NEVER OCCUR]**

**Integumentary Status**

**IF** M0440\_LESION\_OPEN\_WND = 0  
     **THEN** WOUND = 0  
**IF** M0440\_LESION\_OPEN\_WND = 1  
     **THEN** WOUND = 1  
**ELSE** WOUND = MISSING           **'[SHOULD NEVER OCCUR]**

**IF** M0468\_STASIS\_ULCER = 1  
     **THEN** STASIS = 1  
**ELSE IF** M0468\_STASIS\_ULCER = 0 OR M0440\_LESION\_OPEN\_WND = 0  
     **THEN** STASIS = 0  
**ELSE** STASIS = MISSING           **'[SHOULD NEVER OCCUR]**

**IF** M0482\_SURG\_WOUND = 1  
     **THEN** SURGICAL = 1  
**ELSE IF** M0482\_SURG\_WOUND = 0 OR M0440\_LESION\_OPEN\_WND = 0  
     **THEN** SURGICAL = 0  
**ELSE** SURGICAL = MISSING           **'[SHOULD NEVER OCCUR]**

**NOTE:** Pressure ulcer measure indicates presence of at least one pressure ulcer at Stage 1 or higher. Therefore, unobservable (and therefore unstageable) pressure ulcers are excluded from consideration.

**IF** (M0445\_PRESS\_ULCER = 1 AND  
 (M0450\_NBR\_PRSULC\_STG1 NOT = 00,01,02,03,04 OR  
 M0450\_NBR\_PRSULC\_STG2 NOT = 00,01,02,03,04 OR  
 M0450\_NBR\_PRSULC\_STG3 NOT = 00,01,02,03,04 OR  
 M0450\_NBR\_PRSULC\_STG4 NOT = 00,01,02,03,04))  
 OR (M0440\_LESION\_OPEN\_WND =1 AND \_M0445\_PRESS\_ULCER NOT = 0,1)  
 OR M0440\_LESION\_OPEN\_WND NOT =0,1  
     **THEN**  
         PRESSURE = MISSING  
         ULC\_1 = MISSING  
         ULC\_2 = MISSING  
    **'[SHOULD NEVER OCCUR]**

**ELSE**

**IF** M0450\_NBR\_PRSULC\_STG1 = 01,02,03,04 **OR** M0450\_NBR\_PRSULC\_STG2 = 01,02,03,04 **OR** M0450\_NBR\_PRSULC\_STG3 = 01,02,03,04 **OR** M0450\_NBR\_PRSULC\_STG4 = 01,02,03,04

**THEN** PRESSURE = 1

**ELSE** PRESSURE = 0

**IF** M0450\_NBR\_PRSULC\_STG2 = 01,02,03,04 **OR** M0450\_NBR\_PRSULC\_STG3 = 01,02,03,04 **OR** M0450\_NBR\_PRSULC\_STG4 = 01,02,03,04

**THEN** ULC\_1 = 1

**ELSE** ULC\_1 = 0

**IF** M0450\_NBR\_PRSULC\_STG3 = 01,02,03,04 **OR** M0450\_NBR\_PRSULC\_STG4 = 01,02,03,04

**THEN** ULC\_2 = 1

**ELSE** ULC\_2 = 0

### **Elimination Status**

**IF** M0510\_UTI = 00

**THEN** UTI = 0

**ELSE IF** M0510\_UTI = 01

**THEN** UTI = 1

**ELSE IF** M0510\_UTI = NA,UK

**THEN** UTI = MISSING

**ELSE** UTI = MISSING **['SHOULD NEVER OCCUR']**

**IF** M0520\_UR\_INCONT NOT = 00,01,02

**THEN**

URINARY = MISSING

INCONT = MISSING

CATHETER = MISSING

**['SHOULD NEVER OCCUR']**

**ELSE**

**IF** M0520\_UR\_INCONT = 01,02

**THEN** URINARY = 1

**ELSE** URINARY = 0

**IF** M0530\_UR\_INCONT\_OCCURS = 02

**THEN** INCONT = 1

**ELSE IF** M0530\_UR\_INCONT\_OCCURS = 00,01 **OR** M0520\_UR\_INCONT = 00,02

**THEN** INCONT = 0

**ELSE** INCONT = MISSING **['SHOULD NEVER OCCUR']**

**IF** M0520\_UR\_INCONT = 02

**THEN** CATHETER = 1

**ELSE** CATHETER = 0

```

IF M0540_BWL_INCONT = 00
  THEN BOWEL = 0
IF M0540_BWL_INCONT = 01
  THEN BOWEL = 1
IF M0540_BWL_INCONT = 02
  THEN BOWEL = 2
IF M0540_BWL_INCONT = 03
  THEN BOWEL = 3
IF M0540_BWL_INCONT = 04
  THEN BOWEL = 4
IF M0540_BWL_INCONT = 05
  THEN BOWEL = 5
ELSE IF M0540_BWL_INCONT = NA,UK
  THEN BOWEL = MISSING
ELSE BOWEL = MISSING      [SHOULD NEVER OCCUR]

```

### **Acute Conditions**

This is a complex set of transformations based on a combination of data items and select groups of ICD-9 codes. Some data items are used in the computation of several of the measures reported in this section and to simplify the explanation, these frequently used items and ICD-9 code groups will be referred to as follows:

<u>Data Item</u>	<u>Reference</u>
M0170_DC_HOSP_14_DAYS OR M0175_DC_HOSP_14_DAYS	DISCHARGE1
M0170_DC_REHAB_14_DAYS OR M0175_DC_REHAB_14_DAYS	DISCHARGE2
M0170_DC_NURS_HOME_14_DAYS OR M0175_DC_SNF_14_DAYS OR M0175_DC_NH_14_DAYS	DISCHARGE3
M0170_DC_OTHER OR M0175_DC_OTHER	DISCHARGE4
M0190_14_DAY_INP1_ICD	DISICD1
M0190_14_DAY_INP2_ICD	DISICD2
M0200_REG_CHG_14_DAYS	REGIMEN
M0210_CHGREG_ICD1	REGICD1
M0210_CHGREG_ICD2	REGICD2
M0210_CHGREG_ICD3	REGICD3
M0210_CHGREG_ICD4	REGICD4

<u>ICD-9 Codes (Values and ranges listed below are inclusive of 4 or 5 digit codes beginning with the specified three digits.)</u>	<u>Reference</u>
170-171, 213, 274, 710-739, 781, 800-848, 885-887, 895-897, 905, 927-928	GROUP1
045-049, 191-192, 225, 320-326, 330-337, 338, 340-359, 430-438, 850-854, 907, 950-957	GROUP2
707, 870-884, 890-894, 940-949	GROUP3
391, 393-398, 401-405, 410-417, 420-429, 440-448, 451-455, 456_459, 785	GROUP4
011-012, 160-165, 197, 212, 231, 460-466, 470-478, 480-487, 490-496, 500-508, 510-519, 786, 860-862	GROUP5
001-009, 127, 129, 150-154, 156, 159, 211, 230, 530-537, 538, 550-553, 555-558, 560-579, 787, 863	GROUP6
001-018, 020-027, 030-037, 039-057, 060_066, 070-088, 090-104, 110-118, 120-136	GROUP7
290-319, 797	GROUP8

```

IF ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN
GROUP1 OR DISICD2 IN GROUP1)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP1 OR
REGICD2 IN GROUP1 OR REGICD3 IN GROUP1 OR REGICD4 IN GROUP1))
THEN ACUTE_1 = 1
ELSE ACUTE_1 = 0

```

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN GROUP2 OR DISICD2 IN GROUP2)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP2 OR REGICD2 IN GROUP2 OR REGICD3 IN GROUP2 OR REGICD4 IN GROUP2))

**THEN** ACUTE\_2 = 1

**ELSE** ACUTE\_2 = 0

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN GROUP3 OR DISICD2 IN GROUP3)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP3 OR REGICD2 IN GROUP3 OR REGICD3 IN GROUP3 OR REGICD4 IN GROUP3)) OR M0440\_LESION\_OPEN\_WND = 1

**THEN** ACUTE\_3 = 1

**ELSE** ACUTE\_3 = 0

**IF** M0280\_LIFE\_EXPECTANCY = 01

**THEN** ACUTE\_4 = 1

**ELSE IF** M0280\_LIFE\_EXPECTANCY = 00

**THEN** ACUTE\_4 = 0

**ELSE** ACUTE\_4 = MISSING [SHOULD NEVER OCCUR]

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN GROUP4 OR DISICD2 IN GROUP4)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP4 OR REGICD2 IN GROUP4 OR REGICD3 IN GROUP4 OR REGICD4 IN GROUP4))

**THEN** ACUTE\_5 = 1

**ELSE** ACUTE\_5 = 0

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN GROUP5 OR DISICD2 IN GROUP5)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP5 OR REGICD2 IN GROUP5 OR REGICD3 IN GROUP5 OR REGICD4 IN GROUP5))

**THEN** ACUTE\_6 = 1

**ELSE** ACUTE\_6 = 0

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 = 250 OR DISICD2 = 250)) OR ((REGIMEN = 1) AND (REGICD1 = 250 OR REGICD2 = 250 OR REGICD3 = 250 OR REGICD4 = 250))

**THEN** ACUTE\_7 = 1

**ELSE** ACUTE\_7 = 0

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN GROUP6 OR DISICD2 IN GROUP6)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP6 OR REGICD2 IN GROUP6 OR REGICD3 IN GROUP6 OR REGICD4 IN GROUP6)) OR M0550\_OSTOMY = 01

**THEN** ACUTE\_8 = 1

**ELSE** ACUTE\_8 = 0

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 IN GROUP7 OR DISICD2 IN GROUP7)) OR ((REGIMEN = 1) AND (REGICD1 IN GROUP7 OR REGICD2 IN GROUP7 OR REGICD3 IN GROUP7 OR REGICD4 IN GROUP7))

**THEN** ACUTE\_9 = 1

**ELSE** ACUTE\_9 = 0

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND  
 (M0220\_PRIOR\_UR\_INCON ≠ 0,1 OR M0220\_PRIOR\_CATH ≠ 0,1 OR  
 M0220\_PRIOR\_INTRACT\_PAIN ≠ 0,1 OR M0220\_PRIOR\_IMPR\_DECSN ≠ 0,1 OR  
 M0220\_PRIOR\_DISRUPTIVE ≠ 0,1 OR M0220\_PRIOR\_MEM\_LOSS ≠ 0,1 OR  
 M0220\_PRIOR\_NONE ≠ 0,1 OR M0220\_PRIOR\_NOCHG\_14D ≠ 0, 1 OR  
 M0220\_PRIOR\_UNKNOWN ≠ 0,1 OR M0220\_PRIOR\_NOCHG\_14D = 1))  
**OR** ((DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN = 0)  
 AND  
 (M0175\_DC\_OTHER = 0 OR M0170\_DC\_OTHER = 0) AND (M0220\_PRIOR\_UR\_INCON = 1  
 OR  
 M0220\_PRIOR\_CATH = 1 OR M0220\_PRIOR\_INTRACT\_PAIN = 1 OR  
 M0220\_PRIOR\_IMPR\_DECSN = 1 OR M0220\_PRIOR\_DISRUPTIVE = 1 OR  
 M0220\_PRIOR\_MEM\_LOSS = 1 M0220\_PRIOR\_NONE = 1))  
**OR** ((M0220\_PRIOR\_UR\_INCON = 1 OR M0220\_PRIOR\_CATH = 1 OR  
 M0220\_PRIOR\_INTRACT\_PAIN = 1 OR M0220\_PRIOR\_IMPR\_DECSN = 1 OR  
 M0220\_PRIOR\_DISRUPTIVE = 1 OR M0220\_PRIOR\_MEM\_LOSS = 1) AND  
 (M0220\_PRIOR\_NONE = 1 OR M0220\_PRIOR\_NOCHG\_14D = 1 OR  
 M0220\_PRIOR\_UNKNOWN = 1))  
**OR** (M0220\_PRIOR\_UR\_INCON = 0 AND M0220\_PRIOR\_CATH = 0 AND  
 M0220\_PRIOR\_INTRACT\_PAIN = 0 AND M0220\_PRIOR\_IMPR\_DECSN = 0 AND  
 M0220\_PRIOR\_DISRUPTIVE = 0 AND M0220\_PRIOR\_MEM\_LOSS = 0 AND  
 M0220\_PRIOR\_NONE = 0 AND M0220\_PRIOR\_NOCHG\_14D = 0 AND  
 M0220\_PRIOR\_UNKNOWN = 0)

**THEN**

ACUTE\_10 = MISSING  
 CHRONIC\_5 = MISSING  
 CHRONIC\_7 = MISSING  
 CHRONIC\_8 = MISSING

**[SHOULD NEVER OCCUR]**

**IF** (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND  
 (M0520\_UR\_INCONT = 01,02) AND (M0220\_PRIOR\_UR\_INCON ≠ 1 AND  
 M0220\_PRIOR\_CATH ≠ 1)

**THEN** ACUTE\_10 = 1

**ELSE** ACUTE\_10 = 0

**IF** M0630\_REC\_PSYCH\_NURS = 1

**THEN** ACUTE\_11 = 1

**ELSE IF** M0630\_REC\_PSYCH\_NURS = 0

**THEN** ACUTE\_11 = 0

**ELSE** ACUTE\_11 = MISSING **[SHOULD NEVER OCCUR]**

**IF** M0500\_RESPTX\_OXYGEN = 1

**THEN** ACUTE\_12 = 1

**ELSE IF** M0500\_RESPTX\_OXYGEN = 0

**THEN** ACUTE\_12 = 0

**ELSE** ACUTE\_12 = MISSING **[SHOULD NEVER OCCUR]**



**IF** M0250\_THH\_IV\_INFUSION = 1  
    **THEN** ACUTE\_13 = 1  
**ELSE IF** M0250\_THH\_IV\_INFUSION = 0  
    **THEN** ACUTE\_13 = 0  
**ELSE** ACUTE\_13 = MISSING           **'[SHOULD NEVER OCCUR]'**

**IF** M0250\_THH\_PAR\_NUTRITION = 1 OR M0250\_THH\_ENT\_NUTRITION = 1  
    **THEN** ACUTE\_14 = 1  
**ELSE IF** M0250\_THH\_PAR\_NUTRITION = 0 AND M0250\_THH\_ENT\_NUTRITION = 0  
    **THEN** ACUTE\_14 = 0  
**ELSE** ACUTE\_14 = MISSING           **'[SHOULD NEVER OCCUR]'**

**IF** M0500\_RESPTX\_VENTILATOR = 1  
    **THEN** ACUTE\_15 = 1  
**ELSE IF** M0500\_RESPTX\_VENTILATOR = 0  
    **THEN** ACUTE\_15 = 0  
**ELSE** ACUTE\_15 = MISSING           **'[SHOULD NEVER OCCUR]'**

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

- 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** (DISCHARGE1 NOT = 0,1 OR DISCHARGE2 NOT = 0,1 OR DISCHARGE3 NOT = 0,1  
DISCHARGE4 NOT = 0,1) OR  
((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 =1 OR DISCHARGE4=1) AND  
(DISICD1 = BLANK, INVALID OR DISICD2 = INVALID)) **OR** (REGIMEN NOT = 0,1 OR  
(REGIMEN = 1 AND (REGICD1 = BLANK, INVALID OR REGICD2 = INVALID OR REGICD3 =  
INVALID OR REGICD4 = INVALID)))

**THEN**

    ACUTE\_1 = MISSING  
    ACUTE\_2 = MISSING  
    ACUTE\_3 = MISSING  
    ACUTE\_5 = MISSING  
    ACUTE\_6 = MISSING  
    ACUTE\_7 = MISSING  
    ACUTE\_8 = MISSING  
    ACUTE\_9 = MISSING

**'[SHOULD NEVER OCCUR]'**

**IF** ((DISCHARGE1 NOT = 0,1 OR DISCHARGE2 NOT = 0,1 OR DISCHARGE3 NOT = 0,1) OR  
REGIMEN NOT = 0,1)

**THEN**

    ACUTE\_10 = MISSING

**'[SHOULD NEVER OCCUR]'**

**NOTE:** Because missing inpatient discharge and missing medical regimen are critical errors in themselves, it is not necessary to count this error.

### **Chronic Conditions**

This, too, is a complex set of transformations based on a number of different data items. To simplify the explanation, frequently used items will be referred to as follows:

<u>Data Item</u>	<u>Reference</u>
M0170_DC_HOSP_14_DAYS OR M0175_DC_HOSP_14_DAYS	DISCHARGE1
M0170_DC_REHAB_14_DAYS OR M0175_DC_REHAB_14_DAYS	DISCHARGE2
M0170_DC_NURS_HOME_14_DAYS OR M0175_DC_SNF_14_DAYS OR M0175_DC_NH_14_DAYS	DISCHARGE3
M0200_REG_CHG_14_Days	REGIMEN

**IF** (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND  
(M0720\_PR\_PREP\_LT\_MEALS = 01,02) AND  
((M0730\_PR\_TRANSPORTATION = 01,02 AND M0740\_PR\_LAUNDRY = 01,02) OR  
(M0730\_PR\_TRANSPORTATION = 01,02 AND M0750\_PR\_HOUSEKEEPING = 03,04) OR  
(M0730\_PR\_TRANSPORTATION = 01,02 AND M0760\_PR\_SHOPPING = 02,03) OR  
(M0730\_PR\_TRANSPORTATION = 01,02 AND M0770\_PR\_PHONE\_USE = 04,05) OR  
(M0740\_PR\_LAUNDRY = 01,02 AND M0750\_PR\_HOUSEKEEPING = 03,04) OR  
(M0740\_PR\_LAUNDRY = 01,02 AND M0760\_PR\_SHOPPING = 02,03) OR  
(M0740\_PR\_LAUNDRY = 01,02 AND M0770\_PR\_PHONE\_USE = 04,05) OR  
(M0750\_PR\_HOUSEKEEPING = 03,04 AND M0760\_PR\_SHOPPING = 02,03) OR  
(M0750\_PR\_HOUSEKEEPING = 03,04 AND M0770\_PR\_PHONE\_USE = 04,05) OR  
(M0760\_PR\_SHOPPING = 02,03 AND M0770\_PR\_PHONE\_USE = 04,05))

**THEN** CHRONIC\_1 = 1

**ELSE IF** (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN = 0) AND

(M0720\_CUR\_PREP\_LT\_MEALS = 01,02) AND  
((M0730\_CUR\_TRANSPORTATION = 01,02 AND M0740\_CUR\_LAUNDRY = 01,02) OR  
(M0730\_CUR\_TRANSPORTATION = 01,02 AND M0750\_CUR\_HOUSEKEEPING = 03,04) OR  
(M0730\_CUR\_TRANSPORTATION = 01,02 AND M0760\_CUR\_SHOPPING = 02,03) OR  
(M0730\_CUR\_TRANSPORTATION = 01,02 AND M0770\_CUR\_PHONE\_USE = 04,05) OR  
(M0740\_CUR\_LAUNDRY = 01,02 AND M0750\_CUR\_HOUSEKEEPING = 03,04) OR  
(M0740\_CUR\_LAUNDRY = 01,02 AND M0760\_CUR\_SHOPPING = 02,03) OR  
(M0740\_CUR\_LAUNDRY = 01,02 AND M0770\_CUR\_PHONE\_USE = 04,05) OR  
(M0750\_CUR\_HOUSEKEEPING = 03,04 AND M0760\_CUR\_SHOPPING = 02,03) OR  
(M0750\_CUR\_HOUSEKEEPING = 03,04 AND M0770\_CUR\_PHONE\_USE = 04,05) OR  
(M0760\_CUR\_SHOPPING = 02,03 AND M0770\_CUR\_PHONE\_USE = 04,05))

**THEN** CHRONIC\_1 = 1

**ELSE** CHRONIC\_1 = 0

```

IF (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND
((M0670_PR_BATHING = 03,04,05) OR (M0640_PR_GROOMING = 02,03 AND
(M0650_PR_DRESS_UPPER = 02,03 OR M0660_PR_DRESS_LOWER = 02,03)))
    THEN CHRONIC_2 = 1
ELSE IF (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =
0) AND
((M0670_CUR_BATHING = 03,04,05) OR (M0640_CUR_GROOMING = 02,03 AND
(M0650_CUR_DRESS_UPPER = 02,03 OR M0660_CUR_DRESS_LOWER = 02,03)))
    THEN CHRONIC_2 = 1
ELSE CHRONIC_2 = 0

IF (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND
(M0680_PR_TOILETING = 03,04 OR M0690_PR_TRANSFERRING = 02,03,04,05 OR
M0700_PR_AMBULATION = 02,03,04,05)
    THEN CHRONIC_3 = 1
ELSE IF (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =
0) AND
(M0680_CUR_TOILETING = 03,04 OR M0690_CUR_TRANSFERRING = 02,03,04,05 OR
M0700_CUR_AMBULATION = 02,03,04,05)
    THEN CHRONIC_3 = 1
ELSE CHRONIC_3 = 0

IF (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND
M0710_PR_FEEDING = 02,03,04,05
    THEN CHRONIC_4 = 1
ELSE IF (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =
0) AND
M0710_CUR_FEEDING = 02,03,04,05
    THEN CHRONIC_4 = 1
ELSE CHRONIC_4 = 0

IF (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND
(M0520_UR_INCONT = 01,02 AND (M0220_PRIOR_UR_INCON = 1 OR
M0220_PRIOR_CATH = 1))
    THEN CHRONIC_5 = 1
ELSE IF (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =
0) AND
M0520_UR_INCONT = 01,02
    THEN CHRONIC_5 = 1
ELSE CHRONIC_5 = 0

IF (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND
(M0780_PR_ORAL_MEDS = 01,02 OR M0790_PR_INHAL_MEDS = 01,02 OR
M0800_PR_INJECT_MEDS = 01,02)
    THEN CHRONIC_6 = 1
ELSE IF (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =
0) AND
(M0780_CUR_ORAL_MEDS = 01,02 OR M0790_CUR_INHAL_MEDS = 01,02 OR
M0800_CUR_INJECT_MEDS = 01,02)
    THEN CHRONIC_6 = 1
ELSE CHRONIC_6 = 0

```

**IF** (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND  
 (M0430\_INTRACT\_PAIN = 1 AND M0220\_PRIOR\_INTRACT\_PAIN = 1)  
     **THEN** CHRONIC\_7 = 1  
**ELSE IF** (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =  
 0) AND  
 M0430\_INTRACT\_PAIN = 1  
     **THEN** CHRONIC\_7 = 1  
**ELSE** CHRONIC\_7 = 0

**IF** (DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1 OR REGIMEN = 1) AND  
 (M0220\_PRIOR\_IMPR\_DECSN = 1 OR M0220\_PRIOR\_DISRUPTIVE = 1 OR  
 M0220\_PRIOR\_MEM\_LOSS = 1 OR M0610\_BD\_MEM\_DEFICIT = 1 OR  
 M0610\_BD\_IMP\_DECISN = 1 OR M0610\_BD\_VERBAL = 1 OR M0610\_BD\_PHYSICAL = 1  
 OR M0610\_BD\_SOC\_INAPPRO = 1 OR M0610\_BD\_DELUSIONS = 1)  
     **THEN** CHRONIC\_8 = 1  
**ELSE IF** (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND DISCHARGE3 = 0 AND REGIMEN =  
 0) AND  
 (M0610\_BD\_MEM\_DEFICIT = 1 OR M0610\_BD\_IMP\_DECISN = 1 OR M0610\_BD\_VERBAL =  
 1 OR M0610\_BD\_PHYSICAL = 1 OR M0610\_BD\_SOC\_INAPPRO = 1 OR  
 M0610\_BD\_DELUSIONS = 1)  
     **THEN** CHRONIC\_8 = 1  
**ELSE** CHRONIC\_8 = 0

**IF** M0350\_AP\_HM\_RESIDENT = 1 AND (CHRONIC\_1 = 1 OR CHRONIC\_2 = 1 OR  
 CHRONIC\_3 = 1 OR CHRONIC\_4 = 1 OR CHRONIC\_5 = 1 OR CHRONIC\_6 = 1 OR  
 CHRONIC\_7 = 1 OR CHRONIC\_8 = 1)  
     **THEN** CHRONIC\_9 = 1  
**ELSE** CHRONIC\_9 = 0

**IF** ((DISCHARGE1 NOT = 0,1 OR DISCHARGE2 NOT = 0,1 OR DISCHARGE3 NOT = 0,1) OR  
 REGIMEN NOT = 0,1)  
     **THEN**  
         CHRONIC\_1 = MISSING  
         CHRONIC\_2 = MISSING  
         CHRONIC\_3 = MISSING  
         CHRONIC\_4 = MISSING  
         CHRONIC\_5 = MISSING  
         CHRONIC\_6 = MISSING  
         CHRONIC\_7 = MISSING  
         CHRONIC\_8 = MISSING  
         CHRONIC\_9 = MISSING

**[SHOULD NEVER OCCUR]**

**NOTE:** Because missing inpatient discharge and missing medical regimen are critical errors in themselves, it is not necessary to count these errors.

**Diagnoses for which Patients are Receiving Home Care**

This is a complex transformation based on the six 'home care diagnosis' data items and their corresponding severity ratings, as well as 19 specific ranges of ICD-9 codes. The data items and ranges of interest are given below. To simplify the explanation, the data items and ranges will be referred to as follows:

<u>Data Item</u>	<u>Reference</u>
M0230_PRIMARY_DIAG_ICD	ICDA
M0230_PRIMARY_DIAG_SEVERITY	SEVERITYA
M0240_OTH_DIAG1_ICD	ICDB
M0240_OTH_DIAG1_SEVERITY	SEVERITYB
M0240_OTH_DIAG2_ICD	ICDC
M0240_OTH_DIAG2_SEVERITY	SEVERITYC
M0240_OTH_DIAG3_ICD	ICDD
M0240_OTH_DIAG3_SEVERITY	SEVERITYD
M0240_OTH_DIAG4_ICD	ICDE
M0240_OTH_DIAG4_SEVERITY	SEVERITYE
M0240_OTH_DIAG5_ICD	ICDF
M0240_OTH_DIAG5_SEVERITY	SEVERITYF
M0245_PMT_ICD1	ICDG
M0245_PMT_ICD2	ICDH

<u>ICD-9 Codes</u>	<u>Reference</u>
001-139	RANGE1
140-239	RANGE2
240-279	RANGE3
280-289	RANGE4
290-319	RANGE5
320-389	RANGE6
390-459	RANGE7
460-519	RANGE8
520-579	RANGE9
580-629	RANGE10
630-676	RANGE11
680-709	RANGE12
710-739	RANGE13
740-759	RANGE14
780-799	RANGE15
800-848	RANGE16
850-854	RANGE17
860-959	RANGE18
960-999	RANGE19

For each pair of data items (the ICD-9 diagnosis code and its corresponding severity rating for M0230/M0240) we compute a set of 19 interim measures as follows:

```
IF SEVERITYA >= 1 AND ICDA IS IN RANGE1
  THEN INTERIM_A1 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE1
  THEN INTERIM_A1 = 0
ELSE INTERIM_A1 = MISSING
```

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE2**  
    **THEN INTERIM\_A2 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE2**  
    **THEN INTERIM\_A2 = 0**  
**ELSE INTERIM\_A2 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE3**  
    **THEN INTERIM\_A3 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE3**  
    **THEN INTERIM\_A3 = 0**  
**ELSE INTERIM\_A3 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE4**  
    **THEN INTERIM\_A4 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE4**  
    **THEN INTERIM\_A4 = 0**  
**ELSE INTERIM\_A4 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE5**  
    **THEN INTERIM\_A5 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE5**  
    **THEN INTERIM\_A5 = 0**  
**ELSE INTERIM\_A5 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE6**  
    **THEN INTERIM\_A6 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE6**  
    **THEN INTERIM\_A6 = 0**  
**ELSE INTERIM\_A6 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE7**  
    **THEN INTERIM\_A7 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE7**  
    **THEN INTERIM\_A7 = 0**  
**ELSE INTERIM\_A7 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE8**  
    **THEN INTERIM\_A8 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE8**  
    **THEN INTERIM\_A8 = 0**  
**ELSE INTERIM\_A8 = MISSING**

**IF SEVERITYA >= 1 AND ICDA IS IN RANGE9**  
    **THEN INTERIM\_A9 = 1**  
**ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE9**  
    **THEN INTERIM\_A9 = 0**  
**ELSE INTERIM\_A9 = MISSING**

```

IF SEVERITYA >= 1 AND ICDA IS IN RANGE10
    THEN INTERIM_A10 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE10
    THEN INTERIM_A10 = 0
ELSE INTERIM_A10 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE11
    THEN INTERIM_A11 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE11
    THEN INTERIM_A11 = 0
ELSE INTERIM_A11 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE12
    THEN INTERIM_A12 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE12
    THEN INTERIM_A12 = 0
ELSE INTERIM_A12 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE13
    THEN INTERIM_A13 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE13
    THEN INTERIM_A13 = 0
ELSE INTERIM_A13 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE14
    THEN INTERIM_A14 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE14
    THEN INTERIM_A14 = 0
ELSE INTERIM_A14 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE15
    THEN INTERIM_A15 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE15
    THEN INTERIM_A15 = 0
ELSE INTERIM_A15 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE16
    THEN INTERIM_A16 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE16
    THEN INTERIM_A16 = 0
ELSE INTERIM_A16 = MISSING

IF SEVERITYA >= 1 AND ICDA IS IN RANGE17
    THEN INTERIM_A17 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE17
    THEN INTERIM_A17 = 0
ELSE INTERIM_A17 = MISSING

```

```
IF SEVERITYA >= 1 AND ICDA IS IN RANGE18
    THEN INTERIM_A18 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE18
    THEN INTERIM_A18 = 0
ELSE INTERIM_A18 = MISSING
```

```
IF SEVERITYA >= 1 AND ICDA IS IN RANGE19
    THEN INTERIM_A19 = 1
ELSE IF SEVERITYA >= 1 AND ICDA IS NOT IN RANGE19
    THEN INTERIM_A19 = 0
ELSE INTERIM_A19 = MISSING
```

**NOTE:** At the end of this process, we have 114 interim measures named INTERIM\_A1 to INTERIM\_A19, INTERIM\_B1 to INTERIM\_B19, INTERIM\_C1 to INTERIM\_C19, INTERIM\_D1 to INTERIM\_D19, INTERIM\_E1 to INTERIM\_E19, and INTERIM\_F1 to INTERIM\_F19.

We now compute 38 more measures named INTERIM\_G1 to INTERIM\_G19, as well as INTERIM\_H1 to INTERIM\_H19. These are similar to the INTERIM A thru F variables except that there is no check on a severity rating. The computation for INTERIM\_H1 to INTERIM\_H19 is done in the exact same manner as INTERIM\_G1 to INTERIM\_G19, except that it is based on M0245\_PMT\_ICD2 (ICDH) instead of M0245\_PMT\_ICD1.

```
IF ICDG IS IN RANGE1
    THEN INTERIM_G1 = 1
ELSE IF ICDG IS NOT IN RANGE1
    THEN INTERIM_G1 = 0
ELSE INTERIM_G1 = MISSING
```

```
IF ICDG IS IN RANGE2
    THEN INTERIM_G2 = 1
ELSE IF ICDG IS NOT IN RANGE2
    THEN INTERIM_G2 = 0
ELSE INTERIM_G2 = MISSING
```

```
IF ICDG IS IN RANGE3
    THEN INTERIM_G3 = 1
ELSE IF ICDG IS NOT IN RANGE3
    THEN INTERIM_G3 = 0
ELSE INTERIM_G3 = MISSING
```

```
IF ICDG IS IN RANGE4
    THEN INTERIM_G4 = 1
ELSE IF ICDG IS NOT IN RANGE4
    THEN INTERIM_G4 = 0
ELSE INTERIM_G4 = MISSING
```

```
IF ICDG IS IN RANGE5
    THEN INTERIM_G5 = 1
ELSE IF ICDG IS NOT IN RANGE5
    THEN INTERIM_G5 = 0
ELSE INTERIM_G5 = MISSING
```



```

IF ICDG IS IN RANGE6
    THEN INTERIM_G6 = 1
ELSE IF ICDG IS NOT IN RANGE6
    THEN INTERIM_G6 = 0
ELSE INTERIM_G6 = MISSING

IF ICDG IS IN RANGE7
    THEN INTERIM_G7 = 1
ELSE IF ICDG IS NOT IN RANGE7
    THEN INTERIM_G7 = 0
ELSE INTERIM_G7 = MISSING

IF ICDG IS IN RANGE8
    THEN INTERIM_G8 = 1
ELSE IF ICDG IS NOT IN RANGE8
    THEN INTERIM_G8 = 0
ELSE INTERIM_G8 = MISSING

IF ICDG IS IN RANGE9
    THEN INTERIM_G9 = 1
ELSE IF ICDG IS NOT IN RANGE9
    THEN INTERIM_G9 = 0
ELSE INTERIM_G9 = MISSING

IF ICDG IS IN RANGE10
    THEN INTERIM_G10 = 1
ELSE IF ICDG IS NOT IN RANGE10
    THEN INTERIM_G10 = 0
ELSE INTERIM_G10 = MISSING

IF ICDG IS IN RANGE11
    THEN INTERIM_G11 = 1
ELSE IF ICDG IS NOT IN RANGE11
    THEN INTERIM_G11 = 0
ELSE INTERIM_G11 = MISSING
IF ICDG IS IN RANGE12
    THEN INTERIM_G12 = 1
ELSE IF ICDG IS NOT IN RANGE12
    THEN INTERIM_G12 = 0
ELSE INTERIM_G12 = MISSING

IF ICDG IS IN RANGE13
    THEN INTERIM_G13 = 1
ELSE IF ICDG IS NOT IN RANGE13
    THEN INTERIM_G13 = 0
ELSE INTERIM_G13 = MISSING

```

**IF** ICDG IS IN RANGE14  
    **THEN** INTERIM\_G14 = 1  
**ELSE IF** ICDG IS NOT IN RANGE14  
    **THEN** INTERIM\_G14 = 0  
**ELSE** INTERIM\_G14 = MISSING

**IF** ICDG IS IN RANGE15  
    **THEN** INTERIM\_G15 = 1  
**ELSE IF** ICDG IS NOT IN RANGE15  
    **THEN** INTERIM\_G15 = 0  
**ELSE** INTERIM\_G15 = MISSING

**IF** ICDG IS IN RANGE16  
    **THEN** INTERIM\_G16 = 1  
**ELSE IF** ICDG IS NOT IN RANGE16  
    **THEN** INTERIM\_G16 = 0  
**ELSE** INTERIM\_G16 = MISSING

**IF** ICDG IS IN RANGE17  
    **THEN** INTERIM\_G17 = 1  
**ELSE IF** ICDG IS NOT IN RANGE17  
    **THEN** INTERIM\_G17 = 0  
**ELSE** INTERIM\_G17 = MISSING

**IF** ICDG IS IN RANGE18  
    **THEN** INTERIM\_G18 = 1  
**ELSE IF** ICDG IS NOT IN RANGE18  
    **THEN** INTERIM\_G18 = 0  
**ELSE** INTERIM\_G18 = MISSING

**IF** ICDG IS IN RANGE19  
    **THEN** INTERIM\_G19 = 1  
**ELSE IF** ICDG IS NOT IN RANGE19  
    **THEN** INTERIM\_G19 = 0  
**ELSE** INTERIM\_G19 = MISSING

**NOTE:** Now that all intermediate variables have been computed we can finally compute the DIAG\_x variables as desired.

**IF** INTERIM\_A1 = 1 OR INTERIM\_B1 = 1 OR INTERIM\_C1 = 1 OR INTERIM\_D1 = 1 OR  
INTERIM\_E1 = 1 OR INTERIM\_F1 = 1 OR INTERIM\_G1 = 1 OR INTERIM\_H1 = 1  
    **THEN** DIAG\_1 = 1  
**ELSE** DIAG\_1 = 0

**IF** INTERIM\_A2 = 1 OR INTERIM\_B2 = 1 OR INTERIM\_C2 = 1 OR INTERIM\_D2 = 1 OR  
INTERIM\_E2 = 1 OR INTERIM\_F2 = 1 OR INTERIM\_G2 = 1 OR INTERIM\_H2 = 1  
    **THEN** DIAG\_2 = 1  
**ELSE** DIAG\_2 = 0

**IF** INTERIM\_A3 = 1 OR INTERIM\_B3 = 1 OR INTERIM\_C3 = 1 OR INTERIM\_D3 = 1 OR  
INTERIM\_E3 = 1 OR INTERIM\_F3 = 1 OR INTERIM\_G3 = 1 OR INTERIM\_H3 = 1  
    **THEN** DIAG\_3 = 1  
**ELSE** DIAG\_3 = 0

**IF** INTERIM\_A4 = 1 OR INTERIM\_B4 = 1 OR INTERIM\_C4 = 1 OR INTERIM\_D4 = 1 OR  
INTERIM\_E4 = 1 OR INTERIM\_F4 = 1 OR INTERIM\_G4 = 1 OR INTERIM\_H4 = 1  
    **THEN** DIAG\_4 = 1  
**ELSE** DIAG\_4 = 0

**IF** INTERIM\_A5 = 1 OR INTERIM\_B5 = 1 OR INTERIM\_C5 = 1 OR INTERIM\_D5 = 1 OR  
INTERIM\_E5 = 1 OR INTERIM\_F5 = 1 OR INTERIM\_G5 = 1 OR INTERIM\_H5 = 1  
    **THEN** DIAG\_5 = 1  
**ELSE** DIAG\_5 = 0

**IF** INTERIM\_A6 = 1 OR INTERIM\_B6 = 1 OR INTERIM\_C6 = 1 OR INTERIM\_D6 = 1 OR  
INTERIM\_E6 = 1 OR INTERIM\_F6 = 1 OR INTERIM\_G6 = 1 OR INTERIM\_H6 = 1  
    **THEN** DIAG\_6 = 1  
**ELSE** DIAG\_6 = 0

**IF** INTERIM\_A7 = 1 OR INTERIM\_B7 = 1 OR INTERIM\_C7 = 1 OR INTERIM\_D7 = 1 OR  
INTERIM\_E7 = 1 OR INTERIM\_F7 = 1 OR INTERIM\_G7 = 1 OR INTERIM\_H7 = 1  
    **THEN** DIAG\_7 = 1  
**ELSE** DIAG\_7 = 0

**IF** INTERIM\_A8 = 1 OR INTERIM\_B8 = 1 OR INTERIM\_C8 = 1 OR INTERIM\_D8 = 1 OR  
INTERIM\_E8 = 1 OR INTERIM\_F8 = 1 OR INTERIM\_G8 = 1 OR INTERIM\_H8 = 1  
    **THEN** DIAG\_8 = 1  
**ELSE** DIAG\_8 = 0

**IF** INTERIM\_A9 = 1 OR INTERIM\_B9 = 1 OR INTERIM\_C9 = 1 OR INTERIM\_D9 = 1 OR  
INTERIM\_E9 = 1 OR INTERIM\_F9 = 1 OR INTERIM\_G9 = 1 OR INTERIM\_H9 = 1  
    **THEN** DIAG\_9 = 1  
**ELSE** DIAG\_9 = 0

**IF** INTERIM\_A10 = 1 OR INTERIM\_B10 = 1 OR INTERIM\_C10 = 1 OR INTERIM\_D10 = 1 OR  
INTERIM\_E10 = 1 OR INTERIM\_F10 = 1 OR INTERIM\_G10 = 1 OR INTERIM\_H10 = 1  
    **THEN** DIAG\_10 = 1  
**ELSE** DIAG\_10 = 0

**IF** INTERIM\_A11 = 1 OR INTERIM\_B11 = 1 OR INTERIM\_C11 = 1 OR INTERIM\_D11 = 1 OR  
INTERIM\_E11 = 1 OR INTERIM\_F11 = 1 OR INTERIM\_G11 = 1 OR INTERIM\_H11 = 1  
    **THEN** DIAG\_11 = 1  
**ELSE** DIAG\_11 = 0

**IF** INTERIM\_A12 = 1 OR INTERIM\_B12 = 1 OR INTERIM\_C12 = 1 OR INTERIM\_D12 = 1 OR  
INTERIM\_E12 = 1 OR INTERIM\_F12 = 1 OR INTERIM\_G12 = 1 OR INTERIM\_H12 = 1  
    **THEN** DIAG\_12 = 1  
**ELSE** DIAG\_12 = 0

**IF** INTERIM\_A13 = 1 OR INTERIM\_B13 = 1 OR INTERIM\_C13 = 1 OR INTERIM\_D13 = 1 OR  
INTERIM\_E13 = 1 OR INTERIM\_F13 = 1 OR INTERIM\_G13 = 1 OR INTERIM\_H13 = 1  
    **THEN** DIAG\_13 = 1  
**ELSE** DIAG\_13 = 0

**IF** INTERIM\_A14 = 1 OR INTERIM\_B14 = 1 OR INTERIM\_C14 = 1 OR INTERIM\_D14 = 1 OR  
INTERIM\_E14 = 1 OR INTERIM\_F14 = 1 OR INTERIM\_G14 = 1 OR INTERIM\_H14 = 1  
    **THEN** DIAG\_14 = 1  
**ELSE** DIAG\_14 = 0

**IF** INTERIM\_A15 = 1 OR INTERIM\_B15 = 1 OR INTERIM\_C15 = 1 OR INTERIM\_D15 = 1 OR  
INTERIM\_E15 = 1 OR INTERIM\_F15 = 1 OR INTERIM\_G15 = 1 OR INTERIM\_H15 = 1  
    **THEN** DIAG\_15 = 1  
**ELSE** DIAG\_15 = 0

**IF** INTERIM\_A16 = 1 OR INTERIM\_B16 = 1 OR INTERIM\_C16 = 1 OR INTERIM\_D16 = 1 OR  
INTERIM\_E16 = 1 OR INTERIM\_F16 = 1 OR INTERIM\_G16 = 1 OR INTERIM\_H16 = 1  
    **THEN** DIAG\_16 = 1  
**ELSE** DIAG\_16 = 0

**IF** INTERIM\_A17 = 1 OR INTERIM\_B17 = 1 OR INTERIM\_C17 = 1 OR INTERIM\_D17 = 1 OR  
INTERIM\_E17 = 1 OR INTERIM\_F17 = 1 OR INTERIM\_G17 = 1 OR INTERIM\_H17 = 1  
    **THEN** DIAG\_17 = 1  
**ELSE** DIAG\_17 = 0

**IF** INTERIM\_A18 = 1 OR INTERIM\_B18 = 1 OR INTERIM\_C18 = 1 OR INTERIM\_D18 = 1 OR  
INTERIM\_E18 = 1 OR INTERIM\_F18 = 1 OR INTERIM\_G18 = 1 OR INTERIM\_H18 = 1  
    **THEN** DIAG\_18 = 1  
**ELSE** DIAG\_18 = 0

**IF** INTERIM\_A19 = 1 OR INTERIM\_B19 = 1 OR INTERIM\_C19 = 1 OR INTERIM\_D19 = 1 OR  
INTERIM\_E19 = 1 OR INTERIM\_F19 = 1 OR INTERIM\_G19 = 1 OR INTERIM\_H19 = 1  
    **THEN** DIAG\_19 = 1  
**ELSE** DIAG\_19 = 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** M0230\_PRIMARY\_DIAG\_SEVERITY NOT = 00,01,02,03,04 **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**

- DIAG\_1 = MISSING
- DIAG\_2 = MISSING
- DIAG\_3 = MISSING
- DIAG\_4 = MISSING
- DIAG\_5 = MISSING
- DIAG\_6 = MISSING
- DIAG\_7 = MISSING
- DIAG\_8 = MISSING
- DIAG\_9 = MISSING
- DIAG\_10 = MISSING
- DIAG\_11 = MISSING
- DIAG\_12 = MISSING
- DIAG\_13 = MISSING
- DIAG\_14 = MISSING
- DIAG\_15 = MISSING
- DIAG\_16 = MISSING
- DIAG\_17 = MISSING
- DIAG\_18 = MISSING
- DIAG\_19 = MISSING

**'[SHOULD NEVER OCCUR]**

### Length of Stay

**NOTE:** Because the dates used to calculate LOS are key fields involved in matching assessment pairs to construct an outcome episode, it is impossible that one of these dates would be missing or invalid. It is also impossible that LOSDAYS would take on a negative or zero value.

```
IF M0100_ASSMT_REASON = 1
    THEN LOS_DAYS = (M0906_DC_TRAN_DTH_DT[2] - M0030_START_CARE_DT) + 1
ELSE IF M0100_ASSMT_REASON = 3
    THEN LOS_DAYS = (M0906_DC_TRAN_DTH_DT[2] - M0032_ROC_DT) + 1
```

```
IF LOS_DAYS <= 31
    THEN LOS_1MO = 1
ELSE LOS_1MO = 0
```

```
IF LOS_DAYS >= 32 AND LOS_1 <= 62
    THEN LOS_2MO = 1
ELSE LOS_2MO = 0
```

```
IF LOS_DAYS >= 63 AND LOS_1 <= 124
    THEN LOS_3MO = 1
ELSE LOS_3MO = 0
```

```
IF LOS_DAYS >= 125
    THEN LOS_4MO = 1
ELSE LOS_4MO = 0
```

## ADVERSE EVENTS

### Assumptions and Conventions

- Assessments have already been matched, i.e., first time-point of SOC/ROC with second time-point of Transfer/DC.
- The following transformations result in data items with numeric values. A code of 'MISSING' indicates that the data item should be given a null value and be excluded from analyses. Where the phrase '**[SHOULD NEVER OCCUR]**' appears, it indicates that the data submitted do not meet the published data specifications, and, in addition to excluding the case from the calculation of summary statistics for that particular measure, the entire case should be considered for exclusion based on the following criteria:
  - If **ANY** of the adverse event outcome measures other than events 1-4 cannot be calculated because one of the '**[SHOULD NEVER OCCUR]**' conditions is met, the entire case should be excluded from all analyses.
- As field names are the same across assessment types, presence of [2] at the end of a field name indicates that this data item is taken from the second time-point. For example, M0100\_ASSMT\_REASON refers to the 'Reason for Assessment' item at the first time-point. M0640\_CUR\_GROOMING[2] refers to the 'Ability to Groom Oneself' item at the second time-point. Although some data items are collected at only one of the two time-points, the [2] convention is used for all items to avoid confusion and possible misinterpretation.
- Where multiple values can result in the same transformation, a comma is used in place of a logical 'OR', e.g., IF ITEM1 = 0,1 is the equivalent of IF ITEM1 = 0 OR ITEM1 = 1.
- Throughout the remainder of this document, the measures for inclusion in the Adverse Event Outcome Report are referred to as follows:

### Adverse Event Measures

Measure Name	Description
ADVERSE_EVENT_1	Emergent Care for Injury Caused by Fall or Accident at Home
ADVERSE_EVENT_2	Emergent Care for Wound Infections, Deteriorating Wound Status
ADVERSE_EVENT_3	Emergent Care for Improper Medication Administration, Medication Side Effects
ADVERSE_EVENT_4	Emergent Care for Hypo/Hyperglycemia
ADVERSE_EVENT_5	Development of Urinary Tract Infection
ADVERSE_EVENT_6	Increase in Number of Pressure Ulcers
ADVERSE_EVENT_7	Substantial Decline in 3 or more Activities of Daily Living
ADVERSE_EVENT_8	Substantial Decline in Management of Oral Medications
ADVERSE_EVENT_9	Unexpected Nursing Home Admission
ADVERSE_EVENT_10	Discharged to the Community Needing Wound Care or Medication Assistance

## Adverse Event Measures

Measure Name	Description
ADVERSE_EVENT_11	Discharged to the Community Needing Toileting Assistance
ADVERSE_EVENT_12	Discharged to the Community with Behavioral Problems
ADVERSE_EVENT_13	Unexpected Death
INTERIM_1	Used in computation of INTERIM_5
INTERIM_2	Used in computation of INTERIM_5
INTERIM_3	Used in computation of INTERIM_5
INTERIM_4	Used in computation of INTERIM_5
INTERIM_5	Used in computation of ADVERSE_EVENT_6
INTERIM_6	Used in computation of INTERIM_10
INTERIM_7	Used in computation of INTERIM_10
INTERIM_8	Used in computation of INTERIM_10
INTERIM_9	Used in computation of INTERIM_10
INTERIM_10	Used in computation of ADVERSE_EVENT_6
INTERIM_11	Used in computation of INTERIM_21
INTERIM_12	Used in computation of INTERIM_22
INTERIM_13	Used in computation of INTERIM_23
INTERIM_14	Used in computation of INTERIM_24
INTERIM_15	Used in computation of INTERIM_25
INTERIM_16	Used in computation of INTERIM_21
INTERIM_17	Used in computation of INTERIM_22
INTERIM_18	Used in computation of INTERIM_23
INTERIM_19	Used in computation of INTERIM_24
INTERIM_20	Used in computation of INTERIM_25
INTERIM_21	Used in computation of INTERIM_26
INTERIM_22	Used in computation of INTERIM_26
INTERIM_23	Used in computation of INTERIM_26
INTERIM_24	Used in computation of INTERIM_26
INTERIM_25	Used in computation of INTERIM_26
INTERIM_26	Used in computation of ADVERSE_EVENT_7
INTERIM_27	Used in computation of ADVERSE_EVENT_8
INTERIM_28	Used in computation of ADVERSE_EVENT_8
INTERIM_29	Used in computation of ADVERSE_EVENT_9
INTERIM_30	Used in computation of ADVERSE_EVENT_9
INTERIM_31	Used in computation of ADVERSE_EVENT_9
INTERIM_32	Used in computation of ADVERSE_EVENT_9
INTERIM_33	Used in computation of ADVERSE_EVENT_12



**ADVERSE EVENTS DATA TRANSFORMATION PSEUDO-CODE**

**(NOTE: *Italicized text is not part of code*)**

**Exclusions for Adverse Events 1 - 4**

**IF** M0100\_ASSMT\_REASON[2] = 06,07,09 **NOTE:** Events 1-4 do not apply (are missing) if patient died

**THEN**

**IF** (M0830\_EC\_NONE[2] NOT = 0,1 OR M0830\_EC\_UNKNOWN[2] NOT = 0,1)  
**OR**  
(M0830\_EC\_NONE[2] = 0 AND M0830\_EC\_UNKNOWN[2] = 0 AND  
(M0840\_ECR\_INJURY[2] NOT = 0,1 OR M0840\_ECR\_WOUND[2] NOT = 0,1 OR  
M0840\_ECR\_MEDICATION[2] NOT = 0,1 OR M0840\_ECR\_HYPOGLYC[2] NOT  
= 0,1))

**THEN**

ADVERSE\_EVENT\_1 = MISSING  
ADVERSE\_EVENT\_2 = MISSING  
ADVERSE\_EVENT\_3 = MISSING  
ADVERSE\_EVENT\_4 = MISSING

**[SHOULD NEVER OCCUR]**

**Emergent Care for Injury Caused by Fall or Accident at Home**

**ELSE**

**IF** M0840\_ECR\_INJURY[2] = 1  
**THEN** ADVERSE\_EVENT\_1 = 1  
**ELSE IF** M0830\_EC\_UNKNOWN [2] = 0 AND (M0830\_EC\_NONE[2] = 1 OR  
M0840\_ECR\_UNKNOWN [2] = 0)  
**THEN** ADVERSE\_EVENT\_1 = 0  
**ELSE** ADVERSE\_EVENT\_1 = MISSING

**Emergent Care for Wound Infections, Deteriorating Wound Status**

**IF** M0840\_ECR\_WOUND[2] = 1  
**THEN** ADVERSE\_EVENT\_2 = 1  
**ELSE IF** M0830\_EC\_UNKNOWN [2] = 0 AND (M0830\_EC\_NONE[2] = 1 OR  
M0840\_ECR\_UNKNOWN [2] = 0)  
**THEN** ADVERSE\_EVENT\_2 = 0  
**ELSE** ADVERSE\_EVENT\_2 = MISSING

**Emergent Care for Improper Medication Administration /  
Medication Side Effects**

**IF** M0840\_ECR\_MEDICATION[2] = 1  
**THEN** ADVERSE\_EVENT\_3 = 1  
**ELSE IF** M0830\_EC\_UNKNOWN [2] = 0 AND (M0830\_EC\_NONE[2] = 1 OR  
M0840\_ECR\_UNKNOWN [2] = 0)  
**THEN** ADVERSE\_EVENT\_3 = 0  
**ELSE** ADVERSE\_EVENT\_3 = MISSING

**Emergent Care for Hypo/Hyperglycemia**

**IF** M0840\_ECR\_HYPOGLYC[2] = 1  
    **THEN** ADVERSE\_EVENT\_4 = 1  
**ELSE IF** M0830\_EC\_UNKNOWN [2] = 0 AND (M0830\_EC\_NONE[2] = 1 OR  
    M0840\_ECR\_UNKNOWN [2] = 0)  
    **THEN** ADVERSE\_EVENT\_4 = 0  
**ELSE** ADVERSE\_EVENT\_4 = MISSING

**ELSE**

ADVERSE\_EVENT\_1 = MISSING  
ADVERSE\_EVENT\_2 = MISSING  
ADVERSE\_EVENT\_3 = MISSING  
ADVERSE\_EVENT\_4 = MISSING

**Unexpected Nursing Home Admissions**

**IF** M0100\_ASSMT\_REASON[2] = 06,07,09 **NOTE:** Event 9 does not apply (is missing)  
if patient died

**THEN**

IF M0270\_REHAB\_PROGNOSIS NOT = 00,01, UK  
OR (M0100\_ASSMT\_REASON[2] = 09 AND M0855\_INPAT\_FACILITY[2] NOT =  
NA)  
OR (M0100\_ASSMT\_REASON[2] NOT = 09 AND  
(M0855\_INPAT\_FACILITY[2] NOT = 01,02,03,04  
OR (M0855\_INPAT\_FACILITY[2] =03  
AND (M0900\_NH\_HOSPICE[2] NOT = 0,1 OR M0900\_NH\_PERMANENT[2] NOT  
= 0,1  
OR M0900\_NH\_UNSAFE\_HOME[2] NOT = 0,1 OR M0900\_NH\_OTHER[2] NOT =  
0,1  
OR M0900\_NH\_UNKNOWN NOT = 0,1))))

**THEN** ADVERSE\_EVENT\_9 = MISSING     **[SHOULD NEVER OCCUR]**

**ELSE**

**IF** M0900\_NH\_UNKNOWN[2] = 0  
**THEN**  
    INTERIM\_29 = M0900\_NH\_HOSPICE[2]  
    INTERIM\_30 = M0900\_NH\_PERMANENT[2]  
    INTERIM\_31 = M0900\_NH\_UNSAFE\_HOME[2]  
    INTERIM\_32 = M0900\_NH\_OTHER[2]  
**ELSE IF** M0855\_INPAT\_FACILITY[2] = 01,02,04,NA  
**THEN**  
    INTERIM\_29 = 0  
    INTERIM\_30 = 0  
    INTERIM\_31 = 0  
    INTERIM\_32 = 0

**ELSE**

INTERIM\_29 = MISSING  
INTERIM\_30 = MISSING  
INTERIM\_31 = MISSING  
INTERIM\_32 = MISSING

**IF** M0270\_REHAB\_PROGNOSIS = 01 AND (INTERIM\_29 = 1 OR  
INTERIM\_30 = 1 OR INTERIM\_31 = 1 OR INTERIM\_32 = 1)

**THEN** ADVERSE\_EVENT\_9 = 1

**ELSE IF** M0270\_REHAB\_PROGNOSIS = 01 AND  
((INTERIM\_29 = 0 AND INTERIM\_30 = 0 AND  
INTERIM\_31 = 0 AND INTERIM\_32 = 0)

**THEN** ADVERSE\_EVENT\_9 = 0

**ELSE** ADVERSE\_EVENT\_9 = MISSING

**ELSE**

ADVERSE\_EVENT\_9 = MISSING

**Exclusions for Adverse Events 5 - 8, 10 - 12**

**IF** M0100\_ASSMT\_REASON[2] = 09 **NOTE:** Events 5-8 & 10-12 apply only to  
discharges other than to facility

**THEN**

**IF** M0870\_DSCHG\_DISP[2] NOT = 01,02,03,UK  
OR M0300\_CURR\_RESIDENCE[2] NOT = 01,02,03,04,05  
OR M0350\_AP\_HM\_RESIDENT[2] NOT = 0,1  
OR M0350\_AP\_PD\_HELP[2] NOT = 0,1  
OR M0570\_WHEN\_CONFUSED[2] NOT = 00,01,02,03,04,NA  
OR M0700\_CUR\_AMBULATION[2] NOT = 00,01,02,03,04,05  
OR M0680\_CUR\_TOILETING[2] NOT = 00,01,02,03,04  
OR M0780\_CUR\_ORAL\_MEDS[2] NOT = 00,01,02,NA  
OR M0610\_BD\_MEM\_DEFICIT[2] NOT = 0,1  
OR M0610\_BD\_IMP\_DECISN[2] NOT = 0,1  
OR M0610\_BD\_VERBAL[2] NOT = 0,1  
OR M0610\_BD\_PHYSICAL[2] NOT = 0,1  
OR M0610\_BD\_SOC\_INAPPRO[2] NOT = 0,1  
OR M0610\_BD\_DELUSIONS[2] NOT = 0,1  
OR (M0445\_PRESS\_ULCER[2] = 1 AND M0460\_PRBLM\_ULCER[2] NOT =  
01,02,03,04,NA)  
OR (M0440\_LESION\_OPEN\_WND[2] = 1 AND (M0445\_PRESS\_ULCER[2] NOT =  
0,1 OR M0482\_SURG\_WOUND[2] NOT = 0,1))  
OR (M0482\_SURG\_WOUND[2] = 1 AND M0488\_STAT\_PRB\_SURGWND[2] NOT  
= 01,02,03,NA)  
OR M0440\_LESION\_OPEN\_WND[2] NOT = 0,1  
OR M0510\_UTI NOT = 00,01,NA,UK OR M0510\_UTI[2] NOT = 00,01,NA,UK  
OR ((M0445\_PRESS\_ULCER = 1 AND  
(M0450\_NBR\_PRSULC\_STG1 NOT = 00,01,02,03,04 OR  
M0450\_NBR\_PRSULC\_STG2 NOT = 00,01,02,03,04 OR  
M0450\_NBR\_PRSULC\_STG3 NOT = 00,01,02,03,04 OR  
M0450\_NBR\_PRSULC\_STG4 NOT = 00,01,02,03,04))  
OR (M0440\_LESION\_OPEN\_WND = 1 AND M0445\_PRESS\_ULCER NOT = 0,1)

OR M0440\_LESION\_OPEN\_WND NOT =0,1)  
 OR ((M0445\_PRESS\_ULCER[2] = 1 AND  
 (M0450\_NBR\_PRSULC\_STG1[2] NOT = 00,01,02,03,04 OR  
 M0450\_NBR\_PRSULC\_STG2[2] NOT = 00,01,02,03,04 OR  
 M0450\_NBR\_PRSULC\_STG3[2] NOT = 00,01,02,03,04 OR  
 M0450\_NBR\_PRSULC\_STG4[2] NOT = 00,01,02,03,04))  
 OR (M0440\_LESION\_OPEN\_WND[2] =1 AND \_M0445\_PRESS\_ULCER[2] NOT  
 = 0,1)  
 OR M0440\_LESION\_OPEN\_WND[2] NOT =0,1)  
 OR M0280\_LIFE\_EXPECTANCY NOT 00,01  
 OR M0640\_CUR\_GROOMING NOT = 00,01,02,03  
 OR M0670\_CUR\_BATHING NOT = 00,01,02, 03,04,05  
 OR M0680\_CUR\_TOILETING NOT = 00,01,02, 03,04  
 OR M0690\_CUR\_TRANSFERRING NOT = 00,01,02, 03,04,05  
 OR M0700\_CUR\_AMBULATION NOT = 00,01,02, 03,04,05  
 OR M0640\_CUR\_GROOMING[2] NOT = 00,01,02,03  
 OR M0670\_CUR\_BATHING[2] NOT = 00,01,02, 03,04,05  
 OR M0690\_CUR\_TRANSFERRING[2] NOT = 00,01,02, 03,04,05  
 OR M0780\_CUR\_ORAL\_MEDS NOT = 00,01,02,NA

**THEN**

ADVERSE\_EVENT\_5 = MISSING  
 ADVERSE\_EVENT\_6 = MISSING  
 ADVERSE\_EVENT\_7 = MISSING  
 ADVERSE\_EVENT\_8 = MISSING  
 ADVERSE\_EVENT\_10 = MISSING  
 ADVERSE\_EVENT\_11 = MISSING  
 ADVERSE\_EVENT\_12 = MISSING

**[SHOULD NEVER OCCUR]**

**Development of Urinary Tract Infection**

**ELSE**

IF M0510\_UTI = 00 AND M0510\_UTI[2] = 01  
     **THEN** ADVERSE\_EVENT\_5 = 1  
 ELSE IF M0510\_UTI = 00 AND M0510\_UTI[2] = 00,01  
     **THEN** ADVERSE\_EVENT\_5 = 0  
 ELSE ADVERSE\_EVENT\_5 = MISSING

**Increase in Number of Pressure Ulcers**

IF M0450\_NBR\_PRSULC\_STG1 = 00  
     **THEN** INTERIM\_1 = 0  
 ELSE IF M0450\_NBR\_PRSULC\_STG1 = 01  
     **THEN** INTERIM\_1 = 1  
 ELSE IF M0450\_NBR\_PRSULC\_STG1 = 02  
     **THEN** INTERIM\_1 = 2  
 ELSE IF M0450\_NBR\_PRSULC\_STG1 = 03  
     **THEN** INTERIM\_1 = 3  
 ELSE IF M0450\_NBR\_PRSULC\_STG1 = 04  
     **THEN** INTERIM\_1 = 4  
 ELSE INTERIM\_1 = MISSING

```

IF M0450_NBR_PRSULC_STG2 = 00
  THEN INTERIM_2 = 0
ELSE IF M0450_NBR_PRSULC_STG2 = 01
  THEN INTERIM_2 = 1
ELSE IF M0450_NBR_PRSULC_STG2 = 02
  THEN INTERIM_2 = 2
ELSE IF M0450_NBR_PRSULC_STG2 = 03
  THEN INTERIM_2 = 3
ELSE IF M0450_NBR_PRSULC_STG2 = 04
  THEN INTERIM_2 = 4
ELSE INTERIM_2 = MISSING

IF M0450_NBR_PRSULC_STG3 = 00
  THEN INTERIM_3 = 0
ELSE IF M0450_NBR_PRSULC_STG3 = 01
  THEN INTERIM_3 = 1
ELSE IF M0450_NBR_PRSULC_STG3 = 02
  THEN INTERIM_3 = 2
ELSE IF M0450_NBR_PRSULC_STG3 = 03
  THEN INTERIM_3 = 3
ELSE IF M0450_NBR_PRSULC_STG3 = 04
  THEN INTERIM_3 = 4
ELSE INTERIM_3 = MISSING

IF M0450_NBR_PRSULC_STG4 = 00
  THEN INTERIM_4 = 0
ELSE IF M0450_NBR_PRSULC_STG4 = 01
  THEN INTERIM_4 = 1
ELSE IF M0450_NBR_PRSULC_STG4 = 02
  THEN INTERIM_4 = 2
ELSE IF M0450_NBR_PRSULC_STG4 = 03
  THEN INTERIM_4 = 3
ELSE IF M0450_NBR_PRSULC_STG4 = 04
  THEN INTERIM_4 = 4
ELSE INTERIM_4 = MISSING

IF M0440_LESION_OPEN_WND = 1 AND M0445_PRESS_ULCER = 1
  THEN INTERIM_5 = INTERIM_1 + INTERIM_2 + INTERIM_3 +
  INTERIM_4
ELSE INTERIM_5 = 0

IF M0450_NBR_PRSULC_STG1[2] = 00
  THEN INTERIM_6 = 0
ELSE IF M0450_NBR_PRSULC_STG1[2] = 01
  THEN INTERIM_6 = 1
ELSE IF M0450_NBR_PRSULC_STG1[2] = 02
  THEN INTERIM_6 = 2
ELSE IF M0450_NBR_PRSULC_STG1[2] = 03
  THEN INTERIM_6 = 3
ELSE IF M0450_NBR_PRSULC_STG1[2] = 04
  THEN INTERIM_6 = 4

```

```

ELSE INTERIM_6 = MISSING

IF M0450_NBR_PRSULC_STG2[2] = 00
  THEN INTERIM_7 = 0
ELSE IF M0450_NBR_PRSULC_STG2[2] = 01
  THEN INTERIM_7 = 1
ELSE IF M0450_NBR_PRSULC_STG2[2] = 02
  THEN INTERIM_7 = 2
ELSE IF M0450_NBR_PRSULC_STG2[2] = 03
  THEN INTERIM_7 = 3
ELSE IF M0450_NBR_PRSULC_STG2[2] = 04
  THEN INTERIM_7 = 4
ELSE INTERIM_7 = MISSING

IF M0450_NBR_PRSULC_STG3[2] = 00
  THEN INTERIM_8 = 0
ELSE IF M0450_NBR_PRSULC_STG3[2] = 01
  THEN INTERIM_8 = 1
ELSE IF M0450_NBR_PRSULC_STG3[2] = 02
  THEN INTERIM_8 = 2
ELSE IF M0450_NBR_PRSULC_STG3[2] = 03
  THEN INTERIM_8 = 3
ELSE IF M0450_NBR_PRSULC_STG3[2] = 04
  THEN INTERIM_8 = 4
ELSE INTERIM_8 = MISSING

IF M0450_NBR_PRSULC_STG4[2] = 00
  THEN INTERIM_9 = 0
ELSE IF M0450_NBR_PRSULC_STG4[2] = 01
  THEN INTERIM_9 = 1
ELSE IF M0450_NBR_PRSULC_STG4[2] = 02
  THEN INTERIM_9 = 2
ELSE IF M0450_NBR_PRSULC_STG4[2] = 03
  THEN INTERIM_9 = 3
ELSE IF M0450_NBR_PRSULC_STG4[2] = 04
  THEN INTERIM_9 = 4
ELSE INTERIM_9 = MISSING

IF M0440_LESION_OPEN_WND[2] = 1 AND M0445_PRESS_ULCER[2] = 1
  THEN INTERIM_10 = INTERIM_6 + INTERIM_7 + INTERIM_8 +
  INTERIM_9
ELSE INTERIM_10 = 0

IF INTERIM_5 ≠ 16 AND INTERIM_10 > INTERIM_5
  THEN ADVERSE_EVENT_6 = 1
ELSE IF INTERIM_5 ≠ 16
  THEN ADVERSE_EVENT_6 = 0
ELSE ADVERSE_EVENT_6 = MISSING

```

**Substantial Decline in 3 or more Activities of Daily Living**

```
IF M0640_CUR_GROOMING = 00
  THEN INTERIM_11 = 0
ELSE IF M0640_CUR_GROOMING = 01
  THEN INTERIM_11 = 1
ELSE IF M0640_CUR_GROOMING = 02
  THEN INTERIM_11 = 2
ELSE IF M0640_CUR_GROOMING = 03
  THEN INTERIM_11 = 3
ELSE INTERIM_11 = MISSING
```

```
IF M0670_CUR_BATHING = 00
  THEN INTERIM_12 = 0
ELSE IF M0670_CUR_BATHING = 01
  THEN INTERIM_12 = 1
ELSE IF M0670_CUR_BATHING = 02
  THEN INTERIM_12 = 2
ELSE IF M0670_CUR_BATHING = 03
  THEN INTERIM_12 = 3
ELSE IF M0670_CUR_BATHING = 04
  THEN INTERIM_12 = 4
ELSE IF M0670_CUR_BATHING = 05
  THEN INTERIM_12 = 5
ELSE INTERIM_12 = MISSING
```

```
IF M0680_CUR_TOILETING = 00
  THEN INTERIM_13 = 0
ELSE IF M0680_CUR_TOILETING = 01
  THEN INTERIM_13 = 1
ELSE IF M0680_CUR_TOILETING = 02
  THEN INTERIM_13 = 2
ELSE IF M0680_CUR_TOILETING = 03
  THEN INTERIM_13 = 3
ELSE IF M0680_CUR_TOILETING = 04
  THEN INTERIM_13 = 4
ELSE INTERIM_13 = MISSING
```

```
IF M0690_CUR_TRANSFERRING = 00
  THEN INTERIM_14 = 0
ELSE IF M0690_CUR_TRANSFERRING = 01
  THEN INTERIM_14 = 1
ELSE IF M0690_CUR_TRANSFERRING = 02
  THEN INTERIM_14 = 2
ELSE IF M0690_CUR_TRANSFERRING = 03
  THEN INTERIM_14 = 3
ELSE IF M0690_CUR_TRANSFERRING = 04
  THEN INTERIM_14 = 4
ELSE IF M0690_CUR_TRANSFERRING = 05
  THEN INTERIM_14 = 5
ELSE INTERIM_14 = MISSING
```

```
IF M0700_CUR_AMBULATION = 00
  THEN INTERIM_15 = 0
ELSE IF M0700_CUR_AMBULATION = 01
  THEN INTERIM_15 = 1
ELSE IF M0700_CUR_AMBULATION = 02
  THEN INTERIM_15 = 2
ELSE IF M0700_CUR_AMBULATION = 03
  THEN INTERIM_15 = 3
ELSE IF M0700_CUR_AMBULATION = 04
  THEN INTERIM_15 = 4
ELSE IF M0700_CUR_AMBULATION = 05
  THEN INTERIM_15 = 5
ELSE INTERIM_15 = MISSING
```

```
IF M0640_CUR_GROOMING[2] = 00
  THEN INTERIM_16 = 0
ELSE IF M0640_CUR_GROOMING[2] = 01
  THEN INTERIM_16 = 1
ELSE IF M0640_CUR_GROOMING[2] = 02
  THEN INTERIM_16 = 2
ELSE IF M0640_CUR_GROOMING[2] = 03
  THEN INTERIM_16 = 3
ELSE INTERIM_16 = MISSING
```

```
IF M0670_CUR_BATHING[2] = 00
  THEN INTERIM_17 = 0
ELSE IF M0670_CUR_BATHING[2] = 01
  THEN INTERIM_17 = 1
ELSE IF M0670_CUR_BATHING[2] = 02
  THEN INTERIM_17 = 2
ELSE IF M0670_CUR_BATHING[2] = 03
  THEN INTERIM_17 = 3
ELSE IF M0670_CUR_BATHING[2] = 04
  THEN INTERIM_17 = 4
ELSE IF M0670_CUR_BATHING[2] = 05
  THEN INTERIM_17 = 5
ELSE INTERIM_17 = MISSING
```

```
IF M0680_CUR_TOILETING[2] = 00
  THEN INTERIM_18 = 0
ELSE IF M0680_CUR_TOILETING[2] = 01
  THEN INTERIM_18 = 1
ELSE IF M0680_CUR_TOILETING[2] = 02
  THEN INTERIM_18 = 2
ELSE IF M0680_CUR_TOILETING[2] = 03
  THEN INTERIM_18 = 3
ELSE IF M0680_CUR_TOILETING[2] = 04
  THEN INTERIM_18 = 4
ELSE INTERIM_18 = MISSING
```



```

IF M0690_CUR_TRANSFERRING[2] = 00
  THEN INTERIM_19 = 0
ELSE IF M0690_CUR_TRANSFERRING[2] = 01
  THEN INTERIM_19 = 1
ELSE IF M0690_CUR_TRANSFERRING[2] = 02
  THEN INTERIM_19 = 2
ELSE IF M0690_CUR_TRANSFERRING[2] = 03
  THEN INTERIM_19 = 3
ELSE IF M0690_CUR_TRANSFERRING[2] = 04
  THEN INTERIM_19 = 4
ELSE IF M0690_CUR_TRANSFERRING[2] = 05
  THEN INTERIM_19 = 5
ELSE INTERIM_19 = MISSING

IF M0700_CUR_AMBULATION[2] = 00
  THEN INTERIM_20 = 0
ELSE IF M0700_CUR_AMBULATION[2] = 01
  THEN INTERIM_20 = 1
ELSE IF M0700_CUR_AMBULATION[2] = 02
  THEN INTERIM_20 = 2
ELSE IF M0700_CUR_AMBULATION[2] = 03
  THEN INTERIM_20 = 3
ELSE IF M0700_CUR_AMBULATION[2] = 04
  THEN INTERIM_20 = 4
ELSE IF M0700_CUR_AMBULATION[2] = 05
  THEN INTERIM_20 = 5
ELSE INTERIM_20 = MISSING

IF INTERIM_11 < 2 AND INTERIM_11 < (INTERIM_16 – 1)

  THEN INTERIM_21 = 1
ELSE IF INTERIM_11 < 2 AND INTERIM_11 >= (INTERIM_16 – 1)
  THEN INTERIM_21 = 0
ELSE INTERIM_21 = MISSING

IF INTERIM_12 < 4 AND INTERIM_12 < (INTERIM_17 – 1)

  THEN INTERIM_22 = 1
ELSE IF INTERIM_12 < 4 AND INTERIM_12 >= (INTERIM_17 – 1)
  THEN INTERIM_22 = 0
ELSE INTERIM_22 = MISSING

IF INTERIM_13 < 3 AND INTERIM_13 < (INTERIM_18 – 1)

  THEN INTERIM_23 = 1
ELSE IF INTERIM_13 < 3 AND INTERIM_13 >= (INTERIM_18 – 1)
  THEN INTERIM_23 = 0
ELSE INTERIM_23 = MISSING

IF INTERIM_14 < 4 AND INTERIM_14 < (INTERIM_19 – 1)

```

```

        THEN INTERIM_24 = 1
    ELSE IF INTERIM_14 < 4 AND INTERIM_14 >= (INTERIM_19 - 1)
        THEN INTERIM_24 = 0
    ELSE INTERIM_24 = MISSING

    IF INTERIM_15 < 4 AND INTERIM_15 < (INTERIM_20 - 1)

        THEN INTERIM_25 = 1
    ELSE IF INTERIM_15 < 4 AND INTERIM_15 >= (INTERIM_20 - 1)
        THEN INTERIM_25 = 0
    ELSE INTERIM_25 = MISSING

    IF THREE OR MORE OF INTERIM_21, INTERIM_22, INTERIM_23,
    INTERIM_24, AND INTERIM_25 HAVE VALID DATA,
        THEN INTERIM_26 = INTERIM_21 + INTERIM_22 + INTERIM_23 +
    INTERIM_24 + INTERIM_25
    ELSE INTERIM_26 = MISSING

    IF M0280_LIFE_EXPECTANCY ≠ 01 AND INTERIM_26 >= 3
        THEN ADVERSE_EVENT_7 = 1
    ELSE IF M0280_LIFE_EXPECTANCY ≠ 01 AND INTERIM_26 >= 0
        THEN ADVERSE_EVENT_7 = 0
    ELSE ADVERSE_EVENT_7 = MISSING

```

**Substantial Decline in Management of Oral Medications**

```

    IF M0780_CUR_ORAL_MEDS = 00
        THEN INTERIM_27 = 0
    ELSE IF M0780_CUR_ORAL_MEDS = 01
        THEN INTERIM_27 = 1
    ELSE IF M0780_CUR_ORAL_MEDS = 02
        THEN INTERIM_27 = 2
    ELSE INTERIM_27 = MISSING

    IF M0780_CUR_ORAL_MEDS[2] = 00
        THEN INTERIM_28 = 0
    ELSE IF M0780_CUR_ORAL_MEDS[2] = 01
        THEN INTERIM_28 = 1
    ELSE IF M0780_CUR_ORAL_MEDS[2] = 02
        THEN INTERIM_28 = 2
    ELSE INTERIM_28 = MISSING

    IF INTERIM_27 < 1 AND INTERIM_27 < (INTERIM_28 - 1)
        THEN ADVERSE_EVENT_8 = 1
    ELSE IF INTERIM_27 < 1 AND INTERIM_27 >= (INTERIM_28 - 1)
        THEN ADVERSE_EVENT_8 = 0
    ELSE ADVERSE_EVENT_8 = MISSING

```

**Discharged to the Community Needing Wound Care or Medication Assistance**

IF M0870\_DSCHG\_DISP[2] = 01 AND (M0300\_CURR\_RESIDENCE[2] = 01,02,03,05) AND (M0350\_AP\_HM\_RESIDENT[2] = 0 AND M0350\_AP\_PD\_HELP[2] = 0) AND (M0570\_WHEN\_CONFUSED[2] = 03,04,NA) AND (M0460\_PRBLM\_ULCER[2] = 03,04 OR M0488\_STAT\_PRB\_SURGWND[2] = 03 OR M0780\_CUR\_ORAL\_MEDS[2] = 02)

THEN ADVERSE\_EVENT\_10 = 1

ELSE IF M0870\_DSCHG\_DISP[2] = 01

THEN ADVERSE\_EVENT\_10 = 0

ELSE ADVERSE\_EVENT\_10 = MISSING

**Discharge to the Community Needing Toileting Assistance**

IF M0870\_DSCHG\_DISP[2] = 01 AND (M0350\_AP\_HM\_RESIDENT[2] = 0 AND M0350\_AP\_PD\_HELP[2] = 0) AND (M0700\_CUR\_AMBULATION[2] = 03,04,05 AND M0680\_CUR\_TOILETING[2] = 04)

THEN ADVERSE\_EVENT\_11 = 1

ELSE IF M0870\_DSCHG\_DISP[2] = 01

THEN ADVERSE\_EVENT\_11 = 0

ELSE ADVERSE\_EVENT\_11 = MISSING

**Discharge to the Community with Behavioral Problems**

INTERIM\_33 = M0610\_BD\_MEM\_DEFICIT[2] + M0610\_BD\_IMP\_DECISN[2] + M0610\_BD\_VERBAL[2] + M0610\_BD\_PHYSICAL[2] + M0610\_BD\_SOC\_INAPPRO[2] + M0610\_BD\_DELUSIONS[2]

IF M0870\_DSCHG\_DISP[2] = 01 AND (M0350\_AP\_HM\_RESIDENT[2] = 0 AND M0350\_AP\_PD\_HELP[2] = 0) AND INTERIM\_33 >= 2

THEN ADVERSE\_EVENT\_12 = 1

ELSE IF M0870\_DSCHG\_DISP[2] = 01

THEN ADVERSE\_EVENT\_12 = 0

ELSE ADVERSE\_EVENT\_12 = MISSING

ELSE

ADVERSE\_EVENT\_5 = MISSING

ADVERSE\_EVENT\_6 = MISSING

ADVERSE\_EVENT\_7 = MISSING

ADVERSE\_EVENT\_8 = MISSING

ADVERSE\_EVENT\_10 = MISSING

ADVERSE\_EVENT\_11 = MISSING

ADVERSE\_EVENT\_12 = MISSING

**Unexpected Death**

**NOTE:** Event 13 applies to all cases regardless of the M0100\_ASSMT\_REASON[2]

```
IF M0280_LIFE_EXPECTANCY NOT = 00,01
  THEN ADVERSE_EVENT_13 = MISSING          '[SHOULD NEVER OCCUR]'
ELSE
  IF M0280_LIFE_EXPECTANCY = 00 AND M0100_ASSMT_REASON[2] = 08
    THEN ADVERSE_EVENT_13 = 1
  ELSE IF M0280_LIFE_EXPECTANCY = 00 AND M0100_ASSMT_REASON[2] <>
    08
    THEN ADVERSE_EVENT_13 = 0
  ELSE ADVERSE_EVENT_13 = MISSING
```

## RISK FACTOR TRANSFORMATION SPECIFICATIONS

This document includes pseudo-code for transformation of raw OASIS data into the measures that will be used as risk factors in the risk adjustment process.

### Assumptions and Conventions

- The following transformations result in data items with numeric values. A code of 'MISSING' indicates that the data item should be given a null value and be excluded from analyses. Where the phrase '**[SHOULD NEVER OCCUR]**' appears, it indicates that the data submitted do not meet the published data specifications, and, in addition to excluding the case from the calculation of summary statistics for that particular measure, the entire case should be considered for exclusion from the analyses.
- Assessments must have already been matched, i.e., first timepoint of SOC/ROC (RFA = 01, 02, 03) with second timepoint of Transfer/DC (RFA = 06, 07, 08, 09) before these transformations are applied. Note, however, that for all risk factors measures except those related to length of stay, data from the second time point are not used.
- Where multiple values can result in the same transformation, a comma is used in place of a logical 'OR', e.g., IF ITEM1 = 0,1 is the equivalent of IF ITEM1 = 0 OR ITEM1 = 1.

### Risk Factors

There are 329 independent variables that are used as the baseline risk factors in the risk adjustment process. Of those 329 independent variables, 59 are computed for use as case mix measures and their definition as a risk factor can be carried over directly from the case mix transformation specifications. The remaining 270 risk factors are defined in this section. The risk factors have been grouped broadly for easier reference.

Computations for the risk factors can be very complex. In some cases, e.g., the age-related risk factors, the risk factor computation makes use of the case mix variable. Hence, the complete computation requires both information from the Case Mix Data Transformation Pseudo-Code and the Risk Factor Data Transformation Pseudo-Code. Additionally, other risk factors, e.g., the acute conditions, rely on the computation of intermediate or grouping variables to aggregate large sets of information (e.g., ICD9 codes). Hence, a risk factor computation can require several pages of code to define a single risk factor completely. The Crosswalk of Variable Label, Item Name, Case Mix/Risk Factor Usage, and Computation in the first section of this document provides an index for specific risk factors.

## RISK FACTOR DATA TRANSFORMATION PSEUDO-CODE

(NOTE: *Italicized text is not part of code*)

### Demographics

```
SET AGE_LT65=0
SET AGE_65_74=0
SET AGE_75_84=0
SET AGE_GE85=0
IF AGE < 65 THEN AGE_LT65=1
IF AGE >= 65 AND AGE <= 74 THEN AGE_65_74=1
IF AGE >= 75 AND AGE <= 84 THEN AGE_75_84=1
IF AGE >= 85 THEN AGE_GE85=1
```

### Payment Source

```
SET DUALPAY=0
IF (M0150_CPAY_MCARE_FFS = 1 OR M0150_CPAY_MCARE_HMO = 1) AND
(M0150_CPAY_MCAID_FFS = 1 OR M0150_CPAY_MCAID_HMO = 1)
THEN DUALPAY=1
```

```
SET MDCDONLY=0
IF M0150_CPAY_MCARE_FFS = 0 AND M0150_CPAY_MCARE_HMO = 0 AND
(M0150_CPAY_MCAID_FFS = 1 OR M0150_CPAY_MCAID_HMO = 1)
THEN MDCDONLY=1
```

### Caregiver Risk Factors

```
IF (M0360_PRIMARY_CAREGIVER NOT = 00, UK) AND
(M0350_AP_NONE NOT = 1 AND M0350_AP_UNKNOWN NOT = 1) AND
(M0380_CA_ADL NOT = 0,1 OR M0380_CA_IADL NOT = 0,1)
THEN
    CAREGIVER_1 = MISSING
    CAREGIVER_2 = MISSING
    [SHOULD NEVER OCCUR]
```

```
IF (M0360_PRIMARY_CAREGIVER NOT = 00, UK) AND
(M0350_AP_NONE NOT = 1 AND M0350_AP_UNKNOWN NOT = 1) AND
(M0380_CA_ADL = 0 AND M0380_CA_IADL = 0 AND M0380_CA_ENVIRONMENT = 0
AND
M0380_CA_PSYCHSOC = 0 AND M0380_CA_MEDICAL = 0 AND
M0380_CA_FIN_LEGAL = 0 AND
M0380_CA_HLTH_CARE = 0 AND M0380_CA_UNKNOWN = 0)
THEN
    CAREGIVER_1 = MISSING
    CAREGIVER_2 = MISSING
    [SHOULD NEVER OCCUR]
```

```
IF (M0360_PRIMARY_CAREGIVER NOT = 00, UK) AND
(M0350_AP_NONE NOT = 1 AND M0350_AP_UNKNOWN NOT = 1) AND
(M0380_CA_UNKNOWN = 1 AND (M0380_CA_ADL = 1 OR
M0380_CA_IADL = 1 OR M0380_CA_ENVIRONMENT = 1 OR
```

M0380\_CA\_PSYCHSOC = 1 OR M0380\_CA\_MEDICAL = 1 OR  
M0380\_CA\_FIN\_LEGAL = 1 OR M0380\_CA\_HLTH\_CARE = 1))

**THEN**

CAREGIVER\_1 = MISSING

CAREGIVER\_2 = MISSING

**['SHOULD NEVER OCCUR']**

**IF** (M0360\_PRIMARY\_CAREGIVER = 00, UK OR  
M0350\_AP\_NONE = 1 OR M0350\_AP\_UNKNOWN = 1) AND  
(M0380\_CA\_IADL = 0, 1 OR M0380\_CA\_IADL = 0, 1 OR  
M0380\_CA\_ENVIRONMENT = 0, 1 OR M0380\_CA\_PSYCHSOC = 0, 1 OR  
M0380\_CA\_MEDICAL = 0, 1 OR M0380\_CA\_FIN\_LEGAL = 0, 1 OR  
M0380\_CA\_HLTH\_CARE = 0, 1 OR M0380\_CA\_UNKNOWN = 0, 1)

**THEN**

CAREGIVER\_1 = MISSING

CAREGIVER\_2 = MISSING

**['SHOULD NEVER OCCUR']**

**SET** CAREGIVER\_UK=0

**SET** CAREGIVER\_SK=0

**ELSE IF** M0380\_CA\_UNKNOWN = 1

**THEN**

CAREGIVER\_1 = 0

CAREGIVER\_2 = 0

CAREGIVER\_SK=0

CAREGIVER\_UK=1

**ELSE IF** (M0350\_AP\_UNKNOWN = 1 OR M0360\_PRIMARY\_CAREGIVER = UK)

**THEN**

CAREGIVER\_1 = 0

CAREGIVER\_2 = 0

CAREGIVER\_SK=1

CAREGIVER\_UK=0

**ELSE**

**IF** M0380\_CA\_ADL = 1

**THEN** CAREGIVER\_1 = 1

**ELSE IF** M0380\_CA\_ADL = 0 OR

(M0360\_PRIMARY\_CAREGIVER = 00 OR M0350\_AP\_NONE = 1)

**THEN**

CAREGIVER\_1 = 0

CAREGIVER\_SK=0

CAREGIVER\_UK=0

**IF** M0380\_CA\_IADL = 1

**THEN** CAREGIVER\_2 = 1

**ELSE IF** M0380\_CA\_IADL = 0 OR

(M0360\_PRIMARY\_CAREGIVER = 00 OR M0350\_AP\_NONE = 1)

**THEN**

CAREGIVER\_2 = 0

CAREGIVER\_SK=0

CAREGIVER\_UK=0

```
IF M0350_AP_NONE = 1
  THEN
    ANYPRIMARY = 0
    ANYPRIMARY_UK = 0
    ANYPRIMARY_SK = 0
ELSE IF M0360_PRIMARY_CAREGIVER = 00
  THEN
    ANYPRIMARY = 0
    ANYPRIMARY_UK=0
    ANYPRIMARY_SK=0
ELSE IF M0360_PRIMARY_CAREGIVER = 01, 02, 03, 04, 05
  THEN
    ANYPRIMARY = 1
    ANYPRIMARY_UK=0
    ANYPRIMARY_SK=0
ELSE IF M0360_PRIMARY_CAREGIVER = UK
  THEN
    ANYPRIMARY = 0
    ANYPRIMARY_UK=1
    ANYPRIMARY_SK=0
ELSE IF M0350_AP_UNKNOWN = 1
  THEN
    ANYPRIMARY = 0
    ANYPRIMARY_UK=0
    ANYPRIMARY_SK=1
ELSE ANYPRIMARY = MISSING                                     '[SHOULD NEVER OCCUR]'

SET FREQASST_NA=0
SET FREQASST_SK=0

IF M0360_PRIMARY_CAREGIVER = UK OR M0350_UNKNOWN = 1
  THEN
    FREQASST_OUT=0
    FREQASST_SK=1
ELSE IF M0370_FREQ_PRM_ASSTANCE = UK
  THEN
    FREQASST_OUT=0
    FREQASST_UK=1
ELSE IF FREQASST=0
  THEN
    FREQASST_OUT=0
ELSE IF FREQASST=1
  THEN
    FREQASST_OUT=1
ELSE IF FREQASST=2
  THEN
    FREQASST_OUT=2
ELSE IF FREQASST=3
  THEN
```



FREQASST\_OUT=3

```

ELSE IF FREQASST=4
  THEN
    FREQASST_OUT=4
ELSE IF FREQASST=5
  THEN
    FREQASST_OUT=5
ELSE IF FREQASST=6
  THEN
    FREQASST_OUT=6

```

```

IF HELP_1 = 1 OR HELP_2 = 1
  THEN NEWASSIST = 1
ELSE NEWASSIST = 0

```

```

IF M0350_AP_UNKNOWN = 1
  THEN
    NEWASSIST_UK=1
    NEWASSIST=0

```

### Severity Ratings

```

IF M0230_PRIMARY_DIAG_SEVERITY = 00
  THEN INTSEV0 = 0
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 01
  THEN INTSEV0 = 1
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 02
  THEN INTSEV0 = 2
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 03
  THEN INTSEV0 = 3
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 04
  THEN INTSEV0 = 4
ELSE INTSEV0 = MISSING

```

**‘[SHOULD NEVER OCCUR]**

```

IF M0240_OTH_DIAG_ICD1 NOT = BLANK, INVALID
  IF M0240_OTH_DIAG1_SEVERITY = 00
    THEN INTSEV1 = 0
  ELSE IF M0240_OTH_DIAG1_SEVERITY = 01
    THEN INTSEV1 = 1
  ELSE IF M0240_OTH_DIAG1_SEVERITY = 02
    THEN INTSEV1 = 2
  ELSE IF M0240_OTH_DIAG1_SEVERITY = 03
    THEN INTSEV1 = 3
  ELSE IF M0240_OTH_DIAG1_SEVERITY = 04
    THEN INTSEV1 = 4
  ELSE IF (M0240_OTH_DIAG1_SEVERITY = BLANK) AND (byte 1 of
M0240_OTH_DIAG_ICD1 = "E")
    THEN INTSEV1 = 0
  ELSE INTSEV1 = MISSING

```

**‘[SHOULD NEVER OCCUR]**

```

IF M0240_OTH_DIAG_ICD2 NOT = BLANK, INVALID
  IF M0240_OTH_DIAG2_SEVERITY = 00
    THEN INTSEV2 = 0
  ELSE IF M0240_OTH_DIAG2_SEVERITY = 01
    THEN INTSEV2 = 1
  ELSE IF M0240_OTH_DIAG2_SEVERITY = 02
    THEN INTSEV2 = 2
  ELSE IF M0240_OTH_DIAG2_SEVERITY = 03
    THEN INTSEV2 = 3
  ELSE IF M0240_OTH_DIAG2_SEVERITY = 04
    THEN INTSEV2 = 4
  ELSE IF (M0240_OTH_DIAG2_SEVERITY = BLANK) AND (byte 1 of
M0240_OTH_DIAG_ICD2 = "E")
    THEN INTSEV2 = 0
  ELSE INTSEV2 = MISSING                                     '[SHOULD NEVER OCCUR]

```

```

IF M0240_OTH_DIAG_ICD3 NOT = BLANK, INVALID
  IF M0240_OTH_DIAG3_SEVERITY = 00
    THEN INTSEV3 = 0
  ELSE IF M0240_OTH_DIAG3_SEVERITY = 01
    THEN INTSEV3 = 1
  ELSE IF M0240_OTH_DIAG3_SEVERITY = 02
    THEN INTSEV3 = 2
  ELSE IF M0240_OTH_DIAG3_SEVERITY = 03
    THEN INTSEV3 = 3
  ELSE IF M0240_OTH_DIAG3_SEVERITY = 04
    THEN INTSEV3 = 4
  ELSE IF (M0240_OTH_DIAG3_SEVERITY = BLANK) AND (byte 1 of
M0240_OTH_DIAG_ICD3 = "E")
    THEN INTSEV3 = 0
  ELSE INTSEV3 = MISSING                                     '[SHOULD NEVER OCCUR]

```

```

IF M0240_OTH_DIAG_ICD4 NOT = BLANK, INVALID
  IF M0240_OTH_DIAG4_SEVERITY = 00
    THEN INTSEV4 = 0
  ELSE IF M0240_OTH_DIAG4_SEVERITY = 01
    THEN INTSEV4 = 1
  ELSE IF M0240_OTH_DIAG4_SEVERITY = 02
    THEN INTSEV4 = 2
  ELSE IF M0240_OTH_DIAG4_SEVERITY = 03
    THEN INTSEV4 = 3
  ELSE IF M0240_OTH_DIAG4_SEVERITY = 04
    THEN INTSEV4 = 4
  ELSE IF (M0240_OTH_DIAG4_SEVERITY = BLANK) AND (byte 1 of
M0240_OTH_DIAG_ICD4 = "E")
    THEN INTSEV4 = 0
  ELSE INTSEV4 = MISSING                                     '[SHOULD NEVER OCCUR]

```

```

IF M0240_OTH_DIAG_ICD5 NOT = BLANK, INVALID
  IF M0240_OTH_DIAG5_SEVERITY = 00
    THEN INTSEV5 = 0
  ELSE IF M0240_OTH_DIAG5_SEVERITY = 01
    THEN INTSEV5 = 1
  ELSE IF M0240_OTH_DIAG5_SEVERITY = 02
    THEN INTSEV5 = 2
  ELSE IF M0240_OTH_DIAG5_SEVERITY = 03
    THEN INTSEV5 = 3
  ELSE IF M0240_OTH_DIAG5_SEVERITY = 04
    THEN INTSEV5 = 4
  ELSE IF (M0240_OTH_DIAG5_SEVERITY = BLANK) AND (byte 1 of
M0240_OTH_DIAG_ICD5 = "E")
    THEN INTSEV5 = 0
  ELSE INTSEV5 = MISSING                                     '[SHOULD NEVER OCCUR]

```

```

MAXIMUMSEV = 0.
IF INTSEV0 > 0
  THEN MAXIMUMSEV = INTSEV0
IF INTSEV1 > MAXIMUMSEV
  THEN MAXIMUMSEV = INTSEV1
IF INTSEV2 > MAXIMUMSEV
  THEN MAXIMUMSEV = INTSEV2
IF INTSEV3 > MAXIMUMSEV
  THEN MAXIMUMSEV = INTSEV3
IF INTSEV4 > MAXIMUMSEV
  THEN MAXIMUMSEV = INTSEV4
IF INTSEV5 > MAXIMUMSEV
  THEN MAXIMUMSEV = INTSEV5

```

```

IF M0230_PRIMARY_DIAG_SEVERITY = 00
  THEN SEVERITY = 0
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 01
  THEN SEVERITY = 1
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 02
  THEN SEVERITY = 2
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 03
  THEN SEVERITY = 3
ELSE IF M0230_PRIMARY_DIAG_SEVERITY = 04
  THEN SEVERITY = 4
ELSE SEVERITY = MISSING                                     '[SHOULD NEVER OCCUR]

```

```

SEVERITY2 = 0.
IF INTSEV0 >= 2
  THEN SEVERITY2 = SEVERITY2 + 1
IF INTSEV1 >= 2
  THEN SEVERITY2 = SEVERITY2 + 1
IF INTSEV2 >= 2
  THEN SEVERITY2 = SEVERITY2 + 1
IF INTSEV3 >= 2
  THEN SEVERITY2 = SEVERITY2 + 1

```

```

IF INTSEV4 >= 2
    THEN SEVERITY2 = SEVERITY2 + 1
IF INTSEV5 >= 2
    THEN SEVERITY2 = SEVERITY2 + 1

```

### **Diagnostic Indices**

The following range references apply for the ANYDIAG\_1 through ANYDIAG\_18 transformations.

<u>ICD-9 Codes</u>	<u>Reference</u>
001-139	RANGE1
140-239	RANGE2
240-279	RANGE3
280-289	RANGE4
290-319	RANGE5
320-389	RANGE6
390-459	RANGE7
460-519	RANGE8
520-579	RANGE9
580-629	RANGE10
630-676	RANGE11
680-709	RANGE12
710-739	RANGE13
740-759	RANGE14
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  
OR  
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\_9 = MISSING  
 ANYDIAG\_10 = MISSING  
 ANYDIAG\_11 = MISSING  
 ANYDIAG\_12 = MISSING  
 ANYDIAG\_13 = MISSING  
 ANYDIAG\_14 = MISSING  
 ANYDIAG\_15 = MISSING  
 ANYDIAG\_16 = MISSING  
 ANYDIAG\_17 = MISSING  
 ANYDIAG\_18 = MISSING

**[SHOULD NEVER OCCUR]**

**Number of Acute Conditions**

The following references apply for the ACUTE\_16 transformation.

<u>Data Item</u>	<u>Reference</u>
M0170_DC_HOSP_14_DAYS OR M0175_DC_HOSP_14_DAYS	DISCHARGE 1
M0170_DC_REHAB_14_DAYS OR M0175_DC_REHAB_14_DAYS	DISCHARGE 2
M0170_DC_NURS_HOME_14_DAYS OR M0175_DC_SNF_14_DAYS OR M0175_DC_NH_14_DAYS	DISCHARGE 3
M0190_14_DAY_INP1_ICD	DISICD1
M0190_14_DAY_INP2_ICD	DISICD2
M0200_REG_CHG_14_DAYS	REGIMEN
M0210_CHGREG_ICD1	REGICD1
M0210_CHGREG_ICD2	REGICD2
M0210_CHGREG_ICD3	REGICD3
M0210_CHGREG_ICD4	REGICD4

<u>ICD-9 Codes</u>	<u>Reference</u>
170-171, 213, 274, 710-739, 781, 800-848, 885-887, 895-897, 905, 927-928	GROUP1
045-049, 191-192, 225, 320-326, 330-337, 338, 340-359, 430-438, 850-854, 907, 950-957	GROUP2
707, 870-884, 890-894, 940-949	GROUP3
391, 393-398, 401-405, 410-417, 420-429, 440-448, 451-455, 456_459, 785	GROUP4
011-012, 160-165, 197, 212, 231, 460-466, 470-478, 480-487, 490-496, 500-508, 510-519, 786, 860-862	GROUP5
001-009, 127, 129, 150-154, 156, 159, 211, 230, 530-537, 538, 550-553, 555-558, 560-579, 787, 863	GROUP6
001-018, 020-027, 030-037, 039-057, 060_066, 070-088, 090-104, 110-118, 120-136	GROUP7
290-319, 797	GROUP8
250, BLANK, 000	GROUP9

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

- 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** ((DISCHARGE1 NOT = 0,1 OR DISCHARGE2 NOT = 0,1 OR DISCHARGE3 NOT = 0,1) OR ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 =1) AND (DISICD1 = BLANK OR INVALID) AND DISICD1 = BLANK, INVALID AND DISICD2 = BLANK, INVALID))) **OR** (REGIMEN NOT = 0,1 OR (REGIMEN = 1 AND (REGICD1 = BLANK, INVALID AND REGICD2 = BLANK, INVALID AND REGICD3 = BLANK, INVALID AND REGICD4 = BLANK, INVALID)))  
**THEN** ACUTE\_16 = MISSING **[SHOULD NEVER OCCUR]**

**IF** ((DISCHARGE1 = 1 OR DISCHARGE2 = 1 OR DISCHARGE3 = 1) AND (DISICD1 **NOT IN** GROUP1, GROUP2, GROUP3, GROUP4, GROUP5, GROUP6, GROUP7, GROUP8, GROUP9 OR DISICD2 **NOT IN** GROUP1, GROUP2, GROUP3, GROUP4, GROUP5, GROUP6, GROUP7, GROUP8, GROUP9)) OR ((REGIMEN = 1) AND (REGICD1 **NOT IN** GROUP1, GROUP2, GROUP3, GROUP4, GROUP5, GROUP6, GROUP7, GROUP8, GROUP9 OR REGICD2 **NOT IN** GROUP1, GROUP2, GROUP3, GROUP4, GROUP5, GROUP6, GROUP7, GROUP8, GROUP9 OR REGICD3 **NOT IN** GROUP1, GROUP2, GROUP3, GROUP4, GROUP5, GROUP6, GROUP7, GROUP8, GROUP9 OR REGICD4 **NOT IN** GROUP1, GROUP2, GROUP3, GROUP4, GROUP5, GROUP6, GROUP7, GROUP8, GROUP9))  
**THEN** ACUTE\_16 = 1  
**ELSE** ACUTE\_16 = 0

**IF** ACUTE\_1 = 0, 1 AND ACUTE\_2 = 0, 1 AND ACUTE\_3 = 0, 1 AND ACUTE\_4 = 0, 1  
 AND  
 ACUTE\_5 = 0, 1 AND ACUTE\_6 = 0, 1 AND ACUTE\_7 = 0, 1 AND ACUTE\_8 = 0, 1  
 AND  
 ACUTE\_9 = 0, 1 AND ACUTE\_10 = 0, 1 AND ACUTE\_11 = 0, 1 AND ACUTE\_12 = 0, 1  
 AND  
 ACUTE\_13 = 0, 1 AND ACUTE\_14 = 0, 1 AND ACUTE\_15 = 0, 1 AND ACUTE\_16 = 0,  
 1  
**THEN** AQUIGN = ACUTE\_ 1 + ACUTE\_ 2 + ACUTE\_ 3 + ACUTE\_ 4 + ACUTE\_5  
 +  
 ACUTE\_ 6 + ACUTE\_ 7 + ACUTE\_ 8 + ACUTE\_ 9 + ACUTE\_ 10 + ACUTE\_ 11 +  
 ACUTE\_ 12 + ACUTE\_ 13 + ACUTE\_ 14 + ACUTE\_ 15 + ACUTE\_ 16  
**ELSE** AQUIGN = MISSING **'[SHOULD NEVER OCCUR]**

**Number of Chronic Conditions**

**IF** CHRONIC\_1 = 0, 1 AND CHRONIC\_2 = 0, 1 AND CHRONIC\_3 = 0, 1 AND  
 CHRONIC\_4 = 0, 1 AND  
 CHRONIC\_5 = 0, 1 AND CHRONIC\_6 = 0, 1 AND CHRONIC\_7 = 0, 1 AND  
 CHRONIC\_8 = 0, 1  
**THEN** CQUIGN = CHRONIC\_ 1 + CHRONIC\_ 2 + CHRONIC\_ 3 + CHRONIC\_ 4 +  
 CHRONIC\_ 5 +  
 CHRONIC\_ 6 + CHRONIC\_ 7 + CHRONIC\_ 8  
**ELSE** CQUIGN = MISSING **'[SHOULD NEVER OCCUR]**

**Neuro/Emotional/Behavioral Baseline Dummy Variables**

**IF** (M0610\_BD\_MEM\_DEFICIT = 0 AND M0610\_BD\_IMP\_DECISN = 0 AND  
 M0610\_BD\_VERBAL = 0 AND M0610\_BD\_PHYSICAL = 0 AND  
 M0610\_BD\_SOC\_INAPPRO = 0 AND M0610\_BD\_DELUSIONS = 0 AND  
 M0610\_BD\_NONE = 0) OR (M0610\_BD\_NONE = 1 AND  
 (M0610\_BD\_MEM\_DEFICIT = 1 OR M0610\_BD\_IMP\_DECISN = 1 OR  
 M0610\_BD\_VERBAL = 1 OR M0610\_BD\_PHYSICAL = 1 OR  
 M0610\_BD\_SOC\_INAPPRO = 1 OR M0610\_BD\_DELUSIONS = 1))  
**THEN**  
 BEHAVE\_1 = MISSING  
 BEHAVE\_2 = MISSING  
 BEHAVE\_3 = MISSING  
 BEHAVE\_4 = MISSING  
**'[SHOULD NEVER OCCUR]**

**IF** M0610\_BD\_MEM\_DEFICIT NOT = 0, 1 OR M0610\_BD\_IMP\_DECISN NOT = 0, 1  
 OR  
 M0610\_BD\_VERBAL NOT = 0, 1 OR M0610\_BD\_SOC\_INAPPRO NOT = 0, 1  
**THEN**  
 BEHAVE\_1 = MISSING  
 BEHAVE\_2 = MISSING  
 BEHAVE\_3 = MISSING  
 BEHAVE\_4 = MISSING  
**'[SHOULD NEVER OCCUR]**

**ELSE**

**IF** M0610\_BD\_MEM\_DEFICIT = 1  
    **THEN** BEHAVE\_1 = 1  
**ELSE IF** M0610\_BD\_MEM\_DEFICIT = 0  
    **THEN** BEHAVE\_1 = 0

**IF** M0610\_BD\_IMP\_DECISN = 1  
    **THEN** BEHAVE\_2 = 1  
**ELSE IF** M0610\_BD\_IMP\_DECISN = 0  
    **THEN** BEHAVE\_2 = 0

**IF** M0610\_BD\_VERBAL = 1  
    **THEN** BEHAVE\_3 = 1  
**ELSE IF** M0610\_BD\_VERBAL = 0  
    **THEN** BEHAVE\_3 = 0

**IF** M0610\_BD\_SOC\_INAPPRO = 1  
    **THEN** BEHAVE\_4 = 1  
**ELSE IF** M0610\_BD\_SOC\_INAPPRO = 0  
    **THEN** BEHAVE\_4 = 0

**IF** M0560\_COG\_FUNCTION = 00  
    **THEN** COGNITIVEFUNC = 0

**IF** M0560\_COG\_FUNCTION = 01  
    **THEN** COGNITIVEFUNC = 1

**IF** M0560\_COG\_FUNCTION = 02  
    **THEN** COGNITIVEFUNC = 2

**IF** M0560\_COG\_FUNCTION = 03  
    **THEN** COGNITIVEFUNC = 3

**IF** M0560\_COG\_FUNCTION = 04  
    **THEN** COGNITIVEFUNC = 4

**ELSE** COGNITIVEFUNC = MISSING

'[SHOULD NEVER OCCUR]

**SET** COGNITIVEFUNC\_1=0

**SET** COGNITIVEFUNC\_2=0

**SET** COGNITIVEFUNC\_3=0

**SET** COGNITIVEFUNC\_4=0

**IF** COGNITIVEFUNC=1 **THEN** COGNITIVEFUNC\_1=1

**IF** COGNITIVEFUNC=2 **THEN** COGNITIVEFUNC\_2=1

**IF** COGNITIVEFUNC=3 **THEN** COGNITIVEFUNC\_3=1

**IF** COGNITIVEFUNC=4 **THEN** COGNITIVEFUNC\_4=1



```

IF M0570_WHEN_CONFUSED = 00
    THEN CONFUSIONFREQ = 0
IF M0570_WHEN_CONFUSED = 01
    THEN CONFUSIONFREQ = 1
IF M0570_WHEN_CONFUSED = 02
    THEN CONFUSIONFREQ = 2
IF M0570_WHEN_CONFUSED = 03
    THEN CONFUSIONFREQ = 3
IF M0570_WHEN_CONFUSED = 04, NA
    THEN CONFUSIONFREQ = 4
ELSE CONFUSIONFREQ = MISSING          '[SHOULD NEVER OCCUR]

SET CONFUSIONFREQ_2=0
SET CONFUSIONFREQ_3=0
SET CONFUSIONFREQ_4=0
IF CONFUSIONFREQ=2 THEN CONFUSIONFREQ_2=1
IF CONFUSIONFREQ=3 THEN CONFUSIONFREQ_3=1
IF CONFUSIONFREQ=4 THEN CONFUSIONFREQ_4=1

IF M0590_DP_MOOD NOT = 0, 1 OR M0590_DP_SENSE_FAILURE NOT = 0, 1 OR
M0590_DP_HOPELESSNESS NOT = 0, 1 OR M0590_DP_DEATH NOT = 0, 1 OR
M0590_DP_SUICIDE NOT = 0, 1
    THEN DEPRESSION = MISSING          '[SHOULD NEVER OCCUR]

IF (M0590_DP_MOOD = 0 AND M0590_DP_SENSE_FAILURE = 0 AND
M0590_DP_HOPELESSNESS = 0 AND M0590_DP_DEATH = 0 AND
M0590_DP_SUICIDE = 0 AND M0590_DP_NONE = 0)
    THEN DEPRESSION = MISSING          '[SHOULD NEVER OCCUR]

IF (M0590_DP_NONE = 1 AND (M0590_DP_MOOD = 1 OR
M0590_DP_SENSE_FAILURE = 1 OR M0590_DP_HOPELESSNESS = 1 OR
M0590_DP_DEATH = 1 OR M0590_DP_SUICIDE = 1))
    THEN DEPRESSION = MISSING          '[SHOULD NEVER OCCUR]

ELSE DEPRESSION = M0590_DP_MOOD + M0590_DP_SENSE_FAILURE +
M0590_DP_HOPELESSNESS + M0590_DP_DEATH + M0590_DP_SUICIDE

IF M0580_WHEN_ANXIOUS = 00
    THEN ANXIETYLEVEL = 0
ELSE IF M0580_WHEN_ANXIOUS = 01
    THEN ANXIETYLEVEL = 1
ELSE IF M0580_WHEN_ANXIOUS = 02
    THEN ANXIETYLEVEL = 2
ELSE IF M0580_WHEN_ANXIOUS = 03
    THEN ANXIETYLEVEL = 3
ELSE IF M0580_WHEN_ANXIOUS = NA
    THEN ANXIETY = MISSING
ELSE ANXIETY = MISSING                '[SHOULD NEVER OCCUR]

```

```

SET ANXIETYLEVEL_1=0
SET ANXIETYLEVEL_2=0
SET ANXIETYLEVEL_3=0
IF ANXIETYLEVEL=1 THEN ANXIETYLEVEL_1=1
IF ANXIETYLEVEL=2 THEN ANXIETYLEVEL_2=1
IF ANXIETYLEVEL=3 THEN ANXIETYLEVEL_3=1

```

```

IF M0620_BEH_PROB_FREQ = 00
    THEN PROBFREQ = 0
ELSE IF M0620_BEH_PROB_FREQ = 01
    THEN PROBFREQ = 1
ELSE IF M0620_BEH_PROB_FREQ = 02
    THEN PROBFREQ = 2
ELSE IF M0620_BEH_PROB_FREQ = 03
    THEN PROBFREQ = 3
ELSE IF M0620_BEH_PROB_FREQ = 04
    THEN PROBFREQ = 4
ELSE IF M0620_BEH_PROB_FREQ = 05
    THEN PROBFREQ = 5
ELSE PROBFREQ = MISSING

```

‘[SHOULD NEVER OCCUR]

```

SET PROBFREQ_2=0
SET PROBFREQ_3=0
SET PROBFREQ_4=0
SET PROBFREQ_5=0
IF PROBFREQ=2 THEN PROBFREQ_2=1
IF PROBFREQ=3 THEN PROBFREQ_3=1
IF PROBFREQ=4 THEN PROBFREQ_4=1
IF PROBFREQ=5 THEN PROBFREQ_5=1

```

### **Elimination Status Baseline Dummy Variables**

```

SET BOWEL_OUT_2=0
SET BOWEL_OUT_3=0
SET BOWEL_OUT_4=0
SET BOWEL_OUT_5=0

IF M0540_BWL_INCONT = UK
    THEN
        BOWEL_OUT_UK=1
IF M0540_BWL_INCONT = 00, 01, 02, 03, 04, 05, NA
    THEN
        BOWEL_OUT_UK=0
IF M0540_BWL_INCONT = 00,NA, UK
    THEN
        BOWEL_OUT = 0
IF M0540_BWL_INCONT = 01
    THEN
        BOWEL_OUT = 1
IF M0540_BWL_INCONT = 02
    THEN
        BOWEL_OUT = 2
        BOWEL_OUT_2=1

```

```

IF M0540_BWL_INCONT = 03
    THEN
        BOWEL_OUT = 3
        BOWEL_OUT_3=1
IF M0540_BWL_INCONT = 04
    THEN
        BOWEL_OUT = 4
        BOWEL_OUT_4=1
IF M0540_BWL_INCONT = 05
    THEN
        BOWEL_OUT = 5
        BOWEL_OUT_5=1
ELSE BOWEL_OUT = MISSING          '[SHOULD NEVER OCCUR]'

IF M0520_UR_INCONT = 00
    THEN INCONTBASE = 0
ELSE IF M0530_UR_INCONT_OCCURS = 00
    THEN INCONTBASE = 1
ELSE IF M0530_UR_INCONT_OCCURS = 01
    THEN INCONTBASE = 2
ELSE IF M0530_UR_INCONT_OCCURS = 02
    THEN INCONTBASE = 3
ELSE IF M0520_UR_INCONT = 02
    THEN INCONTBASE = 4
ELSE INCONTBASE = MISSING          '[SHOULD NOT OCCUR]'

SET INCONTBASE_2=0
SET INCONTBASE_3=0
SET INCONTBASE_4=0
IF INCONTBASE=2 THEN INCONTBASE_2=1
IF INCONTBASE=3 THEN INCONTBASE_3=1
IF INCONTBASE=4 THEN INCONTBASE_4=1

IF M0520_UR_INCONT = 00, 02
    THEN INCONTCATH = 0
ELSE IF M0520_UR_INCONT = 01
    THEN INCONTCATH = 1
ELSE INCONTCATH = MISSING          '[SHOULD NEVER OCCUR]'

IF M0520_UR_INCONT = 00
    THEN INCONTSEV = 0
ELSE IF M0520_UR_INCONT = 02
    THEN INCONTSEV = 1
ELSE IF M0530_UR_INCONT_OCCURS = 00
    THEN INCONTSEV = 2
ELSE IF M0530_UR_INCONT_OCCURS = 01
    THEN INCONTSEV = 3
ELSE IF M0530_UR_INCONT_OCCURS = 02
    THEN INCONTSEV = 4
ELSE INCONTSEV = MISSING          '[SHOULD NOT OCCUR]'

```

```

IF M0540_BWL_INCONT = NA
    THEN
        OSTOMY = 1
ELSE IF M0540_BWL_INCONT = 00, 01, 02, 03, 04, 05
    THEN
        OSTOMY = 0
ELSE IF M0540_BWL_INCONT = UK
    THEN
        OSTOMY = 0
ELSE OSTOMY = MISSING                                     '[SHOULD NEVER OCCUR]'

IF M0510_UTI = 00, NA
    THEN
        UTI_OUT = 0
        UTI_OUT_UK=0
ELSE IF M0510_UTI = 01
    THEN
        UTI_OUT = 1
        UTI_OUT_UK = 0
ELSE IF M0510_UTI = UK
    THEN
        UTI_OUT = 0
        UTI_OUT_UK = 1
ELSE UTI_OUT = MISSING                                     '[SHOULD NEVER OCCUR]'

```

**Respiratory Baseline Dummy Variables**

```

SET DYSPNEA_2=0
SET DYSPNEA_3=0
SET DYSPNEA_4=0
IF DYSPNEA=2 THEN DYSPNEA_2=1
IF DYSPNEA=3 THEN DYSPNEA_3=1
IF DYSPNEA=4 THEN DYSPNEA_4=1

```

**ADL Baseline Dummy Variables**

```

SET BATHING_1=0
SET BATHING_2=0
SET BATHING_3=0
SET BATHING_4=0
SET BATHING_5=0
IF BATHING=1 THEN BATHING_1=1
IF BATHING=2 THEN BATHING_2=1
IF BATHING=3 THEN BATHING_3=1
IF BATHING=4 THEN BATHING_4=1
IF BATHING=5 THEN BATHING_5=1

```

**SET** AMBULATION\_2=0  
**SET** AMBULATION\_3=0  
**SET** AMBULATION\_4=0  
**SET** AMBULATION\_5=0  
**IF** AMBULATION=2 **THEN** AMBULATION\_2=1  
**IF** AMBULATION=3 **THEN** AMBULATION\_3=1  
**IF** AMBULATION=4 **THEN** AMBULATION\_4=1  
**IF** AMBULATION=5 **THEN** AMBULATION\_5=1

**SET** EATING\_2=0  
**SET** EATING\_3=0  
**SET** EATING\_4=0  
**SET** EATING\_5=0  
**IF** EATING=2 **THEN** EATING\_2=1  
**IF** EATING=3 **THEN** EATING\_3=1  
**IF** EATING=4 **THEN** EATING\_4=1  
**IF** EATING=5 **THEN** EATING\_5=1

**SET** GROOMING\_1=0  
**SET** GROOMING\_2=0  
**SET** GROOMING\_3=0  
**IF** GROOMING=1 **THEN** GROOMING\_1=1  
**IF** GROOMING=2 **THEN** GROOMING\_2=1  
**IF** GROOMING=3 **THEN** GROOMING\_3=1

**SET** TOILETING\_2=0  
**SET** TOILETING\_3=0  
**SET** TOILETING\_4=0  
**IF** TOILETING=2 **THEN** TOILETING\_2=1  
**IF** TOILETING=3 **THEN** TOILETING\_3=1  
**IF** TOILETING=4 **THEN** TOILETING\_4=1

**SET** TRANSFERRING\_1=0  
**SET** TRANSFERRING\_2=0  
**SET** TRANSFERRING\_3=0  
**SET** TRANSFERRING\_4=0  
**SET** TRANSFERRING\_5=0  
**IF** TRANSFERRING=1 **THEN** TRANSFERRING\_1=1  
**IF** TRANSFERRING=2 **THEN** TRANSFERRING\_2=1  
**IF** TRANSFERRING=3 **THEN** TRANSFERRING\_3=1  
**IF** TRANSFERRING=4 **THEN** TRANSFERRING\_4=1  
**IF** TRANSFERRING=5 **THEN** TRANSFERRING\_5=1

**SET** UPPERDRESS\_2=0  
**SET** UPPERDRESS\_3=0  
**IF** UPPERDRESS=2 **THEN** UPPERDRESS\_2=1  
**IF** UPPERDRESS=3 **THEN** UPPERDRESS\_3=1

**SET LOWERDRESS\_2=0**  
**SET LOWERDRESS\_3=0**  
**IF LOWERDRESS=2 THEN LOWERDRESS\_2=1**  
**IF LOWERDRESS=3 THEN LOWERDRESS\_3=1**

**Prior ADL Status**

P\_AMBULATION\_OUT = P\_AMBULATION  
**IF P\_AMBULATION\_OUT = MISSING**  
    **THEN P\_AMBULATION\_OUT = AMBULATION**

P\_BATHING\_OUT = P\_BATHING  
**IF P\_BATHING\_OUT = MISSING**  
    **THEN P\_BATHING\_OUT = BATHING**

P\_EATING\_OUT = P\_EATING  
**IF P\_EATING\_OUT = MISSING**  
    **THEN P\_EATING\_OUT = EATING**

P\_GROOMING\_OUT = P\_GROOMING  
**IF P\_GROOMING\_OUT = MISSING**  
    **THEN P\_GROOMING\_OUT = GROOMING**

P\_LOWERDRESS\_OUT = P\_LOWERDRESS  
**IF P\_LOWERDRESS\_OUT = MISSING**  
    **THEN P\_LOWERDRESS\_OUT = LOWERDRESS**

P\_TOILETING\_OUT = P\_TOILETING  
**IF P\_TOILETING\_OUT = MISSING**  
    **THEN P\_TOILETING\_OUT = TOILETING**

P\_TRANSFERRING\_OUT = P\_TRANSFERRING  
**IF P\_TRANSFERRING\_OUT = MISSING**  
    **THEN P\_TRANSFERRING\_OUT = TRANSFERRING**

P\_TRANSPORT\_OUT = P\_TRANSPORT  
**IF P\_TRANSPORT\_OUT = MISSING**  
    **THEN P\_TRANSPORT\_OUT = TRANSPORT**

P\_UPPERDRESS\_OUT = P\_UPPERDRESS  
**IF P\_UPPERDRESS\_OUT = MISSING**  
    **THEN P\_UPPERDRESS\_OUT = UPPERDRESS**

### IADL Baseline Dummy Variables

```
SET HOUSEKEEPING_1=0
SET HOUSEKEEPING_2=0
SET HOUSEKEEPING_3=0
SET HOUSEKEEPING_4=0
IF HOUSEKEEPING=1 THEN HOUSEKEEPING_1=1
IF HOUSEKEEPING=2 THEN HOUSEKEEPING_2=1
IF HOUSEKEEPING=3 THEN HOUSEKEEPING_3=1
IF HOUSEKEEPING=4 THEN HOUSEKEEPING_4=1
```

```
SET LAUNDRY_1=0
SET LAUNDRY_2=0
IF LAUNDRY=1 THEN LAUNDRY_1=1
IF LAUNDRY=2 THEN LAUNDRY_2=1
```

```
SET MEALPREP_1=0
SET MEALPREP_2=0
ELSE IF MEALPREP=1
    THEN MEALPREP_1 = 1
ELSE IF MEALPREP = 2
    THEN MEALPREP_2 = 1
```

```
SET ORALMEDS_OUTNA=0
SET ORALMEDS_OUT_1=0
SET ORALMEDS_OUT_2=0
```

```
IF M0780_CUR_ORAL_MEDS = NA
    THEN
        ORALMEDS_OUT=0
        ORALMEDS_OUTNA=1
ELSE IF ORALMEDS=0
    THEN
        ORALMEDS_OUT=0
ELSE IF ORALMEDS=1
    THEN
        ORALMEDS_OUT=1
        ORALMEDS_OUT_1=1
ELSE IF ORALMEDS=2
    THEN
        ORALMEDS_OUT=2
        ORALMEDS_OUT_2=1
```

```
SET PHONEUSE_NA=0
IF M0770_CUR_PHONE_USE = NA
    THEN
        PHONEUSE_OUT=0
        PHONEUSE_NA=1
```

**IF M0770\_CUR\_PHONE\_USE=01 THEN PHONEUSE\_OUT=1**  
**IF M0770\_CUR\_PHONE\_USE=02 THEN PHONEUSE\_OUT=2**  
**IF M0770\_CUR\_PHONE\_USE=03 THEN PHONEUSE\_OUT=3**  
**IF M0770\_CUR\_PHONE\_USE=04 THEN PHONEUSE\_OUT=4**  
**IF M0770\_CUR\_PHONE\_USE=05 THEN PHONEUSE\_OUT=5**

**SET PHONEUSE\_OUT\_1=0**  
**SET PHONEUSE\_OUT\_2=0**  
**SET PHONEUSE\_OUT\_3=0**  
**SET PHONEUSE\_OUT\_4=0**  
**SET PHONEUSE\_OUT\_5=0**  
**IF PHONEUSE\_OUT=1 THEN PHONEUSE\_OUT\_1=1**  
**IF PHONEUSE\_OUT=2 THEN PHONEUSE\_OUT\_2=1**  
**IF PHONEUSE\_OUT=3 THEN PHONEUSE\_OUT\_3=1**  
**IF PHONEUSE\_OUT=4 THEN PHONEUSE\_OUT\_4=1**  
**IF PHONEUSE\_OUT=5 THEN PHONEUSE\_OUT\_5=1**

**SET SHOPPING\_1=0**  
**SET SHOPPING\_2=0**  
**SET SHOPPING\_3=0**  
**IF SHOPPING=1 THEN SHOPPING\_1=1**  
**IF SHOPPING=2 THEN SHOPPING\_2=1**  
**IF SHOPPING=3 THEN SHOPPING\_3=1**

**Prior IADL Status**

**P\_HOUSEKEEPING\_OUT = P\_HOUSEKEEPING**  
**IF P\_HOUSEKEEPING\_OUT = MISSING**  
**THEN P\_HOUSEKEEPING\_OUT = HOUSEKEEPING**

**P\_LAUNDRY\_OUT = P\_LAUNDRY**  
**IF P\_LAUNDRY\_OUT = MISSING**  
**THEN P\_LAUNDRY\_OUT = LAUNDRY**

**P\_MEALPREP\_OUT = P\_MEALPREP**  
**IF P\_MEALPREP = MISSING**  
**THEN P\_MEALPREP\_OUT = MEALPREP**

**SET P\_ORALMEDS\_OUTNA=0**  
**IF M0780\_PR\_ORAL\_MEDS NOT = NA**  
**THEN**  
**P\_ORALMEDS\_OUT = P\_ORALMEDS**

**IF (M0780\_PR\_ORAL\_MEDS=NA) OR (M0780\_PR\_ORAL\_MEDS=UK AND**  
**M0780\_CUR\_ORAL\_MEDS=NA)**  
**THEN**  
**P\_ORALMEDS\_OUT=0**  
**P\_ORALMEDS\_OUTNA=1**

**IF M0780\_PR\_ORAL\_MEDS=UK AND M0780\_CUR\_ORAL\_MEDS=00,01,02**  
**THEN**



**IF M0780\_CUR\_ORAL\_MEDS=00 THEN P\_ORALMEDS\_OUT=0**  
**IF M0780\_CUR\_ORAL\_MEDS=01 THEN P\_ORALMEDS\_OUT=1**  
**IF M0780\_CUR\_ORAL\_MEDS=02 THEN P\_ORALMEDS\_OUT=2**

**SET P\_PHONEUSE\_OUTNA=0**  
**IF M0770\_PR\_PHONE\_USE NOT = NA**  
    **THEN P\_PHONEUSE\_OUT = P\_PHONEUSE**  
**IF (M0770\_PR\_PHONE\_USE=NA) OR (M0770\_PR\_PHONE\_USE=UK AND**  
**M0770\_CUR\_PHONE\_USE=NA)**  
    **THEN**  
        **P\_PHONEUSE\_OUT=0**  
        **P\_PHONEUSE\_OUTNA=1**

**IF M0770\_PR\_PHONE\_USE=UK AND M0770\_CUR\_PHONE\_USE=00,01,02,03,04,05**  
    **THEN**  
        **IF M0770\_CUR\_PHONE\_USE=00 THEN P\_PHONEUSE\_OUT=0**  
        **IF M0770\_CUR\_PHONE\_USE=01 THEN P\_PHONEUSE\_OUT=1**  
        **IF M0770\_CUR\_PHONE\_USE=02 THEN P\_PHONEUSE\_OUT=2**  
        **IF M0770\_CUR\_PHONE\_USE=03 THEN P\_PHONEUSE\_OUT=3**  
        **IF M0770\_CUR\_PHONE\_USE=04 THEN P\_PHONEUSE\_OUT=4**  
        **IF M0770\_CUR\_PHONE\_USE=05 THEN P\_PHONEUSE\_OUT=5**

**P\_SHOPPING\_OUT = P\_SHOPPING**  
**IF P\_SHOPPING\_OUT = MISSING**  
    **THEN P\_SHOPPING\_OUT = SHOPPING**

**Prior Status on Incontinence and Neuro/Cognitive/Behavioral Items**

**SET PRIOR\_UK = 0**  
**IF M0220\_PRIOR\_UR\_INCON NOT = 0, 1 OR M0220\_PRIOR\_CATH NOT = 0, 1 OR**  
**M0220\_PRIOR\_INTRACT\_PAIN NOT = 0, 1 OR M0220\_PRIOR\_IMPR\_DECSN NOT =**  
**0, 1 OR M0220\_PRIOR\_DISRUPTIVE NOT = 0, 1 OR M0220\_PRIOR\_MEM\_LOSS**  
**NOT = 0, 1**  
    **THEN**  
        **PRIOR\_1 = MISSING**  
        **PRIOR\_2 = MISSING**  
        **PRIOR\_3 = MISSING**  
        **PRIOR\_4 = MISSING**  
        **PRIOR\_5 = MISSING**  
        **PRIOR\_6 = MISSING**

**'[SHOULD NEVER OCCUR]**

**IF** (DISCHARGE1 = 0 AND DISCHARGE2 = 0 AND  
DISCHARGE3 = 0 AND REGIMEN = 0) AND  
(M0175\_DC\_OTHER = 0 OR M0170\_DC\_OTHER = 0) AND  
(M0220\_PRIOR\_UNKNOWN = 1)

**THEN**

PRIOR\_1 = MISSING  
PRIOR\_2 = MISSING  
PRIOR\_3 = MISSING  
PRIOR\_4 = MISSING  
PRIOR\_5 = MISSING  
PRIOR\_6 = MISSING

**[SHOULD NEVER OCCUR]**

**ELSE**

**IF** M0220\_PRIOR\_UR\_INCON = 1 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0520\_UR\_INCONT = 01)

**THEN** PRIOR\_1 = 1

**ELSE IF** M0220\_PRIOR\_UR\_INCON = 0 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0520\_UR\_INCONT = 00, 02))

**THEN** PRIOR\_1 = 0

**IF** M0220\_PRIOR\_CATH = 1 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0520\_UR\_INCONT = 02)

**THEN** PRIOR\_2 = 1

**ELSE IF** M0220\_PRIOR\_CATH = 0 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0520\_UR\_INCONT = 00, 01)

**THEN** PRIOR\_2 = 0

**IF** M0220\_PRIOR\_INTRACT\_PAIN = 1 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0430\_INTRACT\_PAIN = 1)

**THEN** PRIOR\_3 = 1

**ELSE IF** M0220\_PRIOR\_INTRACT\_PAIN = 0 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0520\_INTRACT\_PAIN = 0)

**THEN** PRIOR\_3 = 0

**IF** M0220\_PRIOR\_IMPR\_DECSN = 1 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0610\_BD\_IMP\_DECISN = 1)

**THEN** PRIOR\_4 = 1

**ELSE IF** M0220\_PRIOR\_IMPR\_DECSN = 0 OR  
(((M0170\_NONE\_14\_DAYS = 1 OR M0175\_NONE\_14\_DAYS = 1) AND  
M0200\_REG\_CHG\_14\_DAYS = 0) AND M0610\_BD\_IMP\_DECSN = 0)

**THEN** PRIOR\_4 = 0

```

IF M0220_PRIOR_DISRUPTIVE = 1 OR
(((M0170_NONE_14_DAYS = 1 OR M0175_NONE_14_DAYS = 1) AND
M0200_REG_CHG_14_DAYS = 0) AND M0610_BD_SOC_INAPPRO = 1)
  THEN PRIOR_5 = 1
ELSE IF M0220_PRIOR_DISRUPTIVE = 0 OR
(((M0170_NONE_14_DAYS = 1 OR M0175_NONE_14_DAYS = 1) AND
M0200_REG_CHG_14_DAYS = 0) AND M0610_BD_SOC_INAPPRO = 0)
  THEN PRIOR_5 = 0

```

```

IF M0220_PRIOR_MEM_LOSS = 1 OR
(((M0170_NONE_14_DAYS = 1 OR M0175_NONE_14_DAYS = 1) AND
M0200_REG_CHG_14_DAYS = 0) AND M0610_BD_MEM_DEFICIT = 1)
  THEN PRIOR_6 = 1
ELSE IF M0220_PRIOR_MEM_LOSS = 0 OR
(((M0170_NONE_14_DAYS = 1 OR M0175_NONE_14_DAYS = 1) AND
M0200_REG_CHG_14_DAYS = 0) AND M0610_BD_MEM_DEFICIT = 0)
  THEN PRIOR_6 = 0

```

```

ELSE IF M0220_PRIOR_UNKNOWN = 1
  THEN
    PRIOR_1 = 0
    PRIOR_2 = 0
    PRIOR_3 = 0
    PRIOR_4 = 0
    PRIOR_5 = 0
    PRIOR_6 = 0
    PRIOR_UK=1

```

### **Prognosis and Rehabilitation**

```

IF M0260_OVERALL_PROGNOSIS = 00
  THEN
    PROGRF = 0
    PROGUK = 0
ELSE IF M0260_OVERALL_PROGNOSIS = 01
  THEN
    PROGRF = 1
    PROGUK = 0
ELSE IF M0260_OVERALL_PROGNOSIS = UK
  THEN
    PROGRF = 0
    PROGUK = 1

```

```

IF M0270_REHAB_PROGNOSIS = 00
  THEN
    REHABRF = 0
    REHABUK = 0
ELSE IF M0270_REHAB_PROGNOSIS = 01
  THEN
    REHABRF = 1
    REHABUK = 0
ELSE IF M0270_REHAB_PROGNOSIS = UK
  THEN
    REHABRF = 0
    REHABUK = 1

```

**High Risk Factors**

```

IF M0290_RISK_SMOKING NOT = 0, 1 OR M0290_RISK_OBESITY NOT = 0, 1 OR
M0220_RISK_ALCOHOLISM NOT = 0, 1 OR M0290_RISK_DRUGS NOT = 0, 1
  THEN
    RISK_1 = MISSING
    RISK_2 = MISSING
    RISK_3 = MISSING
    RISK_4 = MISSING

```

**‘[SHOULD NEVER OCCUR]’**

```

IF (M0290_RISK_SMOKING = 0 AND M0290_RISK_OBESITY = 0 AND
M0290_RISK_ALCOHOLISM = 0 AND M0290_RISK_DRUGS = 0 AND
M0290_RISK_NONE = 0 AND M0290_RISK_UNKNOWN = 0)
  THEN
    RISK_1 = MISSING
    RISK_2 = MISSING
    RISK_3 = MISSING
    RISK_4 = MISSING

```

**‘[SHOULD NEVER OCCUR]’**

```

IF (M0290_RISK_NONE = 1 OR M0290_RISK_UNKNOWN = 1) AND
(M0290_RISK_SMOKING = 1 OR M0290_RISK_OBESITY = 1 OR
M0290_RISK_ALCOHOLISM = 1 OR M0290_RISK_DRUGS = 1)
  THEN
    RISK_1 = MISSING
    RISK_2 = MISSING
    RISK_3 = MISSING
    RISK_4 = MISSING

```

**‘[SHOULD NEVER OCCUR]’**

```
IF (M0290_RISK_NONE = 1 AND M0290_RISK_UNKNOWN = 1)
  THEN
    RISK_1 = MISSING
    RISK_2 = MISSING
    RISK_3 = MISSING
    RISK_4 = MISSING
    '[SHOULD NEVER OCCUR]
```

```
SET RISK_UK=0
```

```
IF (M0290_RISK_UNKNOWN = 1)
  THEN
    RISK_1 = 0
    RISK_2 = 0
    RISK_3 = 0
    RISK_4 = 0
    RISK_UK=1
```

```
IF (M0290_RISK_UNKNOWN = 0) THEN RISK_UK=0
```

```
ELSE
```

```
IF M0290_RISK_SMOKING = 1
  THEN RISK_1 = 1
ELSE IF M0290_RISK_SMOKING = 0
  THEN RISK_1 = 0
```

```
IF M0290_RISK_OBESITY = 1
  THEN RISK_2 = 1
ELSE IF M0290_RISK_OBESITY = 0
  THEN RISK_2 = 0
```

```
IF M0290_RISK_ALCOHOLISM = 1
  THEN RISK_3 = 1
ELSE IF M0290_RISK_ALCOHOLISM = 0
  THEN RISK_3 = 0
```

```
IF M0290_RISK_DRUGS = 1
  THEN RISK_4 = 1
ELSE IF M0290_RISK_DRUGS = 0
  THEN RISK_4 = 0
```

**Resumption of Care Indicator**

```
IF M0100_ASSMT_REASON = 01, 02
  THEN ROCIND = 0
ELSE IF M0100_ASSMT_REASON = 03
  THEN ROCIND = 1
ELSE ROCIND = MISSING
    '[SHOULD NEVER OCCUR]
```

### Sensory Status Baseline Dummy Variables

SET PAIN\_2=0  
SET PAIN\_3=0  
IF PAIN=2 THEN PAIN\_2=1  
IF PAIN=3 THEN PAIN\_3=1

SET SPEECH\_1=0  
SET SPEECH\_2=0  
SET SPEECH\_3=0  
SET SPEECH\_4=0  
SET SPEECH\_5=0  
IF SPEECH=1 THEN SPEECH\_1=1  
IF SPEECH=2 THEN SPEECH\_2=1  
IF SPEECH=3 THEN SPEECH\_3=1  
IF SPEECH=4 THEN SPEECH\_4=1  
IF SPEECH=5 THEN SPEECH\_5=1

### Integumentary Status

SET PRESSURESTATUS\_NA=0  
SET PRESSUREULCER\_NA=0

IF M0440\_LESION\_OPEN\_WND = 0 OR  
(M0440\_LESION\_OPEN\_WND = 1 AND M0445\_PRESS\_ULCER = 0)  
THEN  
PRESSURESTATUS = 0  
PRESSUREULCER = 0

IF M0445\_PRESS\_ULCER = 1 AND M0464\_STAT\_PRBLM\_PRSULC NOT = 01, 02,  
03, NA  
THEN PRESSURESTATUS = MISSING           **'[SHOULD NEVER OCCUR]'**  
ELSE

IF M0464\_STAT\_PRBLM\_PRSULC = 01  
THEN PRESSURESTATUS = 1  
ELSE IF M0464\_STAT\_PRBLM\_PRSULC = 02  
THEN PRESSURESTATUS = 2  
ELSE IF M0464\_STAT\_PRBLM\_PRSULC = 03  
THEN PRESSURESTATUS = 3  
ELSE IF M0464\_STAT\_PRBLM\_PRSULC = NA  
THEN

PRESSURESTATUS = 0  
PRESSURESTATUS\_NA=1

IF M0445\_PRESS\_ULCER = 1 AND M0460\_STG\_PRBLM\_ULCER NOT = 01, 02, 03,  
04, NA  
THEN PRESSUREULCER = MISSING           **'[SHOULD NEVER OCCUR]'**

```

ELSE
  IF M0460_STG_PRBLM_ULCER = 01
    THEN PRESSUREULCER = 1
  ELSE IF M0460_STG_PRBLM_ULCER = 02
    THEN PRESSUREULCER = 2
  ELSE IF M0460_STG_PRBLM_ULCER = 03
    THEN PRESSUREULCER = 3
  ELSE IF M0460_STG_PRBLM_ULCER = 04
    THEN PRESSUREULCER = 4
IF M0460_STG_PRBLM_ULCER = NA
  THEN
    PRESSUREULCER = 0
    PRESSUREULCER_NA=1

SET STASISSTATUS_NA=0
IF M0440_LESION_OPEN_WND = 0 OR
(M0440_LESION_OPEN_WND = 1 AND M0468_STASIS_ULCER = 0)
  THEN
    STASISSTATUS = 0
    STASISULCER = 0

IF M0468_STASIS_ULCER = 1 AND M0476_STAT_PRB_STASULC NOT = 01, 02, 03,
NA
  THEN STASISSTATUS = MISSING           '[SHOULD NEVER OCCUR]'
ELSE

  IF M0476_STAT_PRB_STASULC = 01
    THEN STASISSTATUS = 1
  ELSE IF M0476_STAT_PRB_STASULC = 02
    THEN STASISSTATUS = 2
  ELSE IF M0476_STAT_PRB_STASULC = 03
    THEN STASISSTATUS = 3
  ELSE IF M0476_STAT_PRB_STASULC = NA
    THEN
      STASISSTATUS = 0
      STASISSTATUS_NA=1

IF M0468_STASIS_ULCER = 1 AND M0470_NBR_STASULC NOT = 00, 01, 02, 03, 04
  THEN STASISULCER = MISSING           '[SHOULD NEVER OCCUR]'
ELSE

  IF M0470_NBR_STASULC = 00
    THEN STASISULCER = 0
  ELSE IF M0470_NBR_STASULC = 01
    THEN STASISULCER = 1
  ELSE IF M0470_NBR_STASULC = 02
    THEN STASISULCER = 2
  ELSE IF M0470_NBR_STASULC = 03
    THEN STASISULCER = 3
  ELSE IF M0470_NBR_STASULC = 04
    THEN STASISULCER = 4

```

```

SET SURGICALSTATUS_NA=0
SET SURGICALSTATUS_2=0
SET SURGICALSTATUS_3=0
IF M0440_LESION_OPEN_WND = 0 OR
(M0440_LESION_OPEN_WND = 1 AND M0482_SURG_WOUND = 0)
    THEN
        SURGICALSTATUS = 0
        SURGICALWOUND = 0

IF M0482_SURG_WOUND = 1 AND M0488_STAT_PRB_SURGWND NOT = 01, 02,
03, NA
    THEN SURGICALSTATUS = MISSING           '[SHOULD NEVER OCCUR]'
ELSE

    IF M0488_STAT_PRB_SURGWND = 01
        THEN SURGICALSTATUS = 1
    ELSE IF M0488_STAT_PRB_SURGWND = 02
        THEN SURGICALSTATUS = 2
            SURGICALSTATUS_2=1
    ELSE IF M0488_STAT_PRB_SURGWND = 03
        THEN SURGICALSTATUS = 3
            SURGICALSTATUS_3=1
    ELSE IF M0488_STAT_PRB_SURGWND = NA
        THEN
            SURGICALSTATUS = 0
            SURGICALSTATUS_NA=1

IF M0482_SURG_WOUND = 1 AND M0484_NBR_SURGWND NOT = 00, 01, 02, 03,
04
    THEN SURGICALWOUND = MISSING           '[SHOULD NEVER OCCUR]'
ELSE

    IF M0484_NBR_SURGWND = 00
        THEN SURGICALWOUND = 0
    ELSE IF M0484_NBR_SURGWND = 01
        THEN SURGICALWOUND = 1
    ELSE IF M0484_NBR_SURGWND = 02
        THEN SURGICALWOUND = 2
    ELSE IF M0484_NBR_SURGWND = 03
        THEN SURGICALWOUND = 3
    ELSE IF M0484_NBR_SURGWND = 04
        THEN SURGICALWOUND = 4

```



```

SET SURGICALWOUND_2=0
SET SURGICALWOUND_3=0
SET SURGICALWOUND_4=0
IF SURGICALWOUND=2 THEN SURGICALWOUND_2=1
IF SURGICALWOUND=3 THEN SURGICALWOUND_3=1
IF SURGICALWOUND=4 THEN SURGICALWOUND_4=1

```

**V and E Dummy Variables**

```

IF M0240_OTH_DIAG1_ICD = E888.9 OR
M0240_OTH_DIAG2_ICD = E888.9 OR M0240_OTH_DIAG3_ICD = E888.9 OR
M0240_OTH_DIAG4_ICD = E888.9 OR M0240_OTH_DIAG5_ICD = E888.9
  THEN E888 = 1
ELSE E888 = 0

```

The following list is a reference for the various V code dummy variables

V codes	Reference
V57.1	LIST 1
V09.0	LIST 2
V57.21, V57.89, V57.3	LIST 3
V58.3, V58.73, V58.78, V58.42, V58.75, V58.81, V58.49, V58.77, V58.76, V58.43, V58.89, V45.81, V58.74	LIST 4
V54.81, V43.65, V54.13, V43.64, V54.19, V54.16, V54.89, V54.11, V54.17	LIST 5
V58.61, V58.83, V58.62, V58.67	LIST 6
V55.3, V55.1	LIST 7
V53.6, V55.6	LIST 8

```

IF M0230_PRIMARY_DIAG_ICD IS IN LIST1 OR M0240_OTH_DIAG1_ICD IS IN LIST1
OR
M0240_OTH_DIAG2_ICD IS IN LIST1 OR M0240_OTH_DIAG3_ICD IS IN LIST1 OR
M0240_OTH_DIAG4_ICD IS IN LIST1 OR M0240_OTH_DIAG5_ICD IS IN LIST1
  THEN V571 = 1
ELSE V571 = 0

```

```

IF M0230_PRIMARY_DIAG_ICD IS IN LIST2 OR M0240_OTH_DIAG1_ICD IS IN LIST2
OR
M0240_OTH_DIAG2_ICD IS IN LIST2 OR M0240_OTH_DIAG3_ICD IS IN LIST2 OR

```

M0240\_OTH\_DIAG4\_ICD IS IN LIST2 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST2  
    **THEN** V09 = 1  
**ELSE** V09 = 0

**IF** M0230\_PRIMARY\_DIAG\_ICD IS IN LIST3 OR M0240\_OTH\_DIAG1\_ICD IS IN LIST3  
OR  
M0240\_OTH\_DIAG2\_ICD IS IN LIST3 OR M0240\_OTH\_DIAG3\_ICD IS IN LIST3 OR  
M0240\_OTH\_DIAG4\_ICD IS IN LIST3 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST3  
    **THEN** V57 = 1  
**ELSE** V57 = 0

**IF** M0230\_PRIMARY\_DIAG\_ICD IS IN LIST4 OR M0240\_OTH\_DIAG1\_ICD IS IN LIST4  
OR  
M0240\_OTH\_DIAG2\_ICD IS IN LIST4 OR M0240\_OTH\_DIAG3\_ICD IS IN LIST4 OR  
M0240\_OTH\_DIAG4\_ICD IS IN LIST4 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST4  
    **THEN** V58 = 1  
**ELSE** V58 = 0

**IF** M0230\_PRIMARY\_DIAG\_ICD IS IN LIST5 OR M0240\_OTH\_DIAG1\_ICD IS IN LIST5  
OR  
M0240\_OTH\_DIAG2\_ICD IS IN LIST5 OR M0240\_OTH\_DIAG3\_ICD IS IN LIST5 OR  
M0240\_OTH\_DIAG4\_ICD IS IN LIST5 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST5  
    **THEN** V54 = 1  
**ELSE** V54 = 0

**IF** M0230\_PRIMARY\_DIAG\_ICD IS IN LIST6 OR M0240\_OTH\_DIAG1\_ICD IS IN LIST6  
OR  
M0240\_OTH\_DIAG2\_ICD IS IN LIST6 OR M0240\_OTH\_DIAG3\_ICD IS IN LIST6 OR  
M0240\_OTH\_DIAG4\_ICD IS IN LIST6 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST6  
    **THEN** V586 = 1  
**ELSE** V586 = 0

**IF** M0230\_PRIMARY\_DIAG\_ICD IS IN LIST7 OR M0240\_OTH\_DIAG1\_ICD IS IN LIST7  
OR  
M0240\_OTH\_DIAG2\_ICD IS IN LIST7 OR M0240\_OTH\_DIAG3\_ICD IS IN LIST7 OR  
M0240\_OTH\_DIAG4\_ICD IS IN LIST7 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST7  
    **THEN** V55 = 1  
**ELSE** V55 = 0

**IF** M0230\_PRIMARY\_DIAG\_ICD IS IN LIST8 OR M0240\_OTH\_DIAG1\_ICD IS IN LIST8  
OR  
M0240\_OTH\_DIAG2\_ICD IS IN LIST8 OR M0240\_OTH\_DIAG3\_ICD IS IN LIST8 OR  
M0240\_OTH\_DIAG4\_ICD IS IN LIST8 OR M0240\_OTH\_DIAG5\_ICD IS IN LIST8  
    **THEN** V53 = 1  
**ELSE** V53 = 0