



3M™ Potentially Preventable Complications (PPC)
Classification System

Evaluating the quality of POA reporting in
hospital claims data

For ICD-9-CM



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Evaluating the quality of POA reporting in hospital claims data

About this document

This document is for customers who want to use the 3M™ Potentially Preventable Complications (PPC) Classification System to evaluate claims data. Before you can begin using the PPC Classification System to evaluate claims data, you should first ensure the POA field for secondary diagnosis is being reported accurately within the data. This document explains criteria developed by 3M Health Information Systems that you can use to determine the quality of POA reporting in your data.

Customers that may want to perform a PPC analysis, and therefore need to evaluate the quality of POA report in their data, can include:

- Hospital HIS departments
- Hospital Quality departments
- State agencies that want to publish comparison reports
- Payers that want to calculate ways to adjust payment based on complication rates
- Payers that want to use PPCs for quality and cost analysis

Development of POA quality screening criteria

3M Health Information Systems (3M HIS) developed a set of quality screening criteria you can use to review your data set and remove hospitals with questionable data in preparation for your PPC analysis. These criteria are based on a statistical analysis of the 2005/2006 California data with 7,371,005 cases from 387 acute care hospitals and are based on a clinical consensus informed by evaluation of distributions of the hospital POA data. 3M HIS evaluated each hospital's case count, average length of stay (ALOS), mortality rate, and percent rate of the POA flag values against four different sets of secondary diagnosis codes.

The first set of secondary diagnosis codes used in 3M HIS' analysis (see "[List 1](#)" on page [8](#)) are pre-existing and should always (or nearly always) be coded as POA. A hospital's data is questionable if they have a low POA rate for these secondary diagnosis codes.

The second set of secondary diagnosis codes (see "[List 2](#)" on page [8](#)) are exempt based on the national POA coding guidelines. These diagnosis codes are usually POA or their POA status is not an important distinction, such as the V codes needed for vaccination, observe newborn, circumcision, sterilization, et.al. Some exempt V codes provide information about the

circumstances of treatment, such as no proc/contraindicated, lap surgery converted to open surgery, and POA would not have the same meaning for those V codes as for diagnoses.

The third set of secondary diagnosis codes (see "[List 3](#)" on page 8) are perinatal codes 7600x-7799x.

The fourth set of secondary diagnosis codes (see "[List 4](#)" on page 8) have a relatively lower percentage rate for being POA when they occur for elective surgical cases or surgical cases that may be urgent but usually are not considered an emergency situation. A hospital's data is questionable if they have a high POA percentage rate for the secondary diagnosis codes assigned to these surgical DRG cases.

From these evaluations, 3M developed eight criteria to help determine the quality of POA reporting in your data:

- **Case Count.** Identifies small specialty care hospitals.
Red Zone: Number of cases < 200
Grey Zone: $200 \leq$ Number of cases < 500
- **Average Length of Stay.** Identifies long-term care and other post-acute care inpatient hospitals with long average lengths of stay.
Red Zone: ALOS \geq 12.5
Grey Zone: $10 \leq$ ALOS < 12.5
- **Mortality Rate.** Identifies hospice and end-of-life care facilities with high mortality rates.
Red Zone: Percent Died \geq 9%
Grey Zone: $6\% \leq$ Percent Died < 9%
- **% Not POA for secondary diagnosis on the Pre-Existing List.** Identifies hospitals with a high not POA rate for pre-existing secondary diagnosis codes.
Red Zone: % NPOA on Pre-Exist \geq 7.5%
Grey Zone: $5\% \leq$ % NPOA on Pre-Exist < 7.5%
- **% Uncertain POA.** Identifies hospitals with a high uncertain POA rate for secondary diagnosis codes (excluding exempt and pre-existing codes) : POA value = "U", "W" or invalid POA value.
Red Zone: % POA Uncertain \geq 10%
Grey Zone: $5\% \leq$ % POA Uncertain < 10%

- **High % POA.** Identifies hospitals with an extremely high percent POA rate for secondary diagnosis codes (excluding exempt, pre-existing, and OB 7600x-7799x codes).
Red Zone: % POA \geq 96%
Grey Zone: 93% \leq % POA < 96%
- **Low % POA.** Identifies hospitals with a low percent POA rate for secondary diagnosis codes (excluding exempt, pre-existing, and OB 7600x-7799x codes).
Red Zone: % POA \leq 70%
Grey Zone: 70% < % POA \leq 77%
- **% POA for secondary diagnosis on the List 1 for elective surgical cases.** Identifies hospitals with a high POA percentage rate for these secondary diagnosis codes on elective surgical DRG cases.
Red Zone: % POA \geq 40%
Grey Zone: 30% \leq % POA < 40%

Screening for POA quality in your data set

The first three criteria are used to identify non-inpatient acute care hospitals and potentially exclude them from analysis. If the list of hospitals included in the analysis are all known inpatient acute care hospitals, you can ignore the first three edits. For each of the remaining five edit criteria 3M HIS developed, a hospital can fall within the red zone or the grey zone. Hospitals that do not pass ONE or more the red zone criteria are identified as "poor-quality reporting of POA indicator", and you should exclude these hospitals when you analyze your data using the PPC classification system. Hospitals that pass all the red zone criteria but do not pass TWO or more grey zone criteria are also identified as "poor-quality reporting of POA indicator" and should be excluded from further PPC-related analysis.

To evaluate the quality of POA reporting in your data set

1. Compare each hospital's data against each of the criteria listed in the previous section.
2. Identify hospitals that fall within the red zone for one or more criteria.
3. Identify hospitals that fall within the grey zone for two or more criteria.
4. Exclude the hospitals identified in steps 2 and 3 from further PPC analysis.

Code set list definitions

List 1

Pre-existing secondary diagnosis code list used with admission APR DRGs. See appendix F in volume 1 of the definitions manual for 3M™ All Patient Refined Diagnosis Related Groups (APR DRG) Classification System (https://support.3mhis.com/app/answers/detail/a_id/6389/).

List 2

Secondary diagnosis codes exempt from POA coding as defined in the national POA coding guidelines.

List 3

Perinatal secondary diagnosis codes 7600x - 7799x.

List 4

The following list of secondary diagnosis codes assigned to surgical DRG cases.

Secondary diagnosis code	Description
4582	IATROGENIC HYPOTENSION
7991	RESPIRATORY ARREST
9971	SURG COMPL-HEART
9972	SURG COMP-PERI VASC SYST
9973	SURG COMPLIC-RESPIR-SYST
9974	SURG COMP-DIGESTV SYSTEM
9975	SURG COMPL-URINARY TRACT
99811	HEMORRHAGE COMPLIC PROC
99812	HEMATOMA COMPLIC PROC
9982	ACCIDENTAL OP LACERATION

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Secondary diagnosis code	Description
99859	OTHER POSTOP INFECTION
99889	OTH SPCF CMPLC PROCD NEC
9992	VASC COMP MED CARE NEC
9993	INFEC COMPL MED CARE NEC
9998	TRANSFUSION REACTION NEC
45829	OTHER IATROGENIC HYPOTENSION
5185	POST TRAUM PULM INSUFFIC
99701	SURG COMPLICATION - CNS
99702	IATROGEN DV INFARC/HMRHG
9980	POSTOPERATIVE SHOCK
99881	EMPHYSEMA RESULT FRM PROC
41511	IATROG PULM EMB/INFARC
99662	INFEC AND INFLAMMATORY REACTION DUE TO OTHER VASC DEVICE, IMPLANT, and GRAFT
99931	INFEC DUE TO CENTRAL VENOUS CATHETER