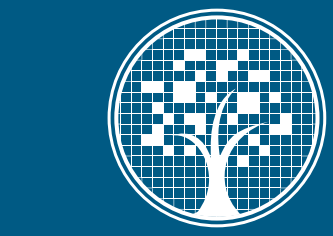

HCUP Methods Series

Special Study on the Meaning of the First-Listed Diagnosis on Emergency Department and Ambulatory Surgery Records

Report # 2011-03

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Agency for Healthcare Research and Quality

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Arizona Department of Health Services
*** California** Office of Statewide Health Planning and Development
Colorado Hospital Association
Florida Agency for Health Care Administration
*** Georgia** Hospital Association
Hawaii Health Information Corporation
Indiana Hospital Association
*** Iowa** Hospital Association
Kentucky Cabinet for Health and Family Services
*** Maryland** Health Services Cost Review Commission
Massachusetts Division of Health Care Finance and Policy
Michigan Health & Hospital Association
*** Missouri** Hospital Industry Data Institute
Nebraska Hospital Association
New Hampshire Department of Health & Human Services
New Jersey Department of Health and Senior Services
New York State Department of Health
North Carolina Department of Health and Human Services
Ohio Hospital Association
Oklahoma State Department of Health
Rhode Island Department of Health
South Carolina State Budget & Control Board
Tennessee Hospital Association
*** Utah** Department of Health
Vermont Association of Hospitals and Health Systems

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EXECUTIVE SUMMARY

Background and Purpose

One of the key questions about emergency department (ED) and ambulatory surgery (AS) care relates to the identification of the reason for the visit, and how to obtain that information from an outpatient bill. While there may be multiple reasons for an acute care visit from a clinical perspective (particularly an ED visit), it is unclear from a data perspective what is coded and billed as the reason for the visit. An important starting point to improve understanding about the reason for the visit on an outpatient bill is to understand the diagnostic coding guidelines that apply to ED and AS services.

These guidelines include the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Official Guidelines for Coding and Reporting[1] as well as uniform billing standards for both the Uniform Billing Form 04 (UB-04) institutional claim[2] and the Centers for Medicare & Medicaid Services (CMS-1500) professional claim[3]. The UB-04 institutional claim is used to bill facility charges, including those related to services that occur in the ED and in hospital-based AS settings. The CMS-1500 is used to bill physician charges and is also used to bill AS charges provided in freestanding ambulatory surgery centers.

In general, the ICD-9-CM Official Guidelines for Coding and Reporting, which apply to both the UB-04 and the CMS-1500, provide the greatest guidance and form the basis of billing standards.

For hospital-based inpatient services, the uniform billing standards for the UB-04 facility claim specify its capture in a separate “principal diagnosis” field. The ICD-9-CM Official Guidelines for Coding and Reporting provide specific direction regarding the coding of the “principal diagnosis.” The ICD-9-CM coding guidelines define principal diagnosis as “that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.” Furthermore, in the inpatient setting, the principal diagnosis drives the Diagnosis Related Group (DRG) which, in turn, drives payment. Therefore, inpatient principal diagnosis coding is considered rigorous and well scrutinized.

For hospital-based outpatient services, the uniform billing standards for the UB-04 facility claim specify its capture in a separate “principal diagnosis” field. This UB-04 coding manual further guides hospitals to use the “first-listed diagnosis” in lieu of “principal diagnosis” for outpatient services. For non-hospital based outpatient services, the CMS-1500 claim form lists diagnoses in a sequential order but does not distinguish the importance of diagnoses by identifying a "principal" diagnosis field. Moreover, the ICD-9-CM coding guidelines, which covers both forms, call for the first-listed diagnosis to be the “code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided.”

[1] Centers for Disease Control and Prevention. ICD-9-CM Official Guidelines for Coding and Reporting. These guidelines were created on 08/05/2010 and are effective as of 10/01/2010. http://www.cdc.gov/nchs/icd/icd9cm_addenda_guidelines.htm#guidelines (Accessed September 17, 2010)

[2] National Uniform Billing Committee. Official UB-04 Data Specifications Manual, 2011.

[3] Center for Medicare and Medicaid. Medicare Claims Processing Manual, Chapter 26 – Completing and Processing Form CMS-1500 Data Set. Rev. June 24, 2011.

In addition to this general statement, the ICD-9-CM Official Guidelines[1] provide more specific direction regarding coding in certain circumstances, including observation stay, patients receiving diagnostic services only, and patients receiving therapeutic services only. The coding guidelines related to ambulatory surgery state, "When a patient presents for outpatient surgery, code the reason for the surgery as the first-listed diagnosis (reason for the encounter), even if the surgery is not performed due to a contraindication."

Unlike inpatient or ambulatory surgery settings, the ICD-9-CM Official Guidelines for Coding and Reporting[1] do not provide specific guidance regarding emergency department visit coding of the first-listed diagnosis. Similarly, the UB-04 guidelines and CMS-1500 guidelines also do not include guidance tailored specifically for coding diagnoses on emergency department visits.

Similar to the DRG for inpatient services, the Prospective Payment System (PPS) is applied in outpatient settings. As a part of the Outpatient Prospective Payment System (OPPS), CMS developed Ambulatory Payment Classifications (APCs) and Ambulatory Surgery Classifications (ASCs). These systems can be used to pay for ED and AS services. However, neither of these systems base payment on the first-listed diagnosis.

Because of these factors, it is unclear from a data perspective if the first-listed diagnosis on ED or AS records should be considered the reason for the visit. To investigate this topic, the Agency for Healthcare Research and Quality (AHRQ), using Healthcare Cost and Utilization Project (HCUP) data, funded a special study on the meaning of the first-listed diagnosis on ED and AS records. The purpose was to investigate the possible meanings of the first-listed diagnosis in the records included in the HCUP State Emergency Department Databases (SEDD) and the State Ambulatory Surgery Databases (SASD). This document is the final report from the study.

Methodology

The study involved a literature review focused on coding and reimbursement guidelines, an online survey of HCUP State Partners, examination of the first-listed diagnoses in 2008 HCUP SEDD and SASD databases, and telephone interviews with HCUP Partners, including a review of state-specific data analyses.

Observations and Conclusions

In general, State Partner survey respondents and interviewees thought that the HCUP data would reflect the coding guidelines, i.e., that the first-listed diagnosis would be:

- On ED records, the "code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided"
- On AS records, the code for the "reason for the surgery."

Most often, the respondents' and interviewees' opinions were based on the belief that hospitals follow the ICD-9 coding guidelines as a matter of routine policy and professional coding practice.

Additional observations from the literature review, survey, data analyses, and interviews conducted for the study are outlined in the body of this report.

The data analysis examined how frequently any secondary diagnoses were present on 2008 SEDD and SASD records. If only one diagnosis is present on the record, it may be assumed

that the diagnosis is chiefly responsible for the services provided, at least as best as was determined during the ED visit or ambulatory surgery.

The analysis also showed how frequently the first-listed diagnosis is:

- A symptom where there were other non-symptom diagnoses on the same record
- A chronic condition where there were other acute diagnoses on the same record.

Although these cases may suggest that either a definitive diagnosis was not established [confirmed] by a physician during the outpatient stay or that a patient had an acute exacerbation of a chronic condition, it may also be possible that the first-listed diagnosis may not be the diagnosis chiefly responsible for services provided.

The data analyses showed that 6% of SEDD records and 18% of SASD records had a chronic first-listed diagnosis and one or more acute secondary diagnoses. In addition, 12% of SEDD records and 4% of SASD records had a first-listed symptom diagnosis and one or more non-symptom secondary diagnoses. However, it is impossible to definitively state that these records were miscoded.

In summary, from the data perspective, both the empirical evidence and State Partner feedback indicates that, in lieu of any other State or hospital-specific information, HCUP data users should consider the first-listed diagnosis as:

- For SEDD records, the “code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided”
- For SASD records, the “reason for the surgery.”

In general, researchers and analysts seeking to examine the “reasons” for ED and AS visits should consider both the data and clinical perspective of the care provided. The data perspective suggests that the first-listed diagnosis on the outpatient records has a distinct meaning regarding the priority of the condition in treatment. However, the researcher and analyst should also consider the clinical perspective, particularly for ED visits. The ED visit often focuses on the symptom-based evaluation of differential diagnoses. Several conditions may have relevance to the "reason" for the ED visit, and all-listed diagnoses may need to be considered.

INTRODUCTION

One of the key questions about emergency department (ED) and ambulatory surgery (AS) care relates to the identification of the reason for the visit, and how to obtain that information from an outpatient bill. While there may be multiple reasons for an acute care visit from a clinical perspective (particularly an ED visit), it is unclear from a data perspective what is coded and billed as the reason for the visit. An important starting point to improve understanding about the reason for the visit on an outpatient bill is to understand the diagnostic coding guidelines that apply to ED and AS services.

For hospital-based inpatient services, the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Official Guidelines for Coding and Reporting[1] provide specific direction regarding the coding of the "principal diagnosis," and uniform billing standards for the Uniform Billing Form 04 (UB-04) facility claim specify its capture in a separate "principal diagnosis" field.

The ICD-9-CM Official Guidelines for Coding and Reporting[1] state the following for diagnostic coding:

> The circumstances of inpatient admission always govern the selection of principal diagnosis. The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."

The ICD-9-CM Official Guidelines[1] further note that the "Uniform Hospital Discharge Data Set (UHDDS) definition of principal diagnosis applies only to inpatients in acute, short-term, long-term care and psychiatric hospitals."

Similar standards have not been adopted for diagnoses recorded in an outpatient setting, such as records for treat and release emergency department (ED) visits and ambulatory surgery (AS) visits.

Therefore, there is concern that the first-listed diagnosis on ED and AS records may not be considered the equivalent of the principal diagnosis on inpatient records (i.e., the diagnosis chiefly responsible for the services provided).

The meaning of the first-listed diagnosis is important to understanding the types of conditions occasioning ED visits and ambulatory surgeries. Specifically, researchers using Healthcare Cost and Utilization Project (HCUP) data will want to know whether the first-listed diagnosis should be used to identify the diagnosis chiefly responsible for the ED visit or ambulatory surgery or whether that diagnosis could appear as "secondary."

This study investigated the possible meanings, only from a data perspective, of the first-listed diagnoses versus all-listed diagnoses on HCUP State Emergency Department Databases (SEDD) and State Ambulatory Surgery Databases (SASD) records.

The study consisted of three key components, each of which is described below:

1. ED and AS Coding Literature Review
2. Data Analysis
3. State Partner Survey and Interviews

The literature search covered primarily ICD-9-CM diagnostic coding policies and Medicare-related reimbursement policies.

Data analyses were conducted on the SEDD and SASD to examine the coding of the first-listed diagnosis field.

Information about the coding of the first-listed diagnosis was also obtained through a Web-based survey of all HCUP State Partners. Based on survey results, Partners were selected for follow-up telephone interviews that allowed a deeper exploration of specific issues. State-specific data analyses were generated and reviewed with the Partners during the phone call.

CODING LITERATURE REVIEW

Introduction

A literature review was conducted to identify coding and reimbursement policies that may impact the coding of the first-listed diagnosis on ED and AS records. Rather than attempt to cover all possible coding practices in all HCUP states (e.g., a thorough search of State Medicaid program Websites), the literature review focused on general coding and reimbursement policies. The literature search was specifically designed to cover ICD-9-CM and Medicare-related policies. It also sought to identify other reimbursement/coding policies (e.g., from commercial payers and Medicaid plans).

However, no documentation of state-specific guidelines, including Medicaid reimbursement policies, was identified. Nor did the literature search identify any publicly available coding or reimbursement policies used by commercial payers.

Therefore, the coding literature review summarizes the following:

- ICD-9-CM Official Guidelines for Coding and Reporting[1]
- UB-04 (CMS 1450) claims guidelines
- CMS-1500 claims guidelines

The UB-04 (CMS1450) institutional claim is used to bill facility charges, including those related to ED and AS. The CMS-1500 is used to bill physician charges and is also used to bill AS provided in freestanding ambulatory surgery centers. In general, the ICD-9-CM Official Guidelines for Coding and Reporting[1] provide the greatest guidance and form the basis of both the UB-04 and CMS-1500 claims guidelines. As such, the ICD-9-CM Official Guidelines[1] cover diagnosis coding in both inpatient and outpatient settings, including ED and AS facilities, and is used as a companion document to the official version of the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*[4] as published on CD-ROM by the U.S. Government Printing Office (GPO). Each of these guidelines is summarized below.

First-listed Diagnosis in Outpatient Settings

Per the ICD-9-CM Official Guidelines Section IV. Diagnostic Coding and Reporting Guidelines for Outpatient Services , "in the outpatient setting, the term first-listed diagnosis is used in lieu of principal diagnosis." Principal diagnosis applies only to hospital-based inpatient services. However, in practice, the term "primary" or "principal" diagnosis may be used when referring to hospital-based outpatient services as well. Review of HCUP state data layouts indicates that the vast majority of states use the label "Principal Diagnosis" or "Primary Diagnosis" for the first-listed diagnosis field. Note that these labels may have originated in inpatient data file layouts that were later adapted for outpatient use.

[4] Center for Medicare and Medicaid Services. CD-ROM Version Of ICD-9-CM. https://www.cms.gov/ICD9ProviderDiagnosticCodes/05_CDROM.asp. (Accessed September 25, 2011).

Per the ICD-9-CM Official Guidelines , the first-listed ICD-9-CM code is the “code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided.” Further, the ICD-9-CM Official Guidelines[1] state "in determining the first-listed diagnosis the coding conventions of ICD-9-CM, as well as the general and disease specific guidelines, take precedence over the outpatient guidelines. Diagnoses often are not established at the time of the initial encounter/visit. It may take two or more visits before the diagnosis is confirmed. The most critical rule involves beginning the search for the correct code assignment through the Alphabetic Index. Never begin searching initially in the Tabular List as this will lead to coding errors."

The ICD-9-CM Official Guidelines[1] also provide more specific direction regarding coding in certain circumstances including:

- Ambulatory surgery
- Observation stay
- Patients receiving diagnostic services only
- Patients receiving therapeutic services only

Specifically, the coding guidelines stipulate that the first-listed diagnosis for ambulatory surgeries be the “diagnosis for which the surgery was performed.”

It is important to note that the guidelines do <u>not</u> provide any specific direction related to ED services.

Therefore, the general requirements for the first-listed diagnosis (i.e., “the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided”) may apply by default. The detailed coding requirements for outpatient services (excerpted from the ICD-9-CM Official Guidelines for Coding and Reporting) are provided in Appendix A.[1]

<u>Principal Diagnosis in Inpatient Settings</u>

In inpatient settings, the ICD-9-CM coding guidelines identify the establishment of a “principal” diagnosis. The text broadly defining the principal diagnosis is provided below:

> “The circumstances of inpatient admission always govern the selection of principal diagnosis.” The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as “that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.”

The principal diagnosis is captured in a distinct principal diagnosis field per UB-04 guidelines. The coding guidelines also provide more specific direction in certain circumstances. Finally, note that the outpatient first-listed diagnosis definition is similar to the inpatient principal diagnosis definition, except that the words “after study” appear in the inpatient principal diagnosis definition. This may reflect the reality that a definitive diagnosis may not be made during some ED visits.

The complete inpatient coding guidelines are provided in Appendix B.

Furthermore, in the inpatient setting, the principal diagnosis drives the Diagnosis Related Group (DRG) which, in turn, drives payment. Therefore, inpatient principal diagnosis coding is considered rigorous and well scrutinized.

UB-04 (CMS 1450) Claims Guidelines

The UB-04 (CMS 1450) claim form is used by facilities rather than physicians for their health insurance billing. These facilities include hospitals, skilled nursing home, hospital-based ambulatory surgery centers, and clinics.[5]

The definition of first-listed diagnoses in this form is the same as the one described in the ICD-9-CM Official Guidelines for Coding and Reporting.

National Uniform Billing Committee, Official UB-04 Data Specifications Manual 2011 states the following on page 186:

> "Data Element: Principal Diagnosis Code and Present on Admission Indicator
> Definition: The ICD-9-CM codes describing the principal diagnosis (i.e., the condition established after study to be chiefly responsible for occasioning the admission of the patient for care). For additional information, refer to the Official ICD-9-CM Guidelines for Coding and Reporting."

This manual also includes the note below.

> "Notes: Follow the official coding guidelines for ICD reporting."

In addition, the Uniform Billing (UB-04) Implementation guidelines by CMS[6] state:

> Even though another diagnosis may be more severe than the principal diagnosis, the hospital enters the principal diagnosis. Entering any other diagnosis may result in incorrect assignment of a DRG and cause the hospital to be incorrectly paid under PPS. The hospital reports the full ICD code for the diagnosis shown to be chiefly responsible for the outpatient services in FL 67 of the bill. It reports the diagnosis to its highest degree of certainty. For instance, if the patient is seen on an outpatient basis for an evaluation of a symptom (e.g., cough) for which a definitive diagnosis is not made, the symptom must be reported (7862). If during the course of the outpatient evaluation and treatment a definitive diagnosis is made (e.g., acute bronchitis), the hospital must report the definitive diagnosis (4660).

CMS-1500 Guidelines

The Form CMS-1500 is the prescribed form for claims prepared and submitted by physicians or suppliers. This form is also used at freestanding ambulatory surgery centers, other than a physician's office, where surgical and diagnostic services are provided on an ambulatory basis. The Medicare Claim Processing Manual (Rev. 2248, 06-24-11) states

> "Enter the patient's diagnosis/condition. With the exception of claims submitted by ambulance suppliers (specialty type 59), all physician and nonphysician specialties (i.e., PA, NP, CNS, CRNA) use an ICD-9-CM code number and code to the highest level of specificity for the date of service. Enter up to four diagnoses in priority order."

However, the guidelines do not define the meaning of "priority order."

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[5] Department of Health & Human Services (DHHS) and Center for Medicare and Medicaid Services (CMS). CMS Manual System, Pub 100-04 Medicare Claim Processing, Transmittal 1104, November 3, 2006.

[6] Department of Health & Human Services (DHHS); Centers for Medicare & Medicaid Services (CMS). CMS Manual System. Pub 100-04 Medicare Claims Processing. Transmittal 1104 Date: November 3, 2006. https://www.cms.gov/transmittals/downloads/R1104CP.pdf (Accessed Sep .17, 2011).

Outpatient Prospective Payment System

Similar to the DRG for inpatient services, the Prospective Payment System (PPS) is applied in outpatient settings. As a part of the Outpatient Prospective Payment System (OPPS), CMS developed Ambulatory Payment Classifications (APCs) and Ambulatory Surgery Classifications (ASCs). These systems can be used to pay for ED and AS services.

The purpose of the OPPS was to 1) transfer the financial risk/burden from Medicare to providers and 2) standardize reimbursement. With this standardization, hospitals and ambulatory surgery centers receive a fixed amount regardless of costs for outpatient services.

Prior to the introduction of the APC system, hospitals were reimbursed by Medicare for outpatient services on a "cost-basis." APCs and ASCs group services that are similar clinically regardless of cost and also are defined solely through the Current Procedural Terminology (CPT) codes. Thus, how accurately and completely hospitals/physicians in hospital outpatient settings code their services with CPTs affects reimbursement for their services. By contrast, diagnosis codes do not affect payment at all.[7] Overall, no reimbursement systems, public or private sector, were identified that are based on the first-listed diagnosis for ED or AS services. Therefore, failure to follow the ICD-9-CM coding guidelines (i.e., not populating the first-listed field with the diagnosis chiefly responsible for the services provided or the reason for surgery) would not affect hospital payment for these services.

DATA ANALYSIS METHODS AND FINDINGS

Methods

The goal of the data analysis conducted for this study was to gauge the extent to which the coding of the first-listed diagnosis may be inconsistent with the coding guidelines described previously. Three metrics were examined:

- The percentage of records containing only one diagnosis. In this case, it was not possible that a secondary diagnosis should have been coded as the first-listed diagnosis.
- The percentage of records with a chronic first-listed diagnosis and at least one acute secondary diagnosis. In this case, it may be suspected that the acute diagnosis should have been the first-listed diagnosis.
- The percentage of records with a symptom first-listed diagnosis and at least one non-symptom secondary diagnosis. In this case, it may be suspected that a definitive diagnosis was not established [confirmed] by the physician during the outpatient visit.

The data analysis was based on the 2008 HCUP SASD and SEDD. For the SASD, only records with variable HCUP_AS > 0 were used (i.e., the analysis only includes AS records with evidence of AS services captured on the HCUP record).

SASD files can contain ambulatory surgeries from both hospital-owned and non-hospital-owned facilities. Note that depending on the state, SASD files can contain records that do not qualify as ambulatory surgeries per HCUP criteria (e.g., other outpatient services). These records were not used in the analysis. For the SEDD, all records were used.

The following analyses were conducted for each database, the SEDD and SASD, for each state and all states combined. DX1 is the first-listed diagnosis. DX2-DXn are secondary diagnoses.

[7] American College of Emergency Physicians. APC FAC. http://www.acep.org/content.aspx?id=30464 (Accessed September, 22 2010).

- The percentage of records with no diagnosis, one diagnosis, and more than one diagnosis
- When there was more than one diagnosis on the record
    - Frequency of first-listed diagnosis (DX1)
    - Frequency of secondary diagnoses (DX2-DXn)
    - Frequency of all listed diagnoses
- For each state and all states combined, a list of the top 20 diagnoses when only one diagnosis was coded
- The percentage of records with:
    - Acute (non-chronic) DX1 and only acute secondary diagnoses
    - Acute (non-chronic) DX1 and only chronic secondary diagnoses
    - Acute (non-chronic) DX1 and a mixture of acute and chronic secondaries
    - Acute (non-chronic) DX1 and no secondary diagnoses
    - Chronic DX1 and only acute secondary diagnoses
    - Chronic DX1 and only chronic secondary diagnoses
    - Chronic DX1 and a mixture of acute and chronic secondaries
    - Chronic DX1 and no secondary diagnoses
- The percentage of records with:
    - Symptom DX1 (ICD-9-CM range 780-796) and only symptom secondary diagnoses
    - Symptom DX1 and only non-symptom secondary diagnoses
    - Symptom DX1 and a mixture of symptom and non-symptom secondaries
    - Symptom DX1 and no secondary diagnoses
    - Non-Symptom DX1 and only symptom secondary diagnoses
    - Non-Symptom DX1 and only non-symptom secondary diagnoses
    - Non-Symptom DX1 and a mixture of symptom and non-symptom secondaries
    - Non-Symptom DX1 and no secondary diagnoses.

As noted above, symptoms were defined by diagnosis codes in the range 780-796. The table below provides a description of these codes.

Exhibit 1: ICD-9-CM Symptom Diagnosis Codes

ICD-9-CM Code	Description
780	General symptoms
781	Symptoms involving nervous and musculoskeletal systems
782	Symptoms involving skin and other integumentary tissue
783	Symptoms concerning nutrition, metabolism, and development
784	Symptoms involving head and neck
785	Symptoms involving cardiovascular system
786	Symptoms involving respiratory system and other chest symptoms
787	Symptoms involving digestive system
788	Symptoms involving urinary system
789	Other symptoms involving abdomen and pelvis
790	Nonspecific findings on examination of blood
791	Nonspecific findings on examination of urine
792	Nonspecific abnormal findings in other body substances
793	Nonspecific (abnormal) findings on radiological and other examinations of body structure
794	Nonspecific abnormal results of function studies
795	Other and nonspecific abnormal cytological, histological, immunological and DNA test findings
796	Other nonspecific abnormal findings

Chronic and acute first-listed diagnoses were identified by the Chronic Condition Indicator developed by the Agency for Healthcare Research and Quality (AHRQ) (http://www.hcup-us.ahrq.gov/toolssoftware/chronic/chronic.jsp).

The Clinical Classification Software (CCS) (http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp) developed by AHRQ was used to group first-listed diagnoses into clinically coherent categories (DXCCSn, where "n" refers to the position of the diagnosis code).

Reason for Visit Field

Some states provide Reason for Visit fields (DX_Visit_Reasonn, where "n" refers to the position of the diagnosis code) in their SEDD and/or SASD data. Interviewees cited these fields as another place in which relevant diagnosis information may be captured. Specifically, the field is intended to capture the diagnosis that occasioned the visit rather than the diagnosis chiefly responsible for the services provided. For example, if a patient arrives complaining of chest pain and is later found to have had an acute myocardial infarction (AMI), the Reason for Visit field (DX_Visit_Reasonn) would capture the chest pain diagnosis.

Subsequent to the State Partner interviews, the availability/use of Reason for Visit fields (DX_Visit_Reasonn) in the 2009 SEDD and SASD data was examined. The results are summarized below, although no further data analyses were conducted. Note that the 2008 data were used for the data analyses in this study because the 2009 data were not available at the time that the analyses were conducted. The 2009 documentation was used for the Reason for Visit (DX_Visit_Reasonn) analysis since it was the most recently available information at the time of completion of this report.

- Thirty-two states provided SASD and/or SEDD data in 2009. Among these states, 17 states (53%) provided a Reason for Visit field.
- Seventeen states provided at least one Reason for Visit field in their SEDD data. The population of the first Reason for Visit field was generally very high with 12 states having population rates greater than 95%. Five states provided a second Reason for Visit field, however, population rates decreased dramatically.
- By contrast, only nine states provided a Reason for Visit in their SASD data. In addition, the population of the field was more variable than seen with the SEDD data. Three states had population rates of 100%. The population rate for the remaining states varied from 40% - 90%. Three states provided a second Reason for Visit field and, again, population rates decreased dramatically.

FINDINGS

Findings from SEDD Analyses

In 2008, 28 states contributed to the SEDD. Forty-one percent of SEDD records had only one diagnosis, varying from a low of 29% to a high of 56% across states. Twelve percent of records had a chronic first-listed diagnosis; 88% had an acute first-listed diagnosis. This metric was very consistent across states. Across all states, when the first-listed diagnosis is chronic, there are no secondary diagnoses 42% of the time.

There were:

- Only acute secondary diagnoses 21% of the time,
- A mixture of acute and chronic secondary diagnoses 27% of the time, and
- Only chronic secondary diagnoses 18% of the time.

In other words, for records where a chronic diagnosis was listed first, an acute secondary diagnosis was present 48% of the time. This percentage ranged from a low of 29% to a high of 66% across states. These records could be considered suspect, as it may be expected that the acute diagnosis would be more likely to be the diagnosis chiefly responsible for the services provided than the chronic diagnosis. They represented approximately 6% of all SEDD records (12% * 48% = 5.8%).

Figure 1 in Appendix C shows the state-level distributions of secondary diagnosis coding when the first-listed diagnosis is chronic. The vertical axis is the number of states and the horizontal axis is the percentage of records when the first-listed diagnosis is chronic. As indicated, the percentage of records where there are 1) only acute secondary diagnoses or 2) only chronic secondary diagnoses is relatively consistent across states. This consistency across states may suggest an underlying clinical rationale for the coding patterns observed. A wider distribution may have suggested variation in state-specific coding practices or data collection.

Twenty percent of records had a symptom diagnosis as first-listed; 88% had a non-symptom first-listed diagnosis. This metric was very consistent across states. When first-listed was a symptom, there were no secondary diagnoses 28% of the time.

There were:

- Only non-symptom secondary diagnoses 42% of the time
- A mixture of symptom and non-symptom secondary diagnoses 20% of the time, and
- Only symptom secondary diagnoses 9% of the time.

Therefore, for records where a symptom diagnosis was listed first, a non-symptom secondary diagnosis was present 62% of the time. This percentage ranged from a low of 49% to a high of 71% across states. These records may be indicative that a diagnosis was not established [confirmed] during the outpatient visit. They represented 12% of all SEDD records (20% * 62%).

Figure 2 in Appendix C shows the state-level distributions of secondary diagnosis coding when the first-listed diagnosis is a symptom. As indicated, there is relative consistency in the percentage of records where there are only symptom or non-symptom secondary diagnoses across states. Again, the consistency across states suggests that state-specific coding inconsistencies and/or data collection practices are not impacting the coding of records where the first-listed diagnosis is a symptom.

For the SEDD, Figures 3 and 4 in Appendix C show the top 20 CCS diagnosis categories based on the first-listed diagnosis (DX1) and all-listed diagnoses (DX), respectively, when there is more than one diagnosis on the record. The CCS categories based on DX1 are consistent with those expected to be treated frequently in the ED. However, those based on all-listed DX include a number of common chronic conditions (e.g., hypertension, diabetes). Consistent with feedback from interviewees, it is likely that the all-listed DX analysis is picking up chronic/comorbid conditions that are included as secondary diagnoses.

Findings from SASD Analyses

Thirty-two percent of SASD records had only one diagnosis, varying from a low of 19% to a high of 39% across states. Thirty-six percent of records had a chronic first-listed diagnosis. This metric was very consistent across states. When the first-listed diagnosis was chronic, there were no secondary diagnoses 32% of the time.

There were:

- Only acute secondary diagnoses 15% of the time
- A mixture of acute and chronic secondary diagnoses 33% of the time, and

- Only chronic secondary diagnoses 21% of the time.

For records where a chronic diagnosis was listed first, an acute secondary diagnosis was present 48% of the time. These records could be considered suspect, as it may be expected that the acute diagnosis would be more likely to be the diagnosis chiefly responsible for the services provided than the chronic diagnosis. They represented approximately 18% of all SASD records (36% * 48% = 17.3%).

Figure 5 in Appendix C shows the state-level distributions of secondary diagnosis coding when the first-listed diagnosis is chronic. Consistent with the SEDD observations, the percentage of records where there are 1) only acute secondary diagnoses or 2) only chronic secondary diagnoses is relatively consistent across states. This consistency across states may suggest an underlying clinical rationale for the coding patterns observed rather than coding inconsistencies.

Only 6% of records had a symptom diagnosis as first-listed. This metric was very consistent across states. When first-listed was a symptom, there were no secondary diagnoses 24% of the time.

There were:

- Only non-symptom secondary diagnoses 48% of the time,
- A mixture of symptom and non-symptom secondary diagnoses 22% of the time, and
- Only symptom secondary diagnoses 6% of the time.

For records where a symptom diagnosis was listed first, a non-symptom secondary diagnosis was present 70% of the time. These records may be indicative that a diagnosis was not established [confirmed] by a physician at the time of the outpatient visit. They represented 4% of all SASD records (6% * 70%).

Figure 6 in Appendix C shows the state-level distributions of secondary diagnosis coding when the first-listed diagnosis is symptom. Again, there is relative consistency in the percentage of records where there are only symptom or non-symptom secondary diagnoses across states.

For the SASD, Figures 7 and 8 in Appendix C show the top 20 CCS diagnosis categories based on DX1 and all-listed DX, respectively, when there is more than one diagnosis on the record. The CCS categories based on DX1 are consistent with those expected to be treated with ambulatory surgery. However, consistent with the pattern seen in the SEDD analysis, those based on all-listed DX include a number of common chronic conditions (e.g., hypertension, diabetes).

STATE PARTNER SURVEY METHODS AND FINDINGS

Methods

A survey of all states supplying SEDD and/or SASD data was conducted to gather feedback on the coding of the first-listed diagnosis code on ED and AS records. The survey was implemented using SurveyMonkey.

Findings

There are 31 states that submit SEDD and/or SASD data. In total, 25 of the 31 states responded to the survey. Among these 25 states, three states provided SASD, three states provided SEDD, and 19 states provided both SASD and SEDD. Please note that not all states responded to each question.

A detailed summary of the responses to each question, categorized by section, is provided in Appendix D.

Salient observations include:

- For SEDD records, of respondents who did not respond “don’t know” or “not applicable,” 100% indicated that the first-listed diagnosis was “always” or “frequently” the reason chiefly responsible for the services provided. None of these respondents selected “seldom” or “never.”
- Similarly, for SASD records, of respondents who did not respond “don’t know” or “not applicable,” 100% indicated that the first-listed diagnosis was “always” or “frequently” the diagnosis code for which the procedure was performed. None of these respondents selected “seldom” or “never.” These responses were consistent across all payers: Private insurance, Medicare managed care, Medicare fee-for-service, Medicaid managed care, and Medicaid fee-for-service.
- Regarding variation in coding practices across hospitals, of the nine states that responded, most thought that hospitals would follow coding guidelines; however, some suspected that there may be cases where hospital coding practices/systems may not establish the first-listed diagnosis as that chiefly responsible for the services provided. It should be noted that no states had direct knowledge that this was occurring.
- Regarding state-specific payer reimbursement and/or coding guidelines, the large majority of respondents did not know whether such guidelines had been established. Five states indicated there were guidelines that applied to all payers, but none indicated they knew how well these guidelines were followed.
- Only one state indicated that they had completed a study related to the coding of first-listed diagnosis.

In summary, respondents generally felt that hospitals would follow the ICD-9-CM coding guidelines regarding first-listed diagnoses; however, few had any direct knowledge of the consistency with which this was occurring.

STATE PARTNER INTERVIEW METHODS AND FINDINGS

Methods

Based on the data analysis and State Partner survey results, 10 states were selected for follow-up through semi-structured telephone interviews. Selection criteria were relatively informal and included:

- Knowledge of coding of first-listed diagnosis issues (as reflected in survey results)
- Presence of interesting results from the data analyses
- Indication of state-specific guidelines

Six states agreed to participate and were interviewed. All interviewees were HCUP state Partners who had a variety of data backgrounds but did not have clinical backgrounds. A document containing state-specific data analyses was prepared and shared with interviewees as part of the process.

The interviews had the following general goals:

- Understand the possible meanings of the first-listed diagnosis on SEDD and SASD records
- Understand issues that may impact the meaning of the first-listed diagnosis, including coding practices and reimbursement incentives
- Identify any strategies to enhance the data

The topics covered during the interviews mirrored those raised in the survey, specifically:

- Whether the coding of the first-listed diagnosis follows ICD-9-CM coding guidelines
- Whether there are any state-specific coding guidelines that would impact the meaning of the first-listed diagnosis
- Whether there are any ED or AS payer reimbursement systems that incorporate the first-listed diagnosis

The state-specific data analyses were also reviewed and any state-specific issues were discussed.

Findings

In general, State Partner interviewees felt that the HCUP data should reflect the coding guidelines; that the first-listed diagnosis would be:

- On ED records, the "code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided"
- On AS records, the code for the "reason for the surgery." (We asked the State Partner interviewees what coding guidelines HCUP data should reflect for AS records in general; we did not ask about the appropriate guidelines HCUP data should reflect specifically in the cases of hospital-based ambulatory surgery centers or freestanding ambulatory surgery centers.)

Most often, this opinion was based on the belief that hospitals follow the coding guidelines as a matter of routine policy and professional coding practice. As one interviewee stated, "We have no reason to second guess the accuracy of the coding." However, no interviewees had conducted any related analysis.

As noted earlier, the vast majority of states label the first-listed diagnosis as the "Principal Diagnosis" or "Primary Diagnosis." However, in most cases, the states did not give specific direction regarding the coding of the first-listed diagnosis field. One state noted their guidelines reflect the ICD-9-CM coding guidelines summarized earlier in this report.

Some interviewees indicated that first-listed coding practices may vary from hospital-to-hospital depending on patient flow, medical records practices, and IT systems.

For example, in the ED, a presenting diagnosis may be captured during registration. The patient then has the ED visit and further/different diagnoses are made. Often, these diagnoses will be based on testing results and further examination/consultation. Depending on the medical records process, the presenting diagnosis may be first-listed even though it may not be the diagnosis chiefly responsible for services provided. In other cases, the physician and/or medical records department may review the visit retrospectively and ensure that the first-listed diagnosis meets guidelines. The timing and process of the capture of diagnoses is central to the establishment of the first-listed diagnosis.

It was also noted that a definitive diagnosis may not be made during the ED visit. For example, a patient may present with symptoms but be released without a definitive cause being determined. For AS, this may be less of a concern since the reason for the surgery is generally established in advance.

Some interviewees noted that medical records systems may also impact first-listed coding through the way that diagnosis codes are captured and ordered electronically during the visit.

However, State Partners indicated that the examples cited were anecdotal or conjecture. As noted earlier, no interviewees had studied the consistency of first-listed coding against the ICD-9-CM guidelines.

Some states have a Reason for Visit field, described previously, that is specifically intended to capture the initial/presenting diagnosis. For example, if a patient arrives complaining of chest pain and is later found to have had an acute myocardial infarction (AMI), the Reason for Visit field would capture the chest pain diagnosis. Per coding guidelines, the first-listed field should contain the AMI diagnosis. For the few who commented, the accuracy of the coding of the Reason for Visit field was assumed to be good, again based on faith in professional coding practice. Two states noted that they had considered adding the Reason for Visit field but had not yet done so.

Interviewees were provided with their states' results. In general, they felt it was an interesting way to examine the data. However, they had limited input on the interpretation of the results (i.e., whether chronic or symptom diagnoses in the first-listed position was problematic in establishing the first-listed diagnosis as the reason for visit). Some interviewees noted that chronic conditions may be treated in the ED but that there could legitimately be a (minor) accompanying acute condition. They suggested that these records may be indicative that the first-listed diagnosis was not the reason for visit but also may be indicative that the reason for visit was related to symptoms of the chronic condition.

One State Partner examined a sample of ED records with a first-listed symptom code and noted that for some records (perhaps about half) the record seemed to "make sense." However, in others, the coding was potentially problematic (i.e., a secondary code perhaps should have been first-listed). Again, the state felt it was difficult to draw definitive conclusions.

In contrast, interviewees were more likely to consider the case of a first-listed symptom diagnosis with secondary non-symptom diagnoses as potentially problematic. For these cases as well, there could legitimately be a first-listed symptom diagnosis (e.g., abdominal pain) and a secondary non-symptom diagnosis (e.g., pregnancy).

Similarly, some interviewees commented that surgery for chronic conditions could legitimately prompt a high percentage of first-listed chronic diagnoses. In general, interviewees were more confident in the coding of AS data given that most of AS is planned.

Finally, the interviewees reviewed the ED and AS lists of the top CCS categories based on the first-listed diagnosis and uniformly confirmed that the CCS categories seemed reasonable.

CONCLUSION

While there are no reimbursement systems to “encourage” the accuracy of coding, the study indicates that the first-listed diagnosis, for the large majority of ED records, will likely meet the ICD-9-CM coding guideline as the “code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided.” Similarly, for AS records, the coding likely conforms to the standard stipulating the “reason for the surgery.”

The data analyses conducted for this study showed that 6% of SEDD records and 18% of SASD records had a chronic first-listed diagnosis and one or more acute secondary diagnoses. In addition, 12% of SEDD records and 4% of SASD records had a first-listed symptom diagnosis and one or more non-symptom secondary diagnoses. In these cases, it is possible that the acute and non-symptom diagnoses respectively should have been first-listed. However, it is impossible to definitively state that these records were miscoded.

State Partner interviewees were consistently of the opinion that the SEDD and SASD data would conform to the ICD-9-CM coding guidelines regarding the first-listed diagnosis, although a few noted that there may be hospital-specific systems or medical records practice issues that could cause the coding to deviate from the guidelines. The State Partner survey feedback also supported the conformance of SEDD and SASD data to the ICD-9-CM coding guidelines.

There are several limitations of the study which should be considered when interpreting the results. First, the study examined first versus all-listed diagnoses only from the perspective of the data, and did not consider the clinical perspective of emergency care or interview clinicians. Second, the literature review did not cover either State-specific or commercial payer reimbursement policies and/or coding guidelines. Third, only 7 State Partners were interviewed, potentially limiting the generalizability of the interview results. Fourth, all interviewees were with State Partner organizations involved in the collection of the data, thereby possibly introducing bias in the information obtained. Information about the background education, skills and experience was not collected nor were particular occupations or backgrounds explicitly targeted (e.g., professional coders).

In summary, from the data perspective, both the empirical evidence and State Partner feedback indicates that, in lieu of any other State or hospital-specific information, HCUP data users should consider the first-listed diagnosis as:

- For SEDD records, the “code for the diagnosis, condition, problem or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided”
- For SASD records, the “reason for the surgery”

In general, researchers and analysts seeking to examine the “reasons” for ED and AS visits should consider both the data and clinical perspective of the care provided. The data perspective suggests that the first-listed diagnosis on the outpatient records has a distinct meaning regarding the priority of the condition in treatment. However, the researcher and analyst should also consider the clinical perspective, particularly for ED visits. The ED visit often focuses on the symptom-based evaluation of differential diagnoses. Several conditions may have relevance to the "reason" for the ED visit, and all-listed diagnoses may need to be considered.

APPENDIX A

ICD-9-CM Official Guidelines for Coding and Reporting: Section IV. Diagnostic Coding and Reporting Guidelines for Outpatient Services

These coding guidelines for outpatient diagnoses have been approved for use by hospitals/ providers in coding and reporting hospital-based outpatient services and provider-based office visits.

Information about the use of certain abbreviations, punctuation, symbols, and other conventions used in the ICD-9-CM Tabular List (code numbers and titles), can be found in Section IA of these guidelines, under "Conventions Used in the Tabular List." Information about the correct sequence to use in finding a code is also described in Section I.

The terms encounter and visit are often used interchangeably in describing outpatient service contacts and, therefore, appear together in these guidelines without distinguishing one from the other.

Though the conventions and general guidelines apply to all settings, coding guidelines for outpatient and provider reporting of diagnoses will vary in a number of instances from those for inpatient diagnoses, recognizing that:

The Uniform Hospital Discharge Data Set (UHDDS) definition of principal diagnosis applies only to inpatients in acute, short-term, long-term care and psychiatric hospitals.

Coding guidelines for inconclusive diagnoses (probable, suspected, rule out, etc.) were developed for inpatient reporting and do not apply to outpatients.

A. Selection of first-listed condition

In the outpatient setting, the term first-listed diagnosis is used in lieu of principal diagnosis.

In determining the first-listed diagnosis the coding conventions of ICD-9-CM, as well as the general and disease specific guidelines take precedence over the outpatient guidelines.

Diagnoses often are not established at the time of the initial encounter/visit. It may take two or more visits before the diagnosis is confirmed.

The most critical rule involves beginning the search for the correct code assignment through the Alphabetic Index. Never begin searching initially in the Tabular List as this will lead to coding errors.

1. Outpatient Surgery

When a patient presents for outpatient surgery, code the reason for the surgery as the first-listed diagnosis (reason for the encounter), even if the surgery is not performed due to a contraindication.

2. Observation Stay

When a patient is admitted for observation for a medical condition, assign a code for the medical condition as the first-listed diagnosis.

When a patient presents for outpatient surgery and develops complications requiring admission to observation, code the reason for the surgery as the first reported diagnosis (reason for the encounter), followed by codes for the complications as secondary diagnoses.

B. Codes from 001.0 through V89

The appropriate code or codes from 001.0 through V89 must be used to identify diagnoses, symptoms, conditions, problems, complaints, or other reason(s) for the encounter/visit.

C. Accurate reporting of ICD-9-CM diagnosis codes

For accurate reporting of ICD-9-CM diagnosis codes, the documentation should describe the patient's condition, using terminology which includes specific diagnoses as well as symptoms, problems, or reasons for the encounter. There are ICD-9-CM codes to describe all of these.

D. Selection of codes 001.0 through 999.9

The selection of codes 001.0 through 999.9 will frequently be used to describe the reason for the encounter. These codes are from the section of ICD-9-CM for the classification of diseases and injuries (e.g. infectious and parasitic diseases; neoplasms; symptoms, signs, and ill-defined conditions, etc.).

E. Codes that describe symptoms and signs

Codes that describe symptoms and signs, as opposed to diagnoses, are acceptable for reporting purposes when a diagnosis has not been established (confirmed) by the provider. Chapter 16 of ICD-9-CM, Symptoms, Signs, and Ill-defined conditions (codes 780.0-799.9) contain many, but not all codes for symptoms.

F. Encounters for circumstances other than a disease or injury

ICD-9-CM provides codes to deal with encounters for circumstances other than a disease or injury. The Supplementary Classification of factors Influencing Health Status and Contact with Health Services (V01.0-V89) is provided to deal with occasions when circumstances other than a disease or injury are recorded as diagnosis or problems.

G. Level of Detail in Coding

1. ICD-9-CM codes with 3, 4, or 5 digits

ICD-9-CM is composed of codes with either 3, 4, or 5 digits. Codes with three digits are included in ICD-9-CM as the heading of a category of codes that may be further subdivided by the use of fourth and/or fifth digits, which provide greater specificity.

2. Use of full number of digits required for a code

A three-digit code is to be used only if it is not further subdivided. Where fourth-digit subcategories and/or fifth-digit subclassifications are provided, they must be assigned. A code is invalid if it has not been coded to the full number of digits required for that code.

See also discussion under Section I.b.3., General Coding Guidelines, Level of Detail in Coding.

H. ICD-9-CM code for the diagnosis, condition, problem, or other reason for encounter/visit

List first the ICD-9-CM code for the diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided. List additional codes that describe any coexisting conditions. In some cases the first-listed diagnosis may be a symptom when a diagnosis has not been established (confirmed) by the physician.

I. Uncertain diagnosis

Do not code diagnoses documented as "probable," "suspected," "questionable," "rule out," or "working diagnosis" or other similar terms indicating uncertainty. Rather, code the condition(s) to the highest degree of certainty for that encounter/visit, such as symptoms, signs, abnormal test results, or other reason for the visit.

Please note: This differs from the coding practices used by short-term, acute care, long-term care and psychiatric hospitals.

J. Chronic diseases

Chronic diseases treated on an ongoing basis may be coded and reported as many times as the patient receives treatment and care for the condition(s).

K. Code all documented conditions that coexist

Code all documented conditions that coexist at the time of the encounter/visit, and require or affect patient care treatment or management. Do not code conditions that were previously treated and no longer exist. However, history codes (V10-V19) may be used as secondary codes if the historical condition or family history has an impact on current care or influences treatment.

L. Patients receiving diagnostic services only

For patients receiving diagnostic services only during an encounter/visit, sequence first the diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the outpatient services provided during the encounter/visit. Codes for other diagnoses (e.g., chronic conditions) may be sequenced as additional diagnoses.

For encounters for routine laboratory/radiology testing in the absence of any signs, symptoms, or associated diagnosis, assign V72.5 and **a code from subcategory** V72.6. If routine testing is performed during the same encounter as a test to evaluate a sign, symptom, or diagnosis, it is appropriate to assign both the V code and the code describing the reason for the non-routine test.

For outpatient encounters for diagnostic tests that have been interpreted by a physician, and the final report is available at the time of coding, code any confirmed or definitive diagnosis(es) documented in the interpretation. Do not code related signs and symptoms as additional diagnoses.

Please note: This differs from the coding practice in the hospital inpatient setting regarding abnormal findings on test results.

M. Patients receiving therapeutic services only

For patients receiving therapeutic services only during an encounter/visit, sequence first the diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the outpatient services provided during the encounter/visit. Codes for other diagnoses (e.g., chronic conditions) may be sequenced as additional diagnoses.

The only exception to this rule is that when the primary reason for the admission/encounter is chemotherapy, radiation therapy, or rehabilitation, the appropriate V code for the service is listed first, and the diagnosis or problem for which the service is being performed listed second.

N. Patients receiving preoperative evaluations only

For patients receiving preoperative evaluations only, sequence first a code from category V72.8, Other specified examinations, to describe the pre-op consultations. Assign a code for the condition to describe the reason for the surgery as an additional diagnosis. Code also any findings related to the pre-op evaluation.

O. Ambulatory surgery

For ambulatory surgery, code the diagnosis for which the surgery was performed. If the postoperative diagnosis is known to be different from the preoperative diagnosis at the time the diagnosis is confirmed, select the postoperative diagnosis for coding, since it is the most definitive.

P. Routine outpatient prenatal visits

For routine outpatient prenatal visits when no complications are present, codes V22.0, Supervision of normal first pregnancy, or V22.1, Supervision of other normal pregnancy, should be used as the principal diagnosis. These codes should not be used in conjunction with chapter 11 codes.

APPENDIX B

ICD-9-CM Official Guidelines for Coding and Reporting: Section II. Selection of Principal Diagnosis

The circumstances of inpatient admission always govern the selection of principal diagnosis. The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care." The UHDDS definitions are used by hospitals to report inpatient data elements in a standardized manner. These data elements and their definitions can be found in the July 31, 1985, Federal Register (Vol. 50, No, 147), pp. 31038-40.

Since that time the application of the UHDDS definitions has been expanded to include all non-outpatient settings (acute care, short term, long term care and psychiatric hospitals; home health agencies; rehab facilities; nursing homes, etc).

In determining principal diagnosis the coding conventions in the ICD-9-CM, Volumes I and II take precedence over these official coding guidelines. *(See Section I.A., Conventions for the ICD-9-CM)* The importance of consistent, complete documentation in the medical record cannot be over-emphasized. Without such documentation, the application of all coding guidelines is a difficult, if not impossible, task.

A. Codes for symptoms, signs, and ill-defined conditions

Codes for symptoms, signs, and ill-defined conditions from Chapter 16 are not to be used as principal diagnosis when a related definitive diagnosis has been established.

B. Two or more interrelated conditions, each potentially meeting the definition for principal diagnosis.

When there are two or more interrelated conditions (such as diseases in the same ICD-9-CM chapter or manifestations characteristically associated with a certain disease) potentially meeting the definition of principal diagnosis, either condition may be sequenced first, unless the circumstances of the admission, the therapy provided, the Tabular List, or the Alphabetic Index indicate otherwise.

C. Two or more diagnoses that equally meet the definition for principal diagnosis

In the unusual instance when two or more diagnoses equally meet the criteria for principal diagnosis as determined by the circumstances of admission, diagnostic workup and/or therapy provided, and the Alphabetic Index, Tabular List, or another coding guideline does not provide sequencing direction, any one of the diagnoses may be sequenced first.

D. Two or more comparative or contrasting conditions

In those rare instances when two or more contrasting or comparative diagnoses are documented as "either/or" (or similar terminology), they are coded as if the diagnoses were confirmed and the diagnoses are sequenced according to the

circumstances of the admission. If no further determination can be made as to which diagnosis should be principal, either diagnosis may be sequenced first.

E. A symptom(s) followed by contrasting/comparative diagnoses

When a symptom(s) is followed by contrasting/comparative diagnoses, the symptom code is sequenced first. All the contrasting/comparative diagnoses should be coded as additional diagnoses.

F. Original treatment plan not carried out

Sequence as the principal diagnosis the condition, which after study occasioned the admission to the hospital, even though treatment may not have been carried out due to unforeseen circumstances.

G. Complications of surgery and other medical care

When the admission is for treatment of a complication resulting from surgery or other medical care, the complication code is sequenced as the principal diagnosis. If the complication is classified to the 996-999 series and the code lacks the necessary specificity in describing the complication, an additional code for the specific complication should be assigned.

H. Uncertain Diagnosis

If the diagnosis documented **at the time of discharge** is qualified as “probable,” “suspected,” “likely,” “questionable,” “possible,” or “still to be ruled out,” or other similar terms indicating uncertainty, code the condition as if it existed or was established. The bases for these guidelines are the diagnostic workup, arrangements for further workup or observation, and initial therapeutic approach that correspond most closely with the established diagnosis.
Note: This guideline is applicable only to inpatient admissions to short-term, acute, long-term care and psychiatric hospitals.

I. Admission from Observation Unit

Admission Following Medical Observation

When a patient is admitted to an observation unit for a medical condition, which either worsens or does not improve, and is subsequently admitted as an inpatient of the same hospital for this same medical condition, the principal diagnosis would be the medical condition which led to the hospital admission.

Admission Following Post-Operative Observation

When a patient is admitted to an observation unit to monitor a condition (or complication) that develops following outpatient surgery, and then is subsequently admitted as an inpatient of the same hospital, hospitals should apply the Uniform Hospital Discharge Data Set (UHDDS) definition of principal diagnosis as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."

J. Admission from Outpatient Surgery

When a patient receives surgery in the hospital's outpatient surgery department and is subsequently admitted for continuing inpatient care at the same hospital, the following guidelines should be followed in selecting the principal diagnosis for the inpatient admission:

If the reason for the inpatient admission is a complication, assign the complication as the principal diagnosis.

If no complication, or other condition, is documented as the reason for the inpatient admission, assign the reason for the outpatient surgery as the principal diagnosis.

If the reason for the inpatient admission is another condition unrelated to the surgery, assign the unrelated condition as the principal diagnosis.

Section III. Reporting Additional Diagnoses

GENERAL RULES FOR OTHER (ADDITIONAL) DIAGNOSES

For reporting purposes the definition for “other diagnoses” is interpreted as additional conditions that affect patient care in terms of requiring:

clinical evaluation; or
therapeutic treatment; or
diagnostic procedures; or
extended length of hospital stay; or
increased nursing care and/or monitoring.

The UHDDS item #11-b defines Other Diagnoses as “all conditions that coexist at the time of admission, that develop subsequently, or that affect the treatment received and/or the length of stay. Diagnoses that relate to an earlier episode which have no bearing on the current hospital stay are to be excluded.” UHDDS definitions apply to inpatients in acute care, short-term, long term care and psychiatric hospital setting. The UHDDS definitions are used by acute care short-term hospitals to report inpatient data elements in a standardized manner. These data elements and their definitions can be found in the July 31, 1985, Federal Register (Vol. 50, No, 147), pp. 31038-40.

Since that time the application of the UHDDS definitions has been expanded to include all non-outpatient settings (acute care, short term, long term care and psychiatric hospitals; home health agencies; rehab facilities; nursing homes, etc). The following guidelines are to be applied in designating “other diagnoses” when neither the Alphabetic Index nor the Tabular List in ICD-9-CM provide direction. The listing of the diagnoses in the patient record is the responsibility of the attending provider.

A. Previous conditions

If the provider has included a diagnosis in the final diagnostic statement, such as the discharge summary or the face sheet, it should ordinarily be coded. Some providers

include in the diagnostic statement resolved conditions or diagnoses and status-post procedures from previous admission that have no bearing on the current stay. Such conditions are not to be reported and are coded only if required by hospital policy.

However, history codes (V10-V19) may be used as secondary codes if the historical condition or family history has an impact on current care or influences treatment.

B. Abnormal findings

Abnormal findings (laboratory, x-ray, pathologic, and other diagnostic results) are not coded and reported unless the provider indicates their clinical significance. If the findings are outside the normal range and the attending provider has ordered other tests to evaluate the condition or prescribed treatment, it is appropriate to ask the provider whether the abnormal finding should be added.
Please note: This differs from the coding practices in the outpatient setting for coding encounters for diagnostic tests that have been interpreted by a provider.

C. Uncertain Diagnosis

If the diagnosis documented at the time of discharge is qualified as “probable,” “suspected,” “likely,” “questionable,” “possible,” or “still to be ruled out” or other similar terms indicating uncertainty, code the condition as if it existed or was established. The bases for these guidelines are the diagnostic workup, arrangements for further workup or observation, and initial therapeutic approach that correspond most closely with the established diagnosis.
Note: This guideline is applicable only to inpatient admissions to short-term, acute, long-term care and psychiatric hospitals.

APPENDIX C
Results of Analyses

Figure 1: State Distributions of Secondary Diagnosis Coding Where First-listed Diagnosis (DX1) is Chronic (Based on SEDD)

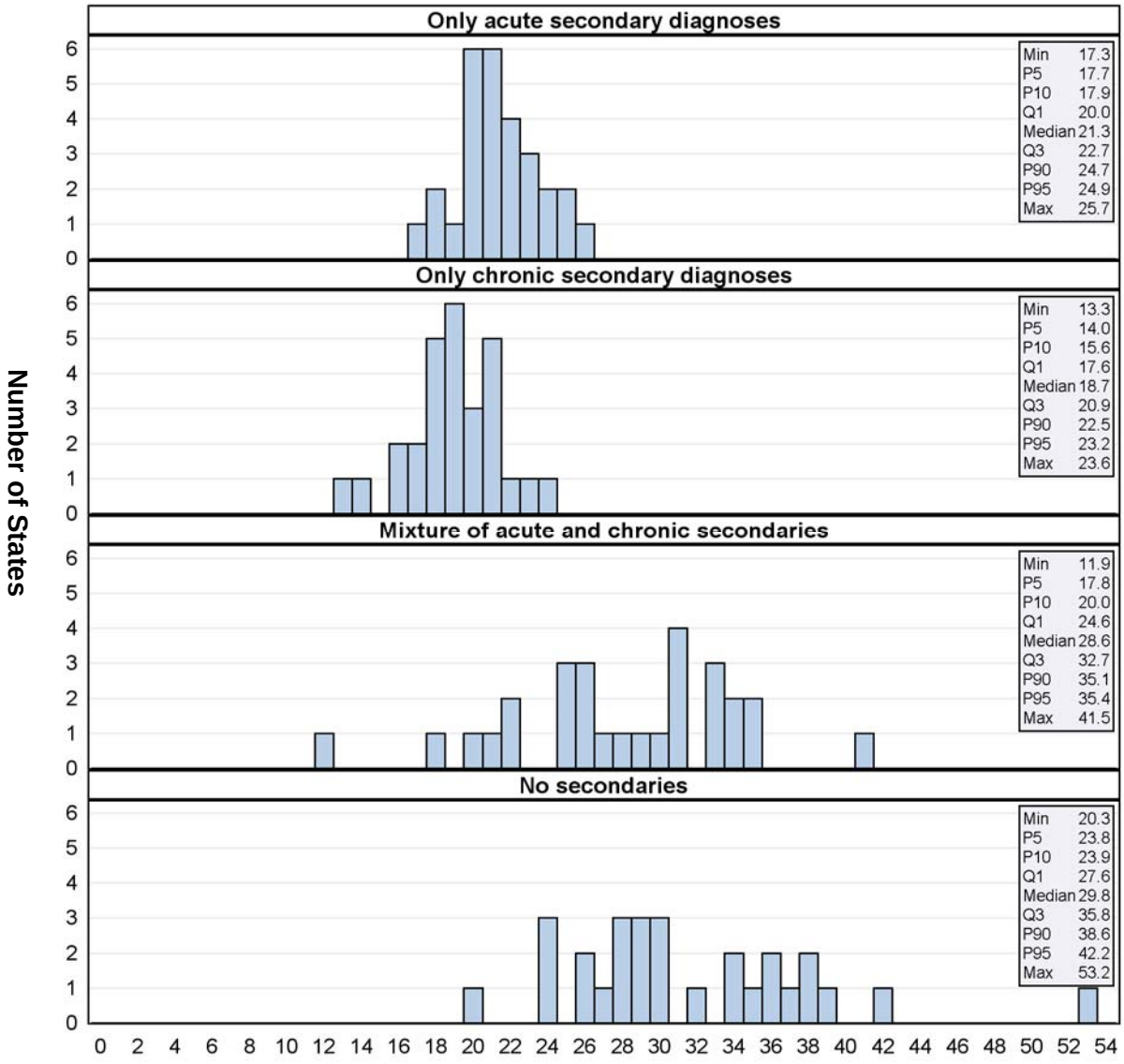


Figure 2: State Distributions of Secondary Diagnosis Coding Where First-listed Diagnosis (DX1) is Symptom (Based on SEDD)

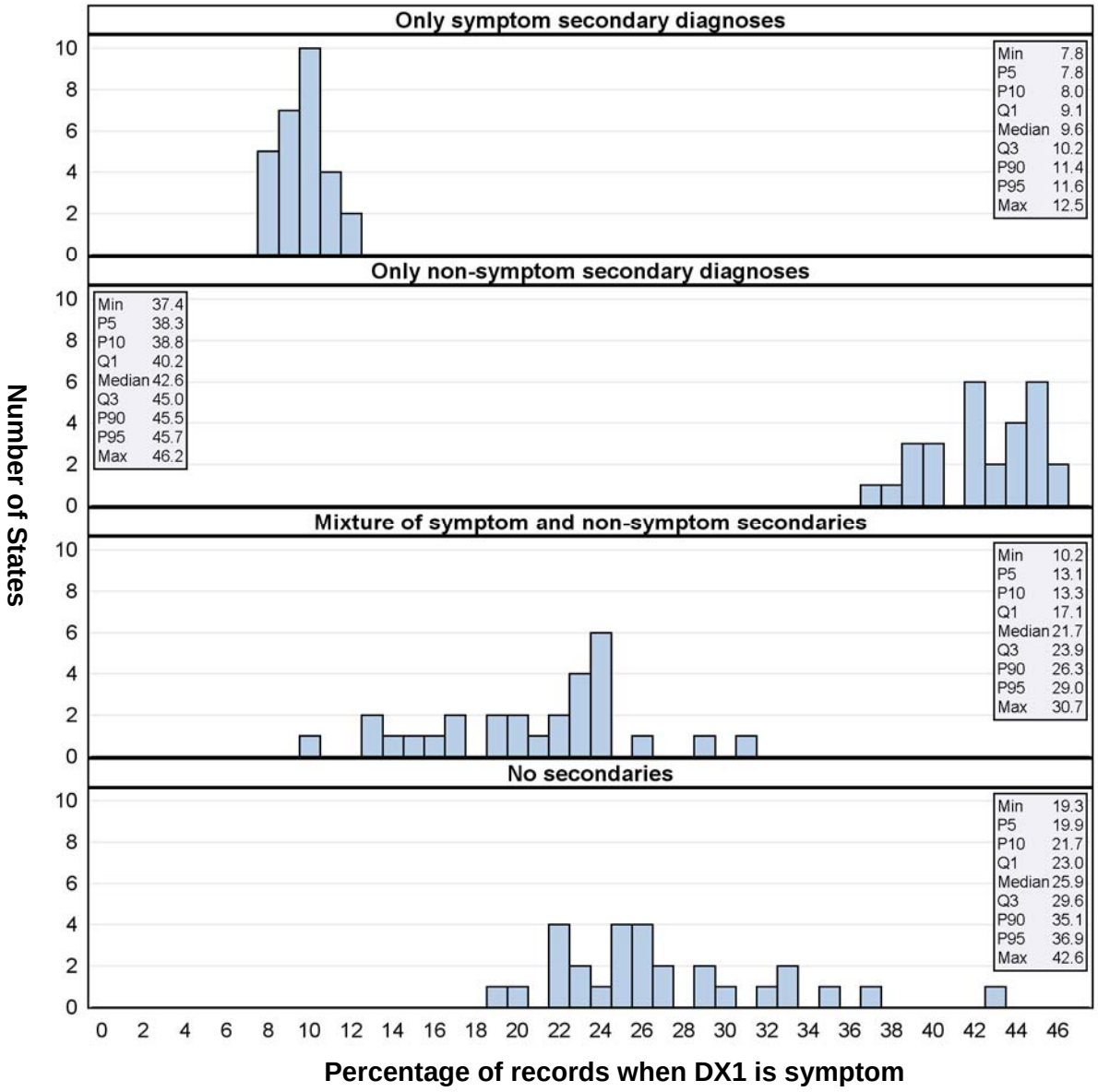


Figure 3. Top 20 Clinical Classification Software, Principal Diagnosis Classification (DXCCS1) by Frequency: All States Combined When There is More Than One Diagnosis, 2008 SEDD

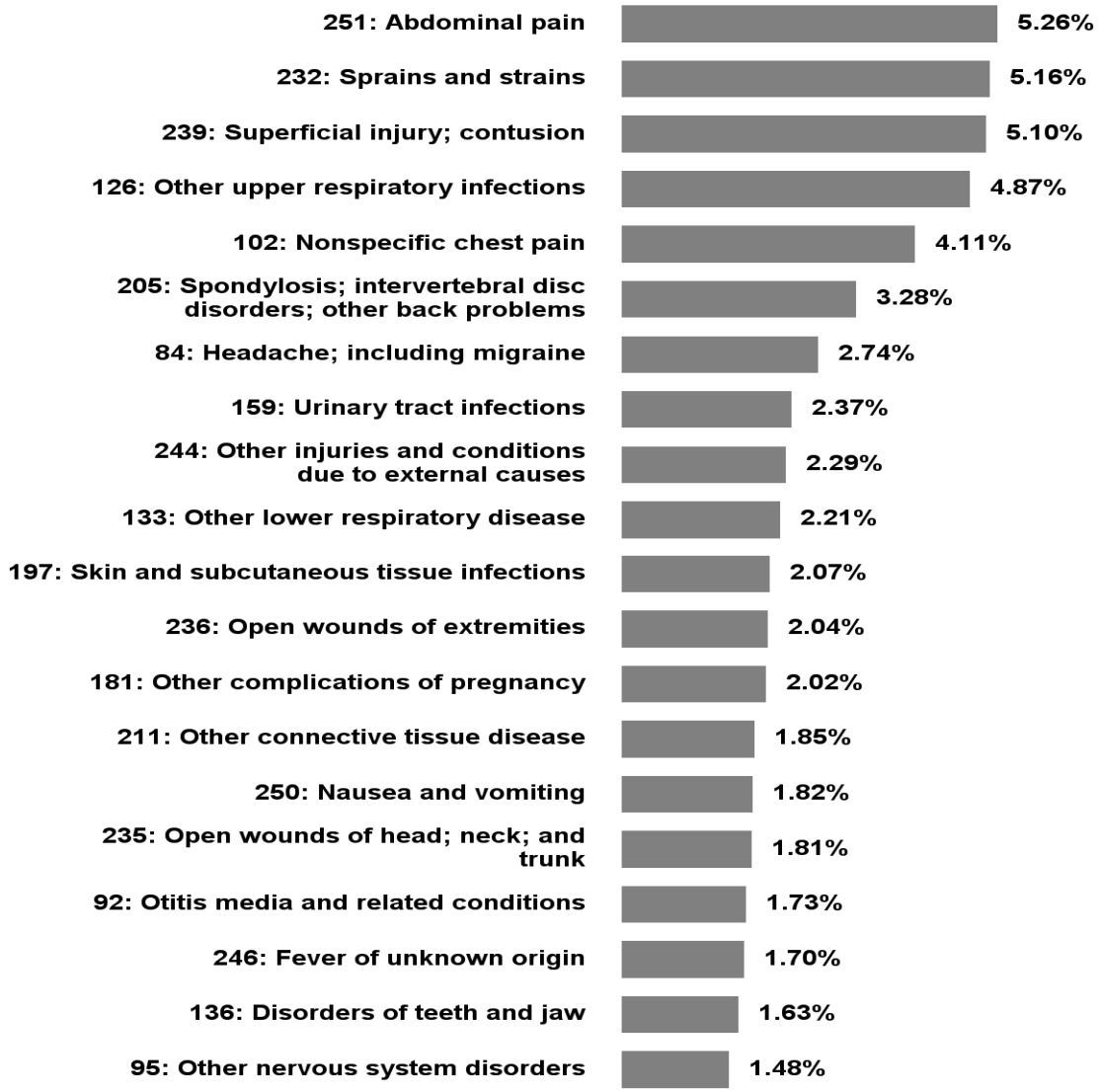


Figure 4. Top 20 Clinical Classification Software, Diagnosis Classification (DXCCS) for All-Listed DXCCS1-DXCCS*n*: All States Combined When There is More Than One Diagnosis, 2008 SEDD

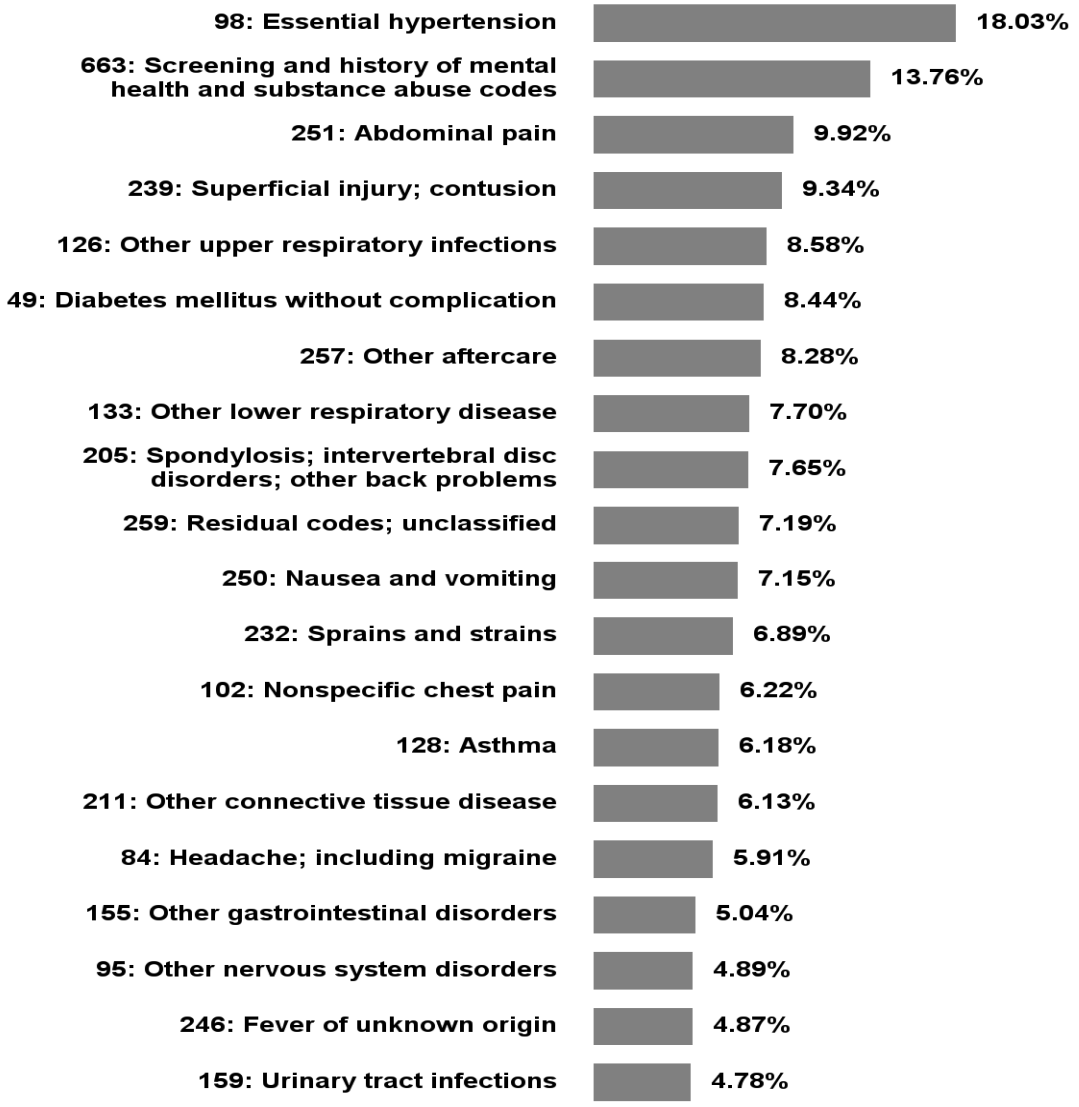


Figure 5: State Distributions of Secondary Diagnosis Coding Where First-listed Diagnosis (DX1) is Chronic (Based on SASD)

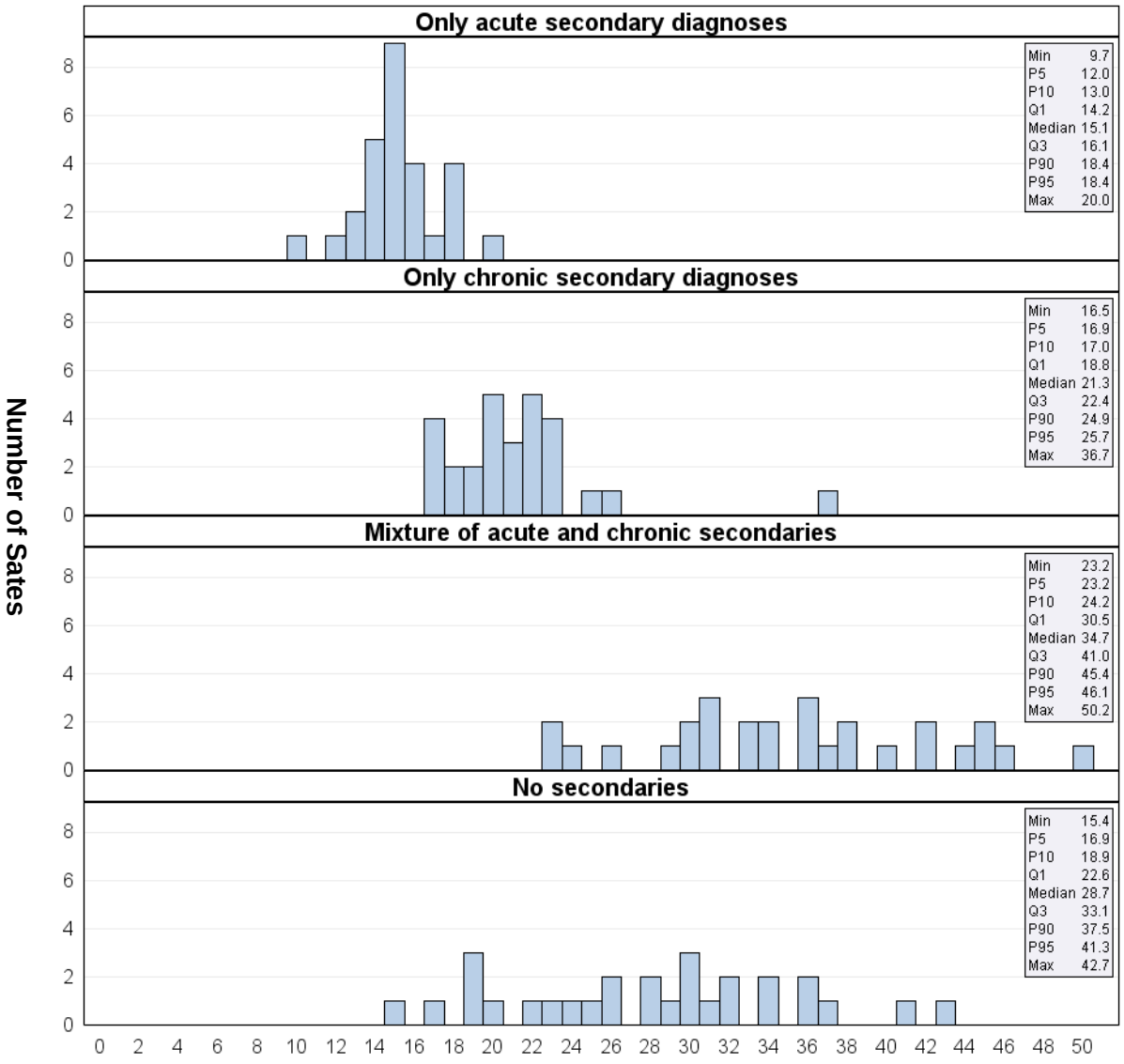


Figure 6: State Distributions of Secondary Diagnosis Coding Where First-listed Diagnosis (DX1) is Symptom (Based on SASD)

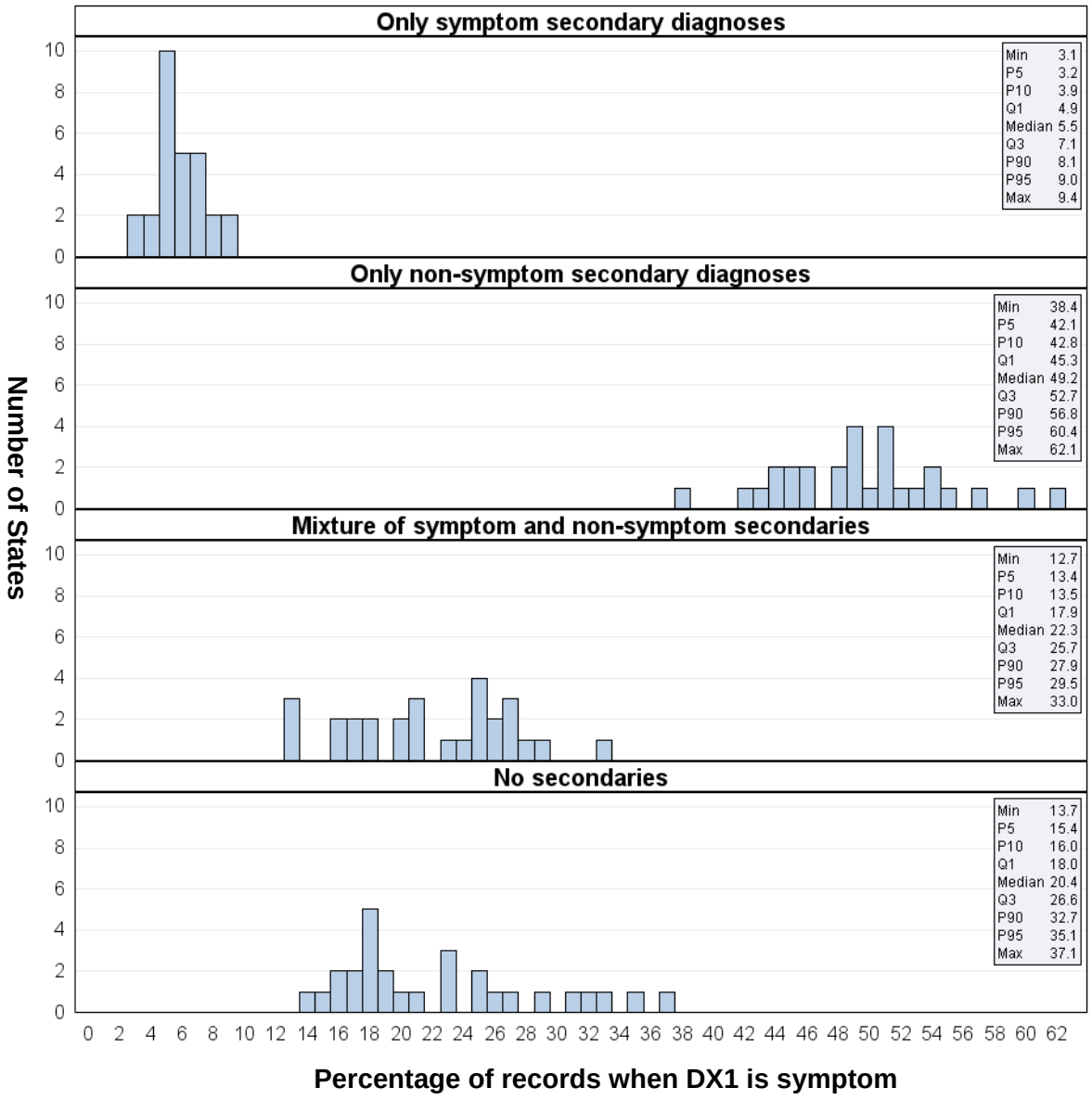


Figure 7: Top 20 Clinical Classification Software, Principal Diagnosis Classification (DXCCS1) by Frequency: All States Combined When There is More Than One Diagnosis, 2008 SASD

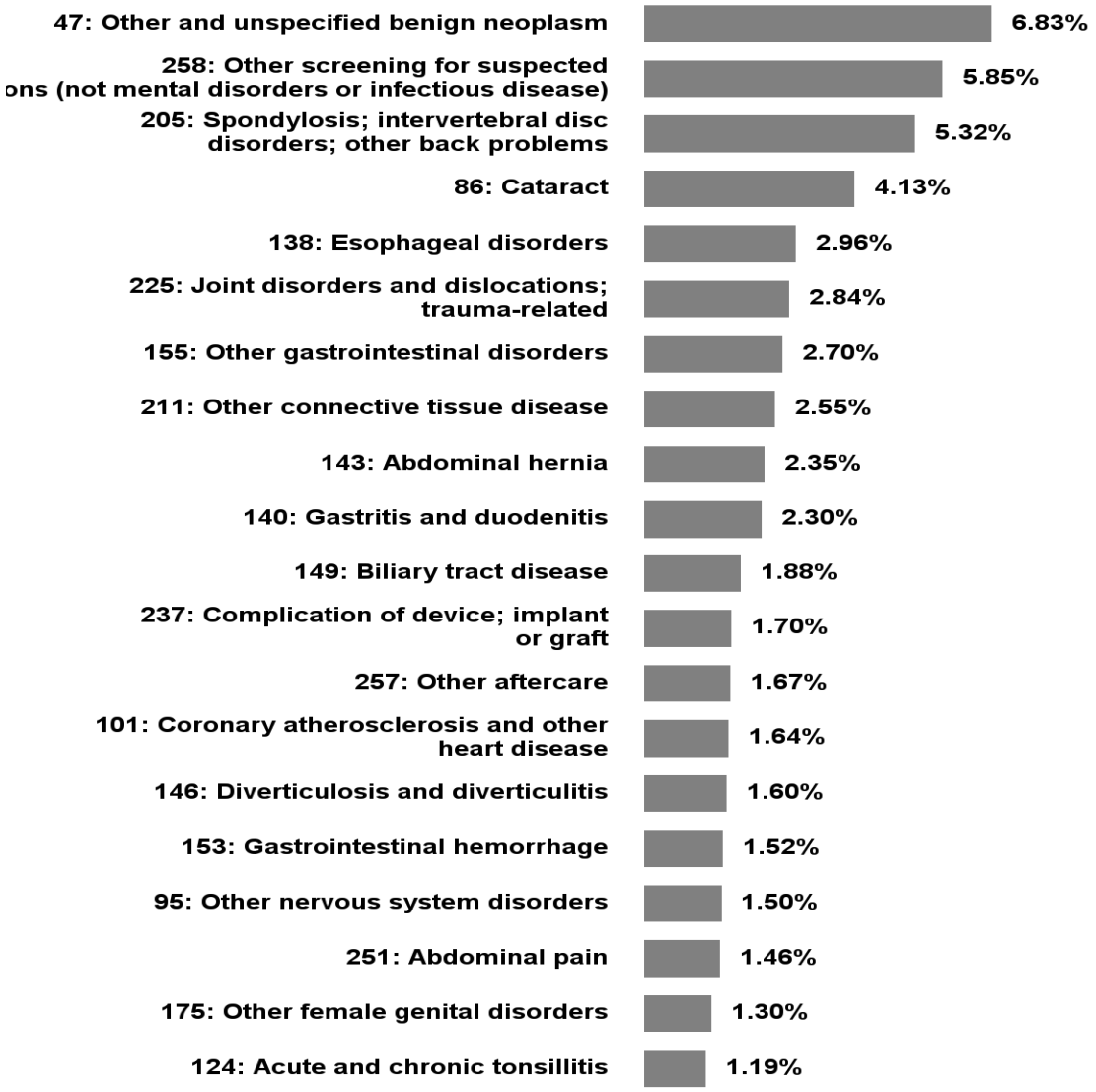
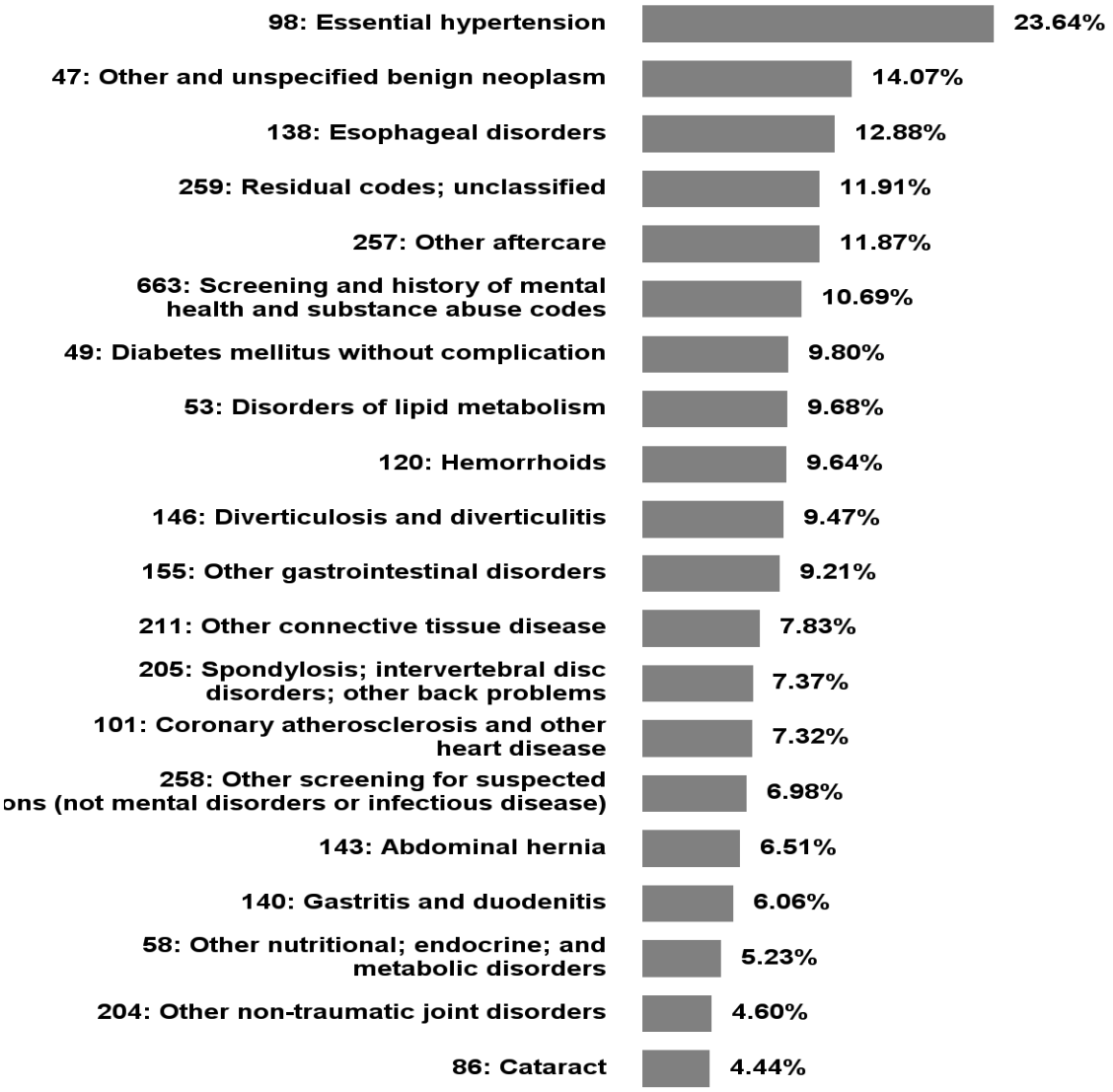


Figure 8: Top 20 Clinical Classification Software, Diagnosis Classification (DXCCS) for All-Listed DXCCS1-DXCCS*n*: All States Combined When There is More Than One Diagnosis, 2008 SASD



APPENDIX D
Results of Survey

Questions Related to the Population of the First-Listed Diagnosis Field

Questions 1a and 1b were intended to solicit opinions regarding the values contained in the first-listed diagnosis field (i.e., independent of any coding or reimbursement guidelines).

Each colored bar in the Exhibit 1 identifies the number of respondents for a particular answer to the question "…what does the first-listed diagnosis indicate on Emergency Department records". For example, the green bar shows how often (e.g., seldom, never, etc.) respondents thought the answer was "The ICD-9-CM for which a procedure/surgery was performed?" The same approach is used for Exhibit 2. Please note that some states that participated in the survey did not respond to some questions. Thus, the sum of the numbers of responses to each question may not be 23.

Exhibit 1: Results for Question1a. "In your state, to the best of your knowledge, what does the first-listed diagnosis indicate on Emergency Department records?"

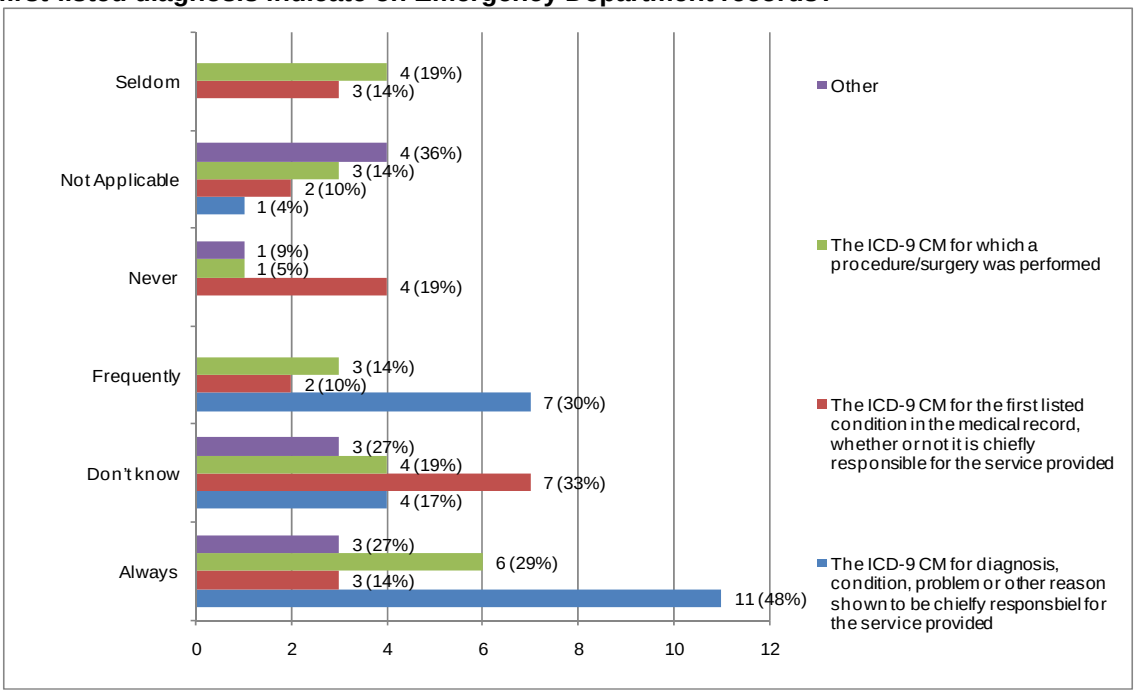
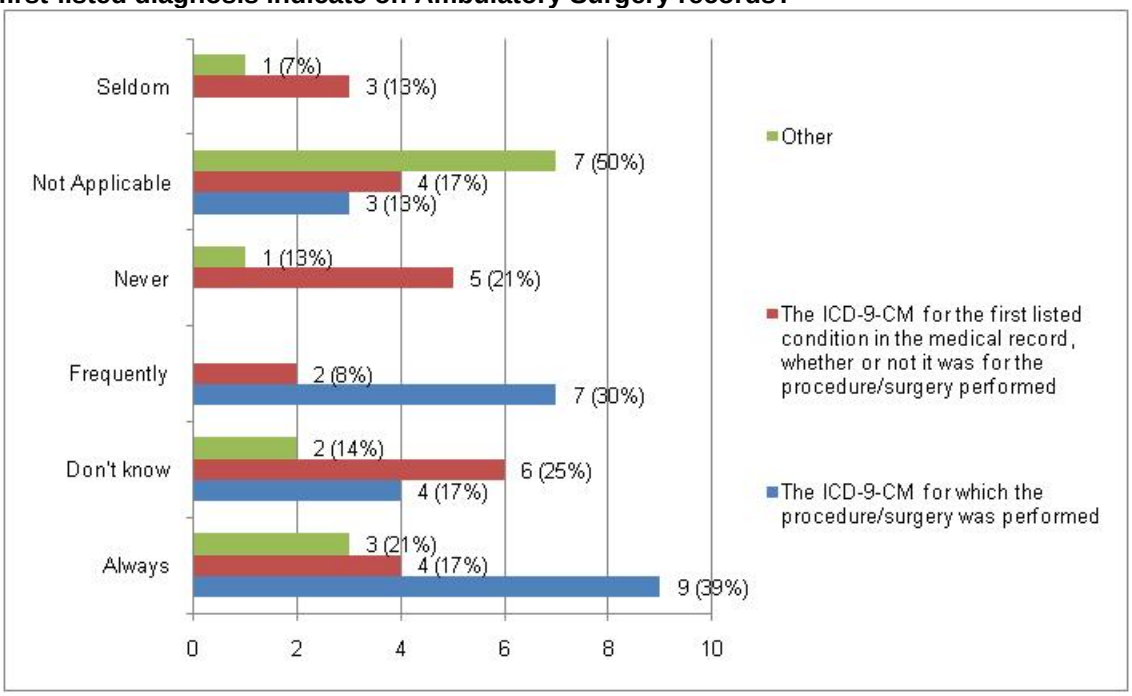


Exhibit 2: Results for Question 1b. "In your state, to the best of your knowledge, what does the first-listed diagnosis indicate on Ambulatory Surgery records?"



For both the SEDD and SASD, three text responses indicated that the first-listed diagnosis should be chiefly responsible for services but acknowledged that this has not been validated.

Questions 2a and 2b were intended to examine the consistency of values contained in the first-listed diagnosis field with guidelines, by payer.

Each colored bar in the Exhibits 3 and 4 identifies the number of respondents for a particular answer by payer. For example, the green bar shows how often respondents thought the answer was "frequently" to the question "how often is the first-listed diagnosis the 'diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided", for each of the listed payers. Please note that some states that participated in the survey did not respond to some questions. Thus, the sum of the numbers of responses to each question may not be 23.

Exhibit 3: Results for Question 2a. "In your state, on Emergency Department records, how often is the first-listed diagnosis the 'diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided,' for the following data set and payer combinations?"

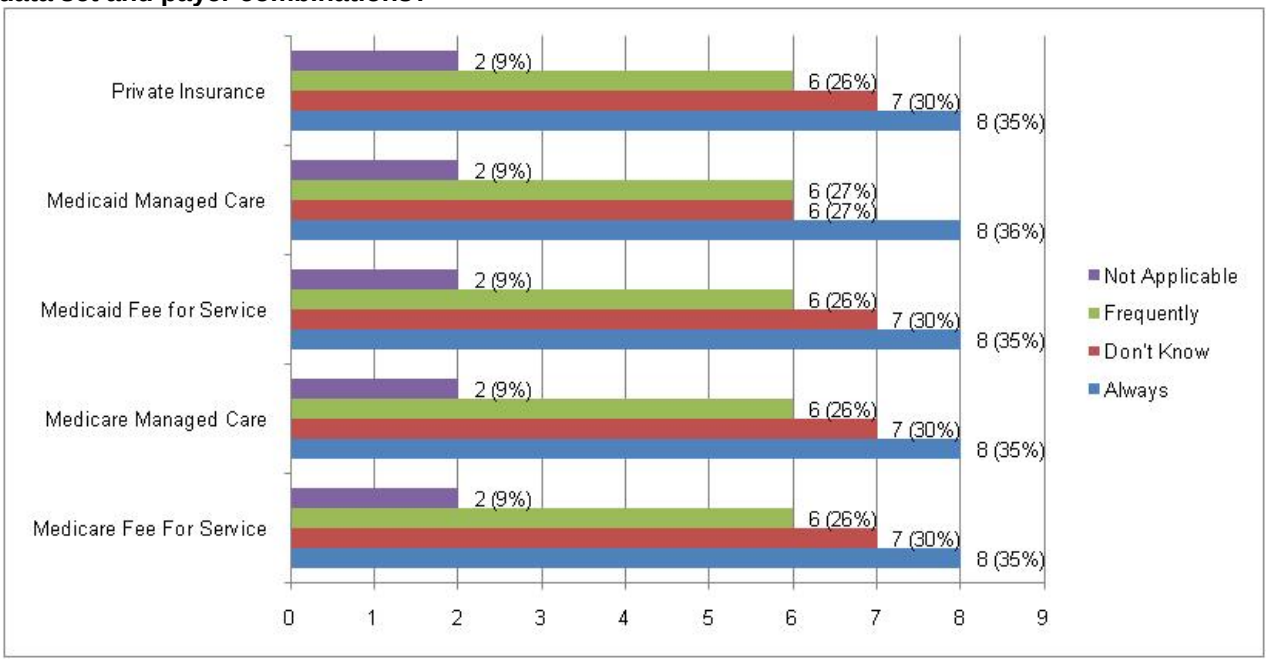
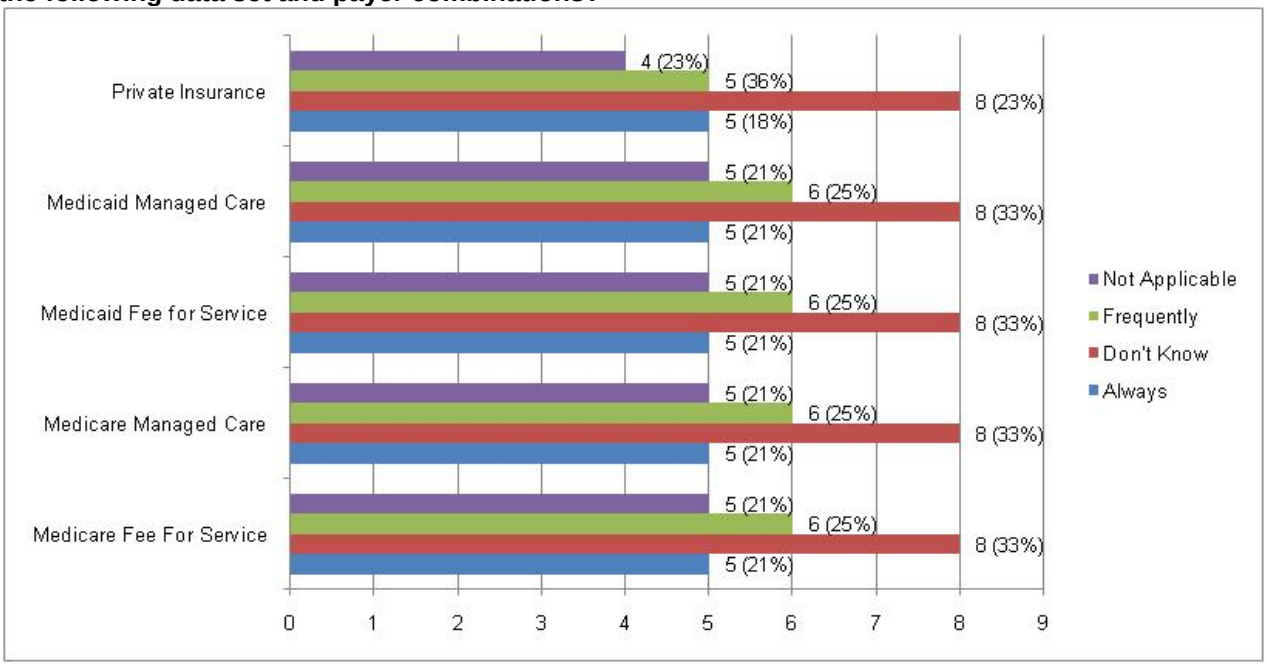


Exhibit 4: Results for Question 2b. "In your state, on Ambulatory Surgery records, how often is the first-listed diagnosis the 'diagnosis for the surgery performed. If the postoperative diagnosis is different from the preoperative diagnosis, the postoperative diagnosis should be selected,' for the following data set and payer combinations?"



Question 3 was intended to assess whether coding practices may vary from hospital to hospital:

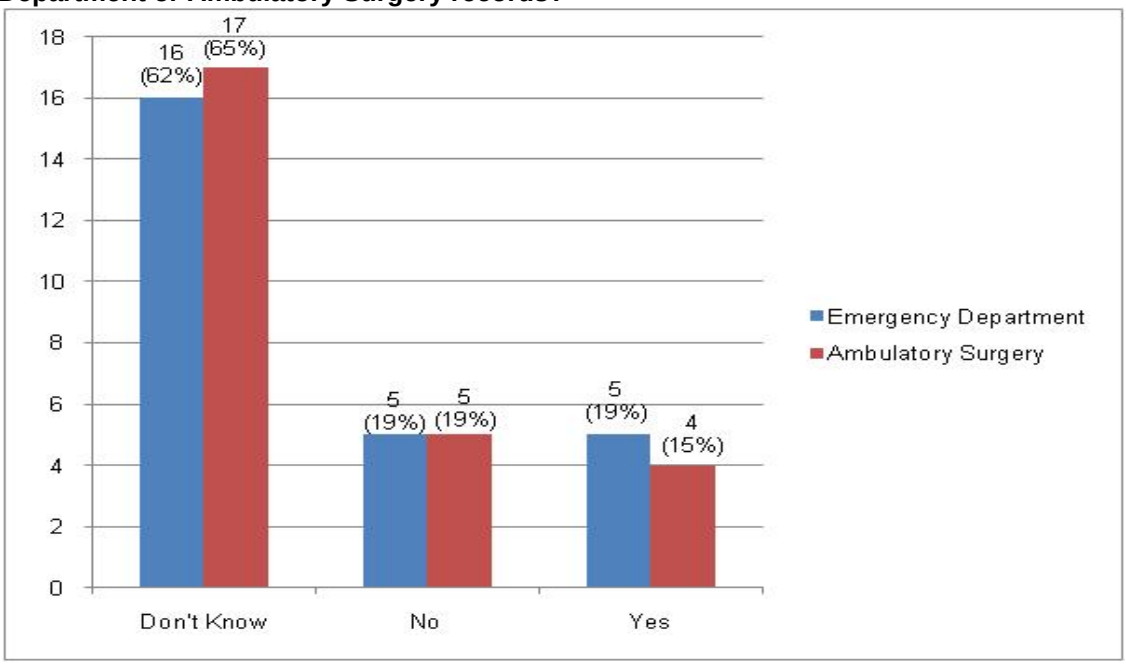
3. Please describe how the coding of first-listed diagnoses on Emergency Department and Ambulatory Surgery records may vary across hospitals or types of hospitals (e.g., teaching hospitals, critical access hospitals, etc.).

There were nine responses to this open-ended question. In general, respondents expected the first-listed diagnoses to be the diagnosis chiefly responsible for the services provided. However, some indicated there may be variation across hospitals, although the extent of this variation is not known.

Questions Related to State-specific Coding and/or Reimbursement Policies

Questions 4, 5, and 6 were intended to assess whether the state has coding guidelines related to the first-listed diagnosis.

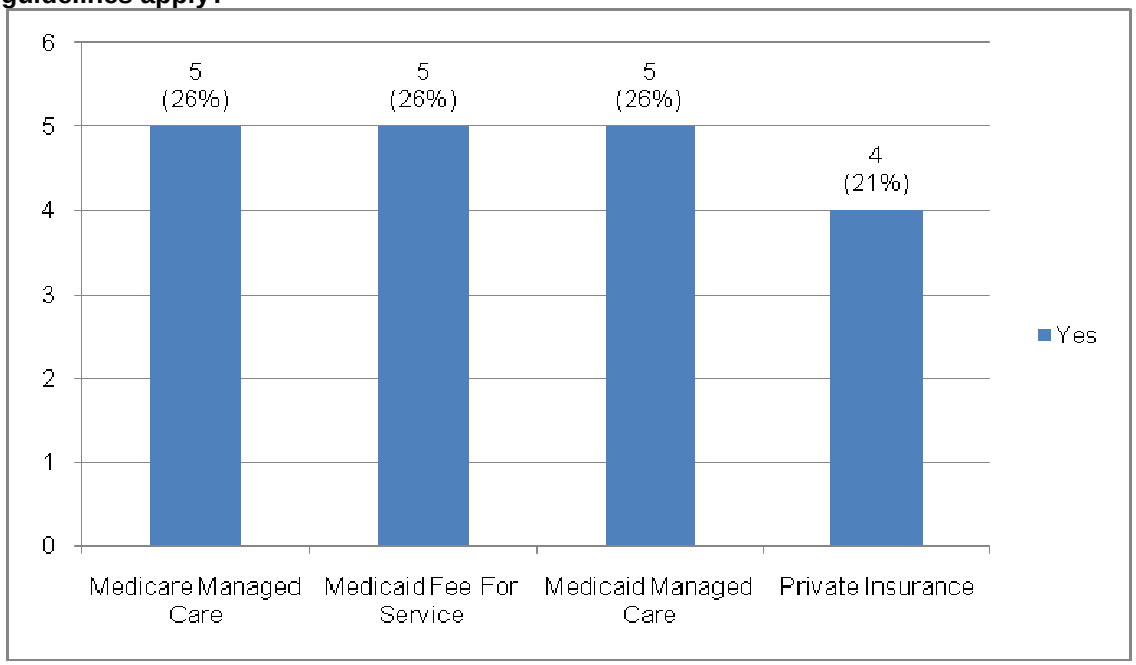
Exhibit 5: Results for Question 4. "Do payers in your state have any guidelines, which may be reimbursement-related, regarding the coding of the first-listed diagnosis field on Emergency Department or Ambulatory Surgery records?"



Results for Question 5. Would you be able to provide related documentation to the project team?

Four State Partners responded to this question: three states answered "Yes" to this question. One state answered "No."

Exhibit 6: Results for Question 6. "To which payer categories do the state coding/reimbursement guidelines apply?"



Question 7. "Have you done any related studies of the diagnosis coding on Emergency Department and/or Ambulatory Surgery records in your state?"

A majority of the participating states (21 states) answered "No" to this question. One state answered "Yes." The rest of states answered "Don't know."