



California ICD-10 Site Visit

Training segments to assist the State of California with ICD-10 Implementation

Segment 1: Analytics and Reporting

June 10 - 11, 2013



```

graph TD
    A[MITA & ICD-10 Support National Quality Strategy] --> B[ICD-10 Overview]
    B --> C[Analytics & Reporting]
    C --> D[Program Integrity]
    D --> E[Policy Remediation Best Practices]
    E --> F[Managed Care]
    F --> G[Claims Management]
    G --> H[Provider Communication]
  
```

Purpose of this set of slides

Communicate and discuss ICD-10 impacts, opportunities, and examples specific to SMA operations in the areas of program integrity and analytics and reporting.

Talking Points

- The move from ICD-9 to ICD-10 is a significant change for SMAs and unlike previous HIPAA efforts, ICD-10 impacts the business of Medicaid as much as its enabling technology systems.
- ICD-10's impact will be disruptive in the short-term, but positive over the longer term. The new code sets will benefit the delivery of care by indicating diagnoses and matching payment to care more precisely. In time, it will promote efficiencies and improvements in care documentation, claims processing, and business intelligence.
- CMS has prepared a series of slides and training materials especially for SMAs, which provide key information about the ICD-10 code sets, how to use them, how to benefit from them, and how to implement them.
- CMS hopes this information will assist SMAs with effectively implementing and benefiting from this major change to the specificity and content of codes sets used to categorize health care diagnoses and inpatient procedures.

Notes

- **Note: the implementation of ICD-10 does not affect HCPCS codes (Levels I and II) for outpatient procedures except in cases where coverage and payment may be dependent on medical necessity as determined by diagnoses codes. For more info on HCPCS codes, please refer to: <http://www.cms.gov/medhcpcsgeninfo/>**
- Unless otherwise specified in this presentation, ICD-10 refers to both ICD10-CM and ICD10-PCS.
- Unless otherwise specified in this presentation, the word "procedures" refers to inpatient procedures.



Agenda

- **Analytics and Reporting**
 - Background
 - Data Fog
 - Equivalent Grouping
 - Drill-Downs
 - Performance Measurement

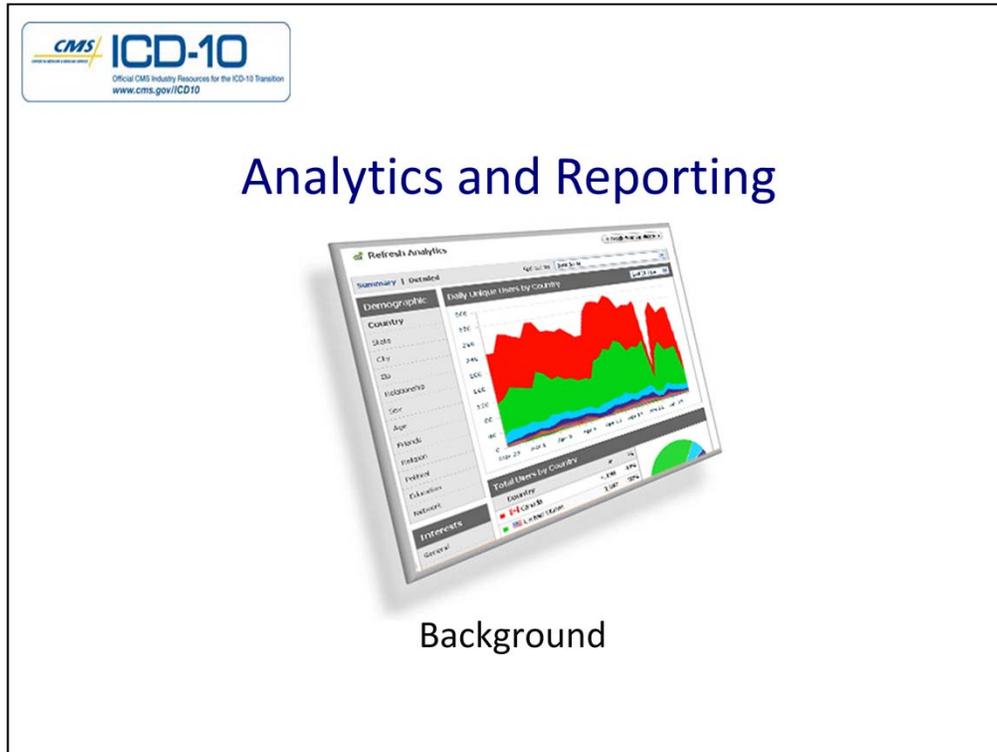
1

Purpose of the slide

Introduce the agenda for a session covering ICD-10 impacts, opportunities, and examples specific to SMA operations in the areas of program integrity and analytics and reporting.

Talking Points

- None



Purpose of the slide

Introduce background slides in order to discuss ICD-10 impacts, opportunities, and examples in the area of analytics and reporting.

Talking Points

- None

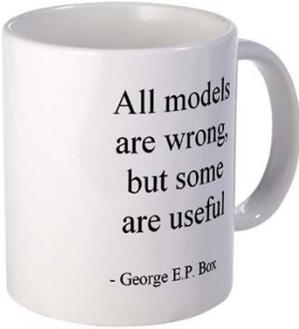


Office of Medicare, Medicaid and the CHIP Programs
www.cms.gov/ICD10

Background

What is Analytics?

- **Analytics** - the application of IT, operations research, and statistics to solve problems. [Huh?]
- **Simple definition of Analytics** - "the science of analysis". [Again, huh?]
- A practical definition, however, would be that analytics is the process of obtaining an optimal or realistic decision based on existing data. [OK]
- Analytics consists of two basic activities – segmentation and prediction



3

Purpose of the slide

Provide a basic overview of analytics.

Talking Points

- Analysis describes processes whereas Analytics describes a toolbox. What sets analytics apart is that it implies the application of analytical tools toward an end, usually to support a business decision.
- We segment recipients/members based on their ages, genders, morbidities, place of service, geographic location, etc. in order to better understand the cost and quality provided by health systems.
- We predict future behaviors based on past behaviors (e.g., forecasting, budgeting, risk adjustment, capitation, etc.)



Office of State Operations for the ICD-10 Transition
www.cms.gov/ICD10

Background

Segmentation and Prediction

- **Segmentation (descriptive statistics) is basically the raw analysis of data across or within a certain time period**

 - Current costs; prevalence of disease; resource usage; performance measurement (e.g., HEDIS); efficiency and effectiveness of policies, procedures, and programs (raw)
- **Prediction (also known as inferential statistics) uses statistical tools to gain further insight from existing data**

 - Health risk and risk stratification; future costs; hypothesis testing and simulations (e.g., what-if analysis); efficiency and effectiveness of policies, procedures, and programs (statistical)
- **ICD-10 impacts all of these types of analytics because**

 - Claims are a primary data source
 - Recipients are characterized and/or categorized by clinical conditions

4

Purpose of the slide

Understand the two basic types of analytical tools used by State Medicaid Agencies.

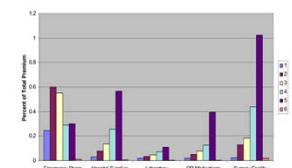
Talking Points

- None

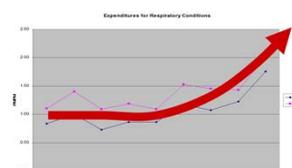


Background
Analytical Examples

Age Group Distribution by OP Category



Category Comparisons

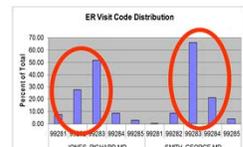


Trends

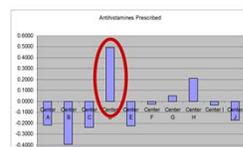
Disease Group	Visits
Diseases of the respiratory system	2538
Symptoms, signs & ill-defined cond/factors in health	2107
Diseases of nervous system and sense organs	1549
Diseases of the digestive system	873
Diseases of the genitourinary system	467
Infectious and parasitic diseases	429
Diseases of musculoskeletal system & connective tissue	352
Diseases of the skin and subcutaneous tissue	275
Diseases of the circulatory system	265
Complications of pregnancy, childbirth, & puerperium	229
Mental disorders	136
Endocrine, nutritional, metabolic, & immunity disorders	98
Residual codes, unclassified	55
Certain conditions originating in perinatal period	27
Blood disease	15
Neoplasms	12
Congenital anomalies	1

Ranking

ER Visit Code Distribution



Pattern Comparisons



Variance

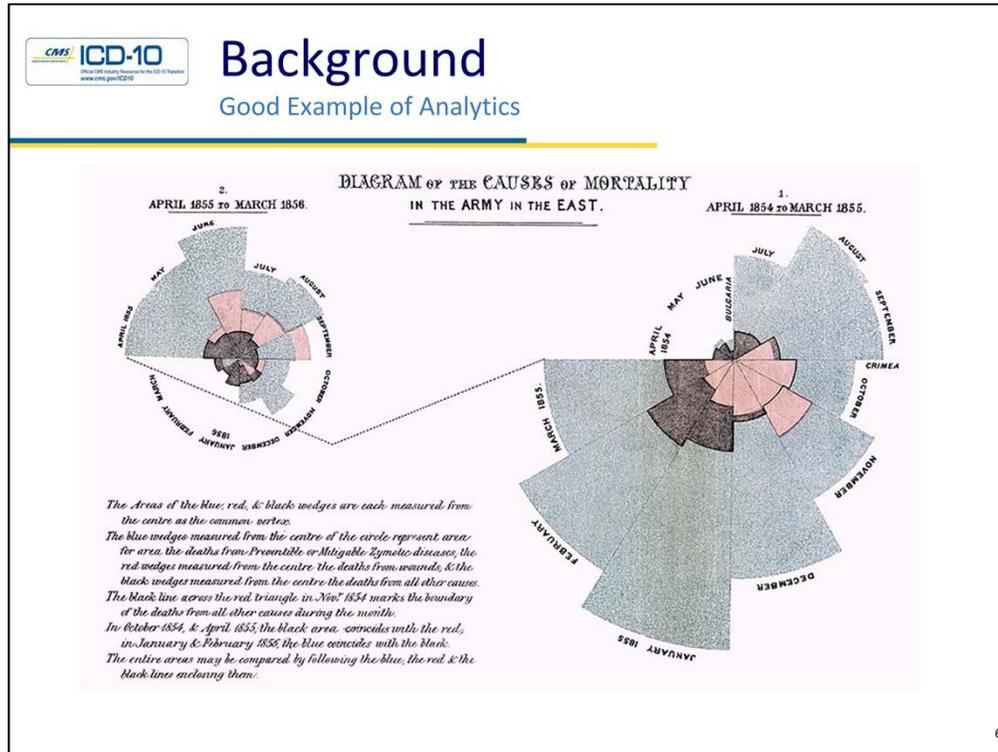
5

Purpose of the slide

Discuss examples of different types of analytical tools

Talking Points

- Reinforce the point that there are significant challenges to crosswalking that can compromise data and processing and in general crosswalking should be avoided whenever possible
- Note that normalizing data means to assure that reporting is at a level of categories that can be supported accurately by both code types



Purpose of the slide

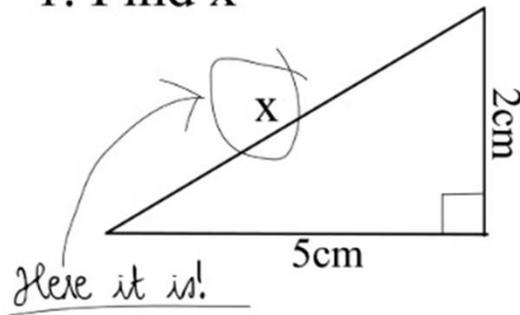
Discuss an example of the good use of analytics.

Talking Points

- This graphic was created during the Crimean War by an early member of the American Statistical Association (ASA) who was more famous for her actions as the mother of nursing – Florence Nightingale.
- In 1859 Nightingale was elected the first female member of the Royal Statistical Society and she later became an honorary member of the ASA.

 **Background**
Bad Example of Analytics

1. Find x



here it is!

2cm

5cm

7

Purpose of the slide

Discuss an example of the bad use of analytics.

Talking Points

- Though ICD-10 is an elephant in the room, it should not be used as an excuse not to move forward.



Background

Making it Real for ICD-10 (1 of 2)

- **Falls Among Elderly Adults**
 - One out of three adults age 65 and older falls each year
 - Of these adults, falls are the leading cause of injury death
 - In 2010, direct medical costs for falls were about \$28 billion

- **In a recent journal article, it compared mortality (coded in ICD-10) and morbidity (coded in ICD-9) diagnoses for falls resulting in death and concluded:**
 - Because the reported minor increases in emergency department and hospitalization rates for falls were insignificant [using ICD-9], the almost sevenfold increase in death rates from "other falls on the same level" [using ICD-10] strongly suggests an effect of improved reporting quality

Purpose of the slide

Understand how ICD-10 may shed additional light to existing analytics.

Talking Points

- According to the study, the greatest increase was a 698% increase in mortality coding under the category "other falls on the same level," falls that aren't as likely to result in injury as a fall down a flight of stairs, for example.
- In 1999, the first year of ICD-10, only 1.6 people age 65 or older per 100,000 population were said to have died from a fall on the same level. But by 2007, that had jumped to 13 per 100,000.
- Before the switch to ICD-10 in 1999, the author states that physicians signing death certificates were more likely to code such deaths as simply resulting from pneumonia or other complications, and ignore the fall that precipitated it weeks before.

Source(s)

- <http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html>
- <http://www.healthleadersmedia.com/page-3/TEC-280330/ICD10-Coding-Uncovers-Higher-Rate-of-Fatal-Falls-Among-Seniors>
- <http://www.ncbi.nlm.nih.gov/pubmed/22547858>



CMS ICD-10
Official Medicare Standard for the 2013 Year
www.cms.gov/ICD10

Background

Making it Real for ICD-10 (2 of 2)

- **In a study titled “The Effectiveness of ICD-10-CM in Capturing Public Health Diseases”**
 - It found that ICD-10-CM is more specific and fully captures more of the public health diseases than ICD-9-CM (e.g. reportable diseases, top 10 causes of death, and those related to terrorism)
- **In a paper produced for the Family Violence Prevention Fund**
 - With additional specificity as to how a domestic violence (DV) encounter occurred, better analysis can lead to better prevention
 - In ICD-9, health care providers could only document DV if they were certain it occurred
 - With ICD- 10-CM, suspected DV cases can be coded and used in the analysis of DV



Purpose of the slide

Understand how ICD-10 may shed additional light to existing analytics.

Talking Points

- Before the switch to ICD-10 in 1999, the author states that physicians signing death certificates were more likely to code such deaths as simply resulting from pneumonia or other complications, and ignore the fall that precipitated it weeks before.

Source(s)

- Watzlaf, V., et al. “The Effectiveness of ICD-10-CM in Capturing Public Health Diseases.” *Perspect Health Inf Manage.* 2007; 4: 6. Published online 2007 June 12.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2047296/>. Accessed 5/15/13.
- Rudman, W. “Coding and Documentation of Domestic Violence.”
<http://www.futureswithoutviolence.org/userfiles/file/HealthCare/codingpaper.pdf>. Accessed 5/15/13.
- Cohn, F., et al. “A Comparison of ICD-10-CM and ICD-9-CM for Capturing Domestic Violence.”
http://ahimafoundation.org/downloads/pdfs/FVFP_domesticviolencepres.pdf. Accessed 5/15/13.

 Official CMS Industry Resources for the ICD-10 Transition
www.cms.gov/ICD10

Analytics and Reporting



The “Data Fog”

Purpose of the slide

Introduce slides covering the ICD-10 data fog in order to discuss ICD-10 impacts, opportunities, and examples in the area of analytics and reporting.

Talking Points

- None



CMS ICD-10
Office of Management and Enterprise Information
www.cms.gov/ICD10

The Data Fog

A Navigational Challenge

■ **A 'Data fog' will challenge analytics during the transition for a number of reasons**

- A new model with little coding experience
- Changes in terminology
- Changes in categorizations
- The sheer number of codes
- Complex coding rules
- Productivity pressures

Consistent



Accurate



Accurate & Consistent

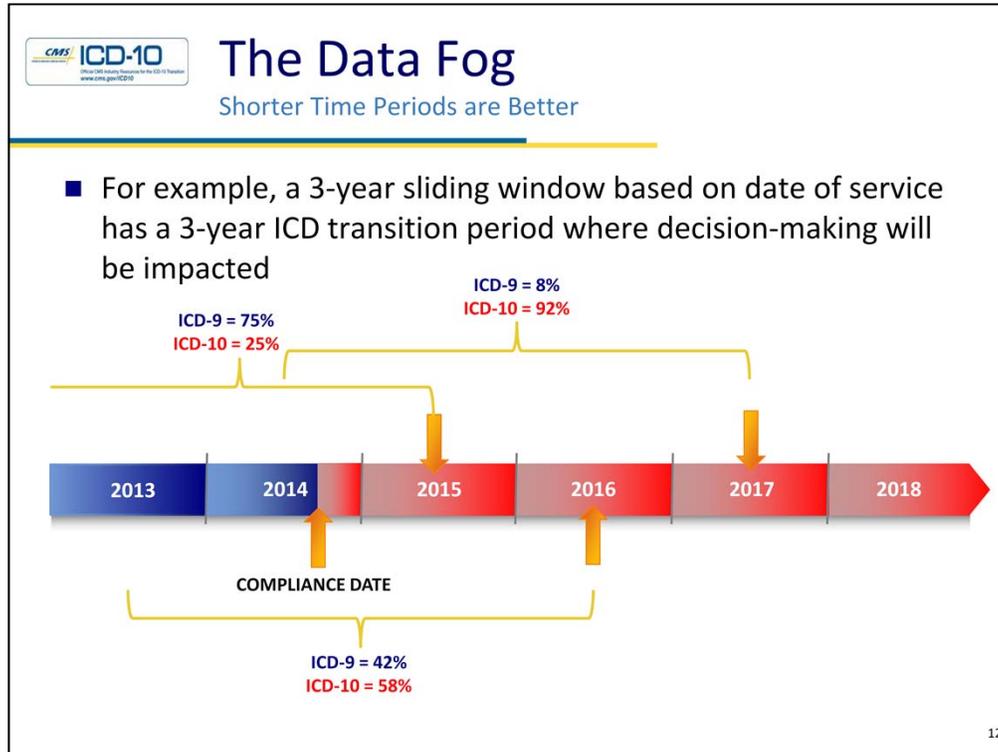


Purpose of the slide

Understand some of the elements of the Program that may see increased risk for adverse outcomes due to ICD-10.

Talking Points

- Based on the experience of other countries (e.g., Canada), ICD-10 will create a 'data fog' that will dissipate over a period of 3 to 5 years.
- Any time data are mapped from ICD-9 to ICD-10 or vice versa, the resulting data may either assume something that is not true or lose information that is true.
- Because of the numerous issues related to mapping existing data points (e.g. claims) coded in ICD-9 to ICD-10, it will be easier and often more accurate to store data in the format it was received and update policies and analytics on the back-end to process either ICD-9 or ICD-10 natively. To perform these updates (see later section on Equivalent Groups), SMAs will still use maps but only as a starting point as maps often capture only a minority of codes that categorize a clinical concept.
- Changes in coding rules and the substantial changes in terminology for the ICD-10-PCS codes may result in considerable confusion in coding interpretation and therefore result in considerable coding variance.



Purpose of the slide

Discuss the differences in distribution of ICD-9-CM and ICD-10 codes over time within a historical data set; and to use this view of the data set to prepare the SMAs for what they will likely experience with respect to incoming data.

Talking Points

- This is an example of changes over time in the distribution of ICD-9-CM vs. ICD-10 codes in a historical data set looking at a rolling three years worth of data
- Additionally, if we include claims run-out, a timely filing requirement of 1 year, and appeals, SMAs may process claims with ICD-9 codes for 12 to 24 months after the ICD-10 implementation date.
- To have a consistent historical data set, it will be necessary to convert ICD-9 data to ICD-10 but any time we convert ICD-9 to ICD-10, we have to assume things that may not be true.
- Up-converting ICD-9 data is like watching the movie Casablanca on a HD TV set.
- The fact is, the shorter the sliding window, the sooner data can be analyzed in 'High-Definition' and this increase in accuracy may outweigh the need for long data windows to smooth fluctuations in data.
- Given the uncertainty caused by ICD-10, SMAs may want to consider shorter terms for its contractors and its data windows during the ICD-10 transition.

Source(s)

- Credit: Max Templeton WEDI presentation of January 27, 2011 for High-Definition television example



CMS ICD-10
Official CMS Website, Approved for the ICD-10 Transition
www.cms.gov/ICD10

The Data Fog

Navigating through the Fog

- **ICD-10 will increase uncertainty in the short run**
- **Since analytics concerns the management of uncertainty, it will increase in importance and workload during the transition:**
 - Remediating existing analytics and reporting
 - Monitoring ICD-10 implementation
 - Building new functionality
 - Evaluating financial neutrality
 - Interpreting trends and benchmarks
 - Validating of aggregation models



A cartoon illustration of a brown wooden sailing ship with three masts and white sails, navigating through a thick, light blue fog. The ship is moving towards the right, with other ships visible in the distance through the haze.

13

Purpose of the slide

To describe the importance of analytics to help SMAs navigate through the ICD-10 'data fog.'

Talking Points

- None

 Official CMS Industry Resources for the ICD-10 Transition
www.cms.gov/ICD10

Analytics and Reporting



Equivalent Grouping

Purpose of the slide

Introduce slides covering equivalent grouping in order to discuss ICD-10 impacts, opportunities, and examples in the area of analytics and reporting.

Talking Points

- None

 **Equivalent Grouping**
Purpose

- **Equivalent Grouping is used to identify an equivalent set of codes that define a medical concept or intent (e.g., diabetes)**
 - Policies that define conditions under which services are considered:
 - Appropriate
 - Not appropriate
 - Require further manual review
 - Rules to define:
 - Coverage
 - Appropriateness
 - COB/TPL
 - Any other criteria that relies on codes to define intent
 - Analytic Categories that attempt to group claims or other data based on types of services or conditions as defined by set of codes

Source: Health Data Consulting 2010 15

Purpose of the slide

Illustrate the purpose of code aggregation and redefining those aggregations in an ICD-10 world.

Talking Points

- Policies, rules, and categories are all created with some intent related to a service or condition. This intent is generally translated into an aggregation or grouping of codes that identifies those claims that apply to policies, conditions, and services, that are incorporated into rules and algorithms and condition or procedures that should be included in any category of analysis
- It is important to emphasize that these policies, rules, and categories are not about codes, but are about the services and conditions that are represented by these codes. The codes that represent these conditions and procedures are very different in ICD-10 as compared to ICD-9.



Office of Management and Enterprise Services
www.cms.gov/ICD10

Equivalent Grouping

Methods

- **Bidirectional ICD-9 to ICD-10 code group conversions:**
 - GEM ICD-9 to ICD-10 file (mapped ICD-9 code is the 'Source Code')
 - GEM ICD-10 to ICD-9 file (mapped ICD-9 code is the 'Target Code')
- **Bidirectional ICD-10 to ICD-9 code group conversions:**
 - GEM ICD-10 to ICD-9 file (mapped ICD-10 code is the 'Source Code')
 - GEM ICD-9 to ICD-10 file (mapped ICD-10 code is the 'Target Code')
- **Native Redefinition (independent concept mapping):**
 - Define the concepts associated with the 'intent' of the policy, category, or rule
 - Identify the codes that represent the 'intent' of the policy, category, or rule independent of existing codes

Source: Health Data Consulting 2010 16

Purpose of the slide

Illustrate the different methods for identifying codes that represent the original intent of a policy, rule, or category.

Talking Points

- The first method looks at mapping a group of pre-define ICD-9 codes using GEM to an 'equivalent group' of ICD-10 codes.
- The second method looks at mapping a group of pre-defined ICD-10 codes using GEM to an 'equivalent group' of ICD-9 codes.
- This type of use of GEM requires both "Forward Mapping" and "Backward Mapping"
 - A forward map is a map from the older code to the newer code. i.e. ICD-9 to ICD-10
 - A backward map is a map from the newer code back to an older code i.e. ICD-10 to ICD-9
- Native redefinition simply looks at defining the group of appropriate ICD-10 codes or ICD-9 codes based on the intent of the policy, rule, or category independent of any prior grouping of codes

Equivalent Grouping

The Case for Native Redefinition

There are a number of reasons to consider redefining groups of codes to represent the ‘intent’ of the policy, category, or rule.

- There is an opportunity to be certain that the ‘intent’ of the original policy, category or rule is clearly defined and articulated so that the proper codes can be selected
- Crosswalking existing codes will reproduce existing errors
- Crosswalking may result in the inclusion or exclusion of codes that don’t match to the intent.
- New concepts supported by ICD-10 may result in a refinement or change in the policy, category, or rule
- Reporting on data sets in ICD-9 to data sets in ICD-10 will be comparable if the each data set is aggregated to the same intent

Source: Health Data Consulting 2010

17

Purpose of the slide

This slide speaks to the reason the “Native Redefinition” of equivalent grouping should be considered

Talking Points

- Outlined in the slide



Equivalent Grouping

Example: Pneumonia

Aggregation of codes that represent “Pneumonia”

- Native ICD-9 definition = [56] Codes
- GEM Bidirectional map of the ICD-9 codes = [57] ICD-10 codes
- Native ICD-10 definition = [75] ICD-10 Codes

Source: Health Data Consulting 2010

18

Purpose of the slide

Provide an example of equivalent grouping – Pneumonia.

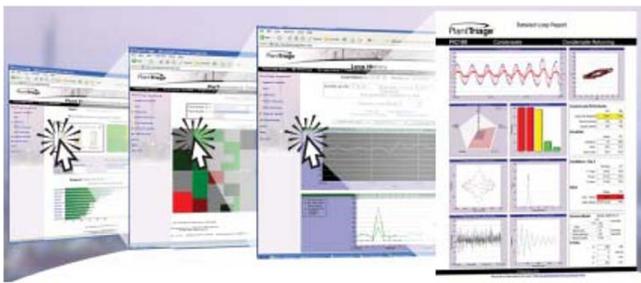
Talking Points

- Outlined in the slide



CMS ICD-10
Official CMS Industry Resources for the ICD-10 Transition
www.cms.gov/ICD10

Analytics and Reporting



Drill-Downs

Purpose of the slide

Introduce slides covering drill-downs in order to discuss ICD-10 impacts, opportunities, and examples in the area of analytics and reporting.

Talking Points

- None



Official CMS Codes, Approved for ICD-10 Transition
www.cms.gov/ICD10

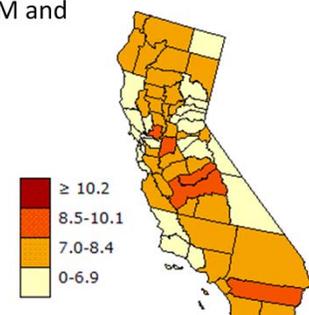
Drill-Downs

Example - Diabetes Mellitus (DM)

- **Chronic disease management is a major opportunity in Medicaid as 5% of recipients account for 50% of costs**
 - ICD-9 codes often define chronic disease only in general terms
 - ICD-10 codes recognize distinctions to help care management

- **For example, let's look at Diabetes Mellitus (DM)**
 - 20% of costs attributable to persons with DM and
 - 10% of costs attributable to DM

- **For example, In ICD-10, DM codes are combination codes that include:**
 - the type of DM,
 - the body system affected, and
 - the complication affecting that body system as part of the code description



20

Purpose of the slide

Provide an example that shows the ability of ICD-10 to improve analytics and care management – Diabetes.

Talking Points

- Now that we've looked at equivalent grouping, let's take a step back and look at how the increased specificity of ICD-10 may help with analytics that support operations like care/disease management.
- The total estimated cost of diabetes in 2007 is \$174 billion, including \$116 billion in excess medical expenditures and \$58 billion in reduced national productivity. Medical costs attributed to diabetes include \$27 billion for care to directly treat diabetes, \$58 billion to treat the portion of diabetes-related chronic complications that are attributed to diabetes, and \$31 billion in excess general medical costs. The largest components of medical expenditures attributed to diabetes are hospital inpatient care (50% of total cost), diabetes medication and supplies (12%), retail prescriptions to treat complications of diabetes (11%), and physician office visits (9%). People with diagnosed diabetes incur average expenditures of \$11,744 per year, of which \$6,649 is attributed to diabetes. People with diagnosed diabetes, on average, have medical expenditures that are ~2.3 times higher than what expenditures would be in the absence of diabetes. For the cost categories analyzed, ~\$1 in \$5 health care dollars in the U.S. is spent caring for someone with diagnosed diabetes, while ~\$1 in \$10 health care dollars is attributed to diabetes. Indirect costs include increased absenteeism (\$2.6 billion) and reduced productivity while at work (\$20.0 billion) for the employed population, reduced productivity for those not in the labor force (\$0.8 billion), unemployment from disease-related disability (\$7.9 billion), and lost productive capacity due to early mortality (\$26.9 billion).

Source(s):

- Agency for Healthcare Research and Quality. "STATISTICAL BRIEF #354: The Concentration and Persistence in the Level of Health Expenditures over Time: Estimates for the U.S. Population, 2008-2009." January 2012. http://meps.ahrq.gov/mepsweb/data_files/publications/st354/stat354.shtml. Accessed 2/23/2012.
- CDC. National Diabetes Surveillance System. 2008 Age-Adjusted Estimates of the Percentage of Adults[†] with Diagnosed Diabetes. http://apps.nccd.cdc.gov/DDT_STRS2/CountyPrevalenceData.aspx?stateId=15&Mode=DBT
- American Diabetic Association. "Economic Costs of Diabetes in the U.S. In 2007." Diabetes Care 31:596-615, 2008. <http://care.diabetesjournals.org/content/31/3/596.full>. Accessed 11/28/2011.
- CDC. National Diabetes Fact Sheet. http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf. Accessed 11/28/2011.



Drill-Downs

Clinical Concepts of Diabetes (1 of 3)

Diabetes = 276 ICD-10 Codes / 83 ICD-9 Codes

Unique concepts within in ICD-10 codes = 62

Red = New ICD-10 concepts

Blue = Concepts used by ICD-9&10

Black = Concepts only in ICD-9

Diabetes Type	Pregnancy	Neurologic Complications
Type 1 diabetes	First trimester	Neurological complication
Type 2 diabetes	Second trimester	Neuropathy
Underlying condition	Third trimester	Mononeuropathy
Drug or chemical induced	Childbirth	Polyneuropathy
Pre-existing	Puerperium	Autonomic (poly)neuropathy
Gestational	Antepartum	Amyotrophy
Poisoning by insulin and oral hypoglycemic	Postpartum	Coma
Adverse effect of insulin and oral hypoglycemic		
Underdosing of insulin and oral hypoglycemic		
Neonatal		
Secondary		

21

Purpose of the slide

The next three slides are used to illustrate some of the changes in concepts that are contained in ICD-10 that will need to be documented to support accurate coding

Talking Points

- Items in **Red** are new concepts supported by ICD-10, those in **Blue** are concepts shared by ICD-9 and ICD-10. Concepts in **Black** are concepts that are in ICD-9 that are no longer supported in ICD-10.



ICD-10
Official ICD-10-CM Codes, Instructions for Use (2013) Replaces
www.cms.gov/ICD10

Drill-Downs

Clinical Concepts of Diabetes (2 of 3)

Red = New ICD-10 concepts
Blue = Concepts used by ICD-9&10
Black = Concepts only in ICD-9

Lab Findings	Renal Complications	Ophthalmologic Complications
Ketoacidosis	Nephropathy	Retinopathy
Hyperosmolarity	Chronic kidney disease	Macular edema
Hypoglycemia	Kidney complication	Cataract
Hyperglycemia		Ophthalmic complication
		Mild nonproliferative retinopathy
		Moderate nonproliferative retinopathy
		Severe nonproliferative retinopathy
		Proliferative retinopathy
		Background retinopathy

Vascular Complications	Skin Complications	Joint Complications
Circulatory complications	Dermatitis	Neuropathic arthropathy
Peripheral angiopathy	Foot Ulcer	Arthropathy
Gangrene	Skin complications	
	Skin ulcer	

22

Purpose of the slide

See slide 34



Official CMS Website, Approved by the OIG as the Official Website
www.cms.gov/ICD10

Drill-Downs

Clinical Concepts of Diabetes (3 of 3)

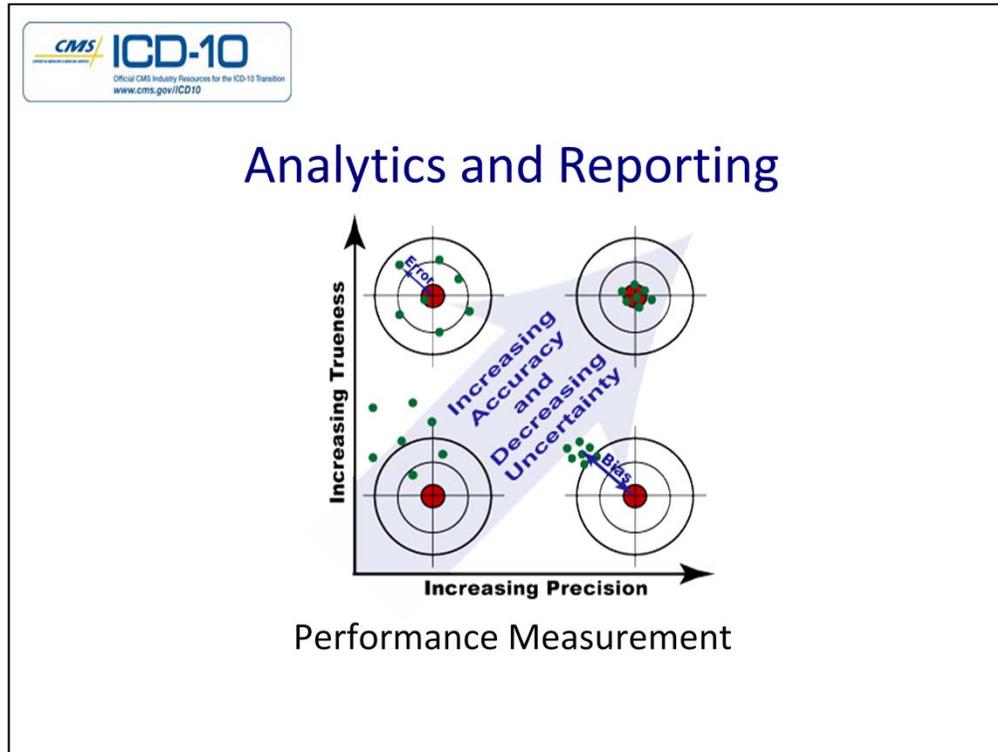
Red = New ICD-10 concepts
Blue = Concepts used by ICD-9&10
Black = Concepts only in ICD-9

Oral Complications	Diabetic Control	Encounter	Other Concepts
Oral complications	Diet-controlled	Initial encounter	Complications
Periodontal disease	Insulin controlled	Subsequent encounter	Right
	Uncontrolled	Sequela	Left
	Controlled		Accidental
			Intentional self-harm
			Assault
			Family history
			Personal history
			Screening

23

Purpose of the slide

See slide 34



Purpose of the slide

Introduce slides covering measures in order to discuss ICD-10 impacts, opportunities, and examples in the area of analytics and reporting.

Talking Points

- None



Office of Medicare Programs for the ICD-10 Transition
www.cms.gov/ICD10

Performance Measurement

Measures

- Measures are a valuable tool to determine health system, contractor, and provider performance for the purposes of contracting, public reporting, and value-based purchasing
- For measures to be valuable, they need to be impactful, transparent, valid, reliable, timely, usable, and feasible – NOT like the following cartoon

© Scott Adams, Inc./Dist. by UFS, Inc. help from n[ate]vw

25

Purpose of the slide

Understand the impact of ICD-10 on SMA efforts to measure, report, and incentivize improvements in quality for recipients.

Talking Points

- On 1/4/02, CMS posted the initial core set of health care quality measures for Medicaid-eligible adults, as required by section 2701 of the Affordable Care Act, for voluntary use by State programs, health insurance issuers and managed care entities that enter into contracts with Medicaid, and providers of items and services under these programs.
- 25 State Medicaid programs require NCQA accreditation and HEDIS
- CMS, NCQA, and NQF have developed robust measure development and maintenance processes.
- For a full discussion on the use quality measures in Medicaid managed care across States, refer to NCQA report below.
- For an excellent discussion on measurement in fee for service, see CHCS document below.

Source(s):

- CMS. "Medicaid Program: Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults." This document is scheduled to be published in the Federal Register on 01/04/2012 and available online at <http://federalregister.gov/a/2011-3375>
- National Committee for Quality Assurance. "State Recognition of NCQA and HEDIS." <http://www.ncqa.org/tabid/135/Default.aspx>. Accessed 12/27/2011.
- National Committee for Quality Assurance. "Medicaid Managed Care Quality Benchmarking Project: Final Report." August 23, 2010. <http://www.cms.gov/MedicaidCHIPQualPrac/downloads/NCQAMBench.pdf>. Accessed 12/27/2011.
- Center for Health Care Strategies, Inc. "Performance Measurement in Fee-for-Service Medicaid: Emerging Best Practices." October 2010. http://www.chcs.org/usr_doc/CA_FFS_Performance_Measures_Final_102610.pdf. Accessed 12/27/2011.
- See CMS Measures Manager Blueprint for discussion of measure development, evaluation, and maintenance at https://www.cms.gov/MMS/19_MeasuresManagementSystemBlueprint.asp

- National Quality Forum. Measure Evaluation Criteria. http://www.qualityforum.org/docs/measure_evaluation_criteria.aspx. Accessed 12/27/2011.
- Watzlaf, V. et al. "The Effectiveness of ICD-10-CM in Capturing Public Health Diseases." *Perspectives in Health Information Management*. 4;6 (Summer 2007). Accessed 7/1/2011. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2047296/>
- Scott Adams, Inc. 2010. www.dilbert.com.



CMS ICD-10
Office of Management Services for the ICD-10 Transition
www.cms.gov/ICD10

Performance Measurement

Measure Maintenance

- **Good news is that over time, ICD-10 will improve the accuracy and reliability of population and public health measures**
- **Bad news is that more than 100 national organizations are involved in quality measure maintenance and reporting**
 - Measure maintainers (e.g. including States) need to remediate measures and end-users need to update reporting for ICD-10
 - Measure clearinghouses (e.g. NQF and AHRQ) expect maintainers to remediate measures



26

Purpose of the slide

Understand the impact of ICD-10 on SMA efforts to measure, report, and incentivize improvements in quality for recipients.

Talking Points

- Much of the focus is on provider and plan performance but ICD-10 also significantly improves public health measures.
- Each maintainer will need to remediate their own measures and for those States that use multiple systems, States will have to coordinate

Source(s):

- Watzlaf, V. et al. "The Effectiveness of ICD-10-CM in Capturing Public Health Diseases." *Perspectives in Health Information Management*. 4:6 (Summer 2007). Accessed 7/1/2011. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2047296/>
- Society of Actuaries. Measurement of Healthcare Quality and Efficiency Resources for Healthcare Professionals: Inventory of Programs and Organizations. <http://www.soa.org/files/pdf/research-quality-efficiency-inventory-2009.pdf>. Accessed 6/17/2011.
- National Committee for Quality Assurance. "HEDIS and ICD-10 Information." <http://www.ncqa.org/tabid/1260/Default.aspx>. Accessed 7/1/2011.
- National Quality Forum. ICD-10-CM/PCS Coding Maintenance Operational Guidance: A CONSENSUS REPORT. Accessed 7/1/2011. http://www.qualityforum.org/Publications/2010/10/ICD-10-CM/PCS_Coding_Maintenance_Operational_Guidance.aspx
- Also, see CMS Measures Manager Blueprint for discussion of measure development, evaluation, and maintenance at https://www.cms.gov/MMS/19_MeasuresManagementSystemBlueprint.asp



Official ICD-10 Codes, Approved for the 2013 Transition
www.cms.gov/ICD10

Performance Measurement

Changes in Definitions Used in Diagnoses

- **During the ICD-10 transition, it may be difficult to determine if changes in quality measurements are an actual change in performance or simply due to the change in the code sets**
- **For example, the definition of AMI has changed**
 - ICD-9: Eight weeks from initial onset
 - ICD-10: Four weeks from initial onset
- **Subsequent vs. Initial episode of care**
 - ICD-9: Fifth character defines initial vs. subsequent episode of care
 - ICD-10: No ability to distinguish initial vs. subsequent episode of care
- **Subsequent (MI)**
 - ICD-9 – No ability to relate a subsequent MI to an initial MI
 - ICD-10 – Separate category to define a subsequent MI occurring within 4 weeks of an initial MI

27

Purpose of the slide

Understand that changes in definitions used for diagnoses will impact measurements.

Talking Points

- In this case, even if we assume that coders will code exactly in ICD-10 as they did in ICD-9 and that all codes map exactly from ICD-9 to ICD-10, measurements may be different some definitions that inform codes are different between the code sets (see AMI example)



Office of Medicare Programs for the ICD-10 Transition
www.cms.gov/ICD10

Performance Measurement

Example - Comprehensive Diabetes Care (CDC)

- The Comprehensive Diabetes Care measures are often used by State Medicaid Agencies to determine performance

Description

The percentage of members 18–75 years of age with diabetes (type 1 and type 2) who had each of the following.

<ul style="list-style-type: none"> • Hemoglobin A1c (HbA1c) testing • HbA1c poor control (>9.0%) • HbA1c control (<8.0%) • HbA1c control (<7.0%) for a selected population* • Eye exam (retinal) performed 	<ul style="list-style-type: none"> • LDL-C screening • LDL-C control (<100 mg/dL) • Medical attention for nephropathy • BP control (<140/80 mm Hg) • BP control (<140/90 mm Hg)
--	---

*Additional exclusion criteria are required for this indicator that will result in a different eligible population from all other indicators. This indicator is only reported for the commercial and Medicaid product lines.

- Diagnosis and procedure codes are used to determine both the denominators and numerators

Source: National Committee for Quality Assurance (NCQA), HEDIS 2012 Volume 2: Technical Specifications.

28

Purpose of the slide

Discuss a specific example of a quality measure and the impacts of ICD-10.

Talking Points

- See exhibit Technical Specifications for the Comprehensive Diabetes Care (CDC) measures.

Source(s):

- National Committee for Quality Assurance. HEDIS 2012 Volume 2: Technical Specifications.



Performance Measurement

Remediation

- The National Committee for Quality Assurance (NCQA) is remediating approximately one-third of their measures each year so that they are complete by 10/1/2013
- On 3/15/2012, NCQA will post ICD-10 codes applicable to a second set of measures, including Comprehensive Diabetes Care, for 30-day review and comment
- “HEDIS will begin the phase-out of ICD-9 codes in HEDIS 2015. Codes will be removed from a measure when the look-back period for the measure, plus one additional year, has been exhausted. This is consistent with NCQA’s current policy for removing obsolete codes from measure specifications”

Source: NCQA. <http://www.ncqa.org/tabid/1260/Default.aspx>

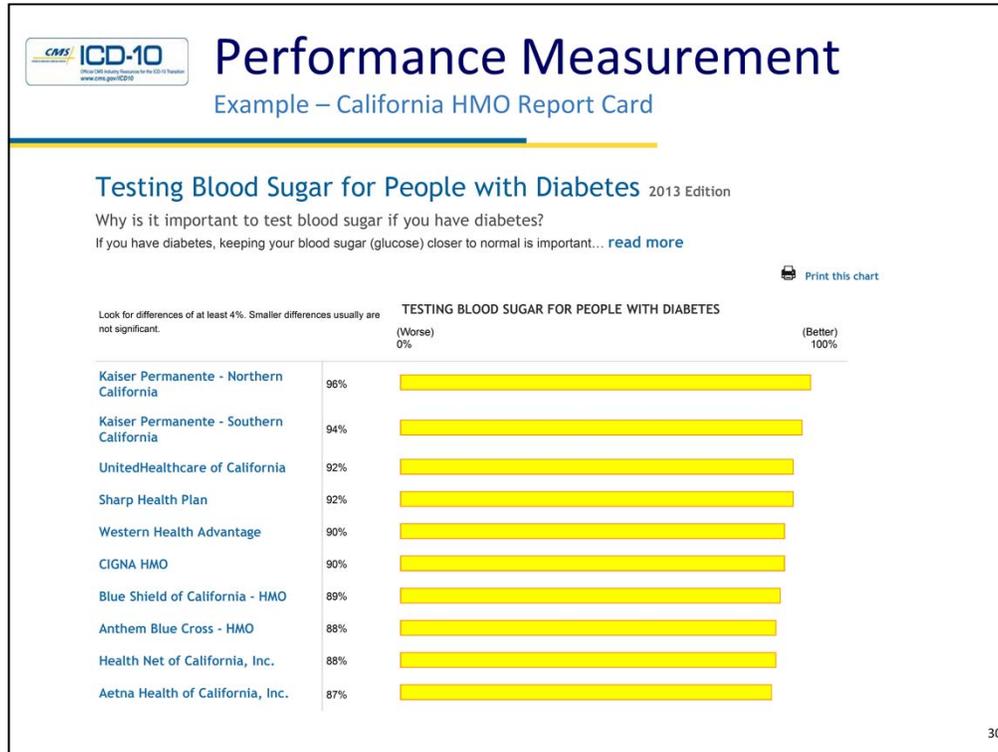
29

Talking Points

- Measures in the 3/15/2012 set include:
 - **Prevention and Screening:** Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents, Childhood Immunization Status, Immunizations for Adolescents, Breast Cancer Screening, Cervical Cancer Screening, Colorectal Cancer Screening, Chlamydia Screening in Older Women, Glaucoma Screening in Older Adults
 - **Respiratory Conditions:** Appropriate Testing for Children With Pharyngitis, Appropriate Treatment for Children With Upper Respiratory Infection, Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis, Use of Spirometry Testing in the Assessment and Diagnosis of COPD, Pharmacotherapy Management of COPD Exacerbation, Use of Appropriate Medications for People With Asthma
 - **Cardiovascular Conditions:** Cholesterol Management for Patients With Cardiovascular Conditions, Controlling High Blood Pressure, Persistence of Beta-Blocker Treatment After a Heart Attack
 - **Musculoskeletal Conditions:** Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis, Osteoporosis Management in Women, Use of Imaging Studies for Low Back Pain
 - **Diabetes:** Comprehensive Diabetes Care
 - **Behavioral Health:** Antidepressant Medication Management, Follow-Up Care for Children Prescribed ADHD Medication, Follow-Up After Hospitalization for Mental Illness
 - **Medication Management:** Potentially Harmful Drug-Disease Interactions in the Elderly
 - **Access/Availability of Care:** Initiation and Engagement of Alcohol and Other Drug Dependence Treatment
 - **Use of Services:** Identification of Alcohol and Other Drug Services, Mental Health Utilization

Source(s)

- National Committee for Quality Assurance. HEDIS 2012 Volume 2: Technical Specifications.
- National Committee for Quality Assurance. <http://www.ncqa.org/tabid/1260/Default.aspx>. Accessed 12/22/2011.
- National Committee for Quality Assurance. <http://www.ncqa.org/tabid/1261/Default.aspx>. Accessed 12/22/2011.



Purpose of the slide

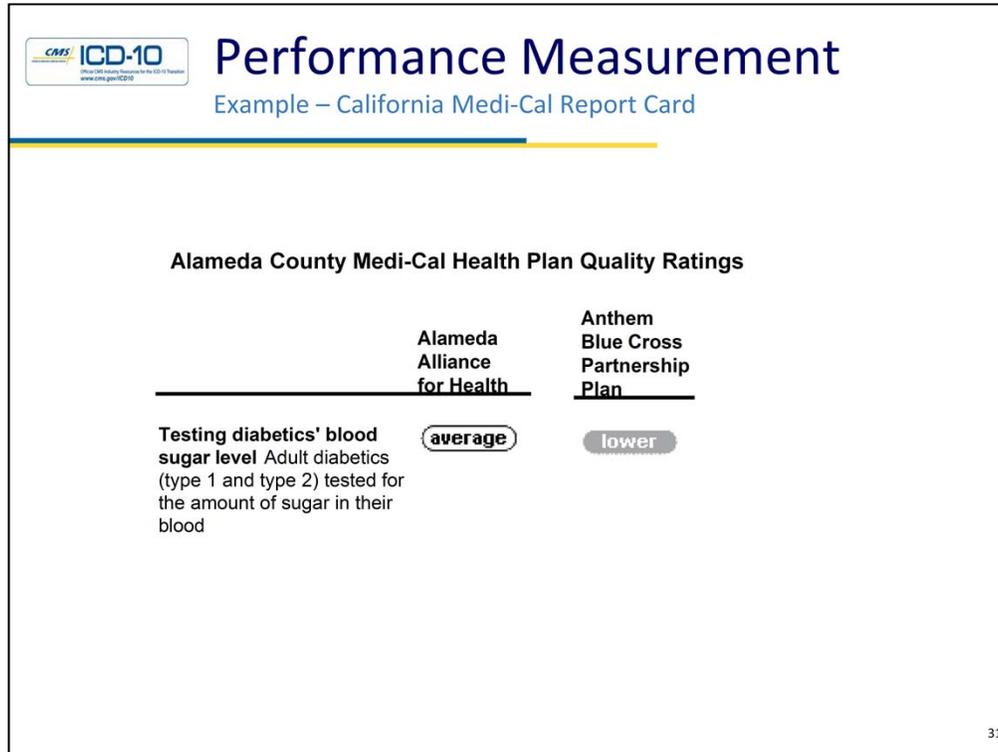
Discuss a State-specific example of using performance measures impacted by ICD-10.

Talking Points

- This Report Card shows the quality of health care for over 9 million Californians who get their care through Health Maintenance Organizations (HMO). The 10 largest HMOs in the state are included in this Report Card.
- Benchmarks, standards, and trend need to be re-evaluated in light of ICD-10.

Source(s)

- <http://reportcard.opa.ca.gov/rc2013/HMOmeasure.aspx?Category=HMOHEDIS&Topic=DiabetesCare&Measure=TestingBloodSugarForDiabetesPatients>



Purpose of the slide

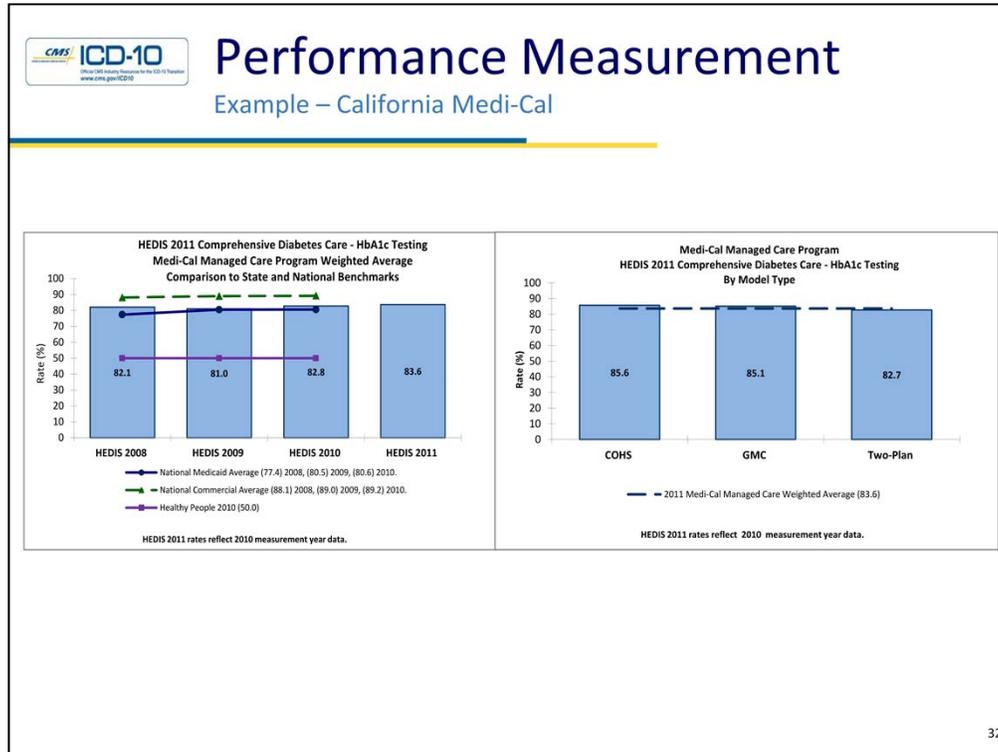
Discuss a State-specific example of using performance measures impacted by ICD-10.

Talking Points

- Ratings for vaccines for children, checkups for teens, checkups for children, pregnancy care, testing diabetics' blood sugar, and care for adults with bronchitis is from records of Medi-Cal members' services during 2011. This is the most up-to-date information available.
- Benchmarks, standards, and trend need to be re-evaluated in light of ICD-10.

Source(s)

- <http://reportcard.opa.ca.gov/rc/medi-calmeasure.aspx?County=ALAMEDA>



Purpose of the slide

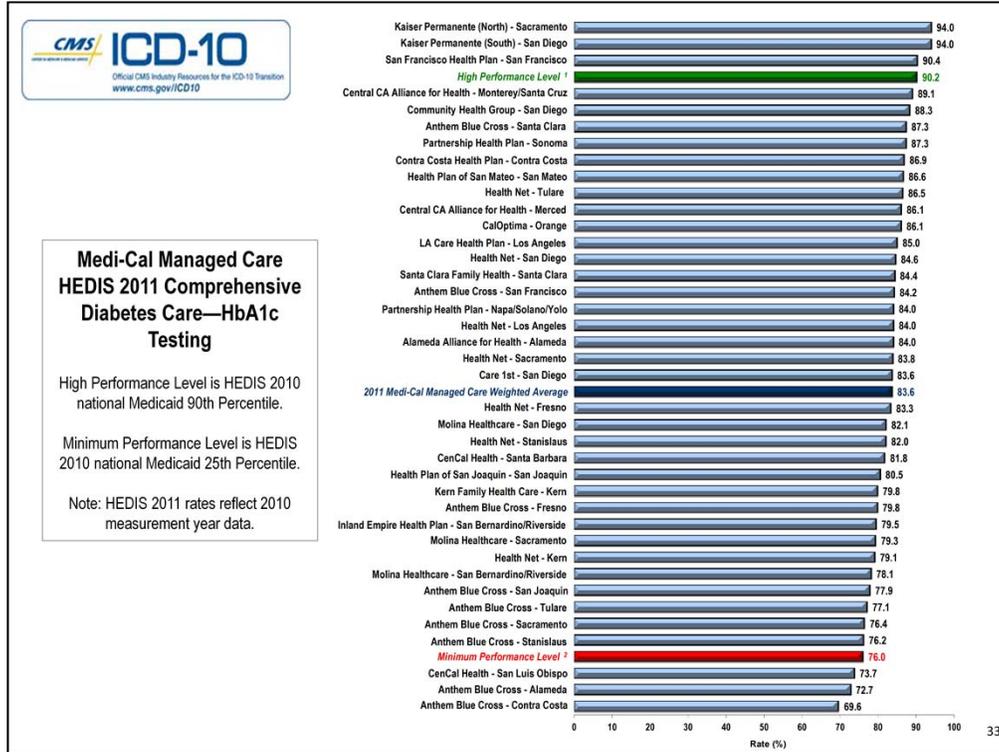
Discuss a State-specific example of using performance measures impacted by ICD-10.

Talking Points

- Benchmarks, standards, and trend need to be re-evaluated in light of ICD-10.

Source(s)

- Michigan Department of Community Health. **Michigan Medicaid HEDIS 2012 Results Statewide Aggregate Report (Oct 2012)**. http://www.michigan.gov/documents/mdch/MI2012_HEDIS-Aggregate_Report_F1_402790_7.pdf. Accessed 1/12/13.



Purpose of the slide

Discuss a State-specific example of using performance measures impacted by ICD-10.

Talking Points

- Benchmarks, standards, and trend need to be re-evaluated in light of ICD-10.

Source(s)

- DHCS. **2011 HEDIS Aggregate Report for the Medi-Cal Managed Care Program (Dec 2011).**
http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Qual_Rpts/HEDIS_Reports/CA2011_HEDIS_Aggregate_F2.pdf. Accessed 5/20/13.
- DHCS. **Performance Evaluation Report Kaiser Permanente (KP Cal, LLC) Sacramento County (Jun 2012).**
http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Qual_Rpts/1011PlanSpecificPerfEvals/Kaiser-Sac_CA2010-11_PerfEval_Report_F2.pdf. Accessed 5/20/13.



Performance Measurement

Example – California Medi-Cal

Table 3.2—2010–2011 Performance Measure Results for Kaiser—Sacramento County

Performance Measure ¹	Domain of Care ²	2010 HEDIS Rates ³	2011 HEDIS Rates ⁴	Performance Level for 2011	Performance Comparison ⁵	MMCD's Minimum Performance Level ⁶	MMCD's High Performance Level (Goal) ⁷
AAB	Q	61.4%	54.8%	***	↔	19.7%	35.9%
AWC	Q,A,T	32.1%	39.0%	**	↑	38.8%	63.2%
BCS	Q,A	73.9%	74.1%	***	↔	46.2%	63.8%
CCS	Q,A	81.9%	84.1%	***	↑	61.0%	78.9%
CDC-BP	Q	79.0%	77.8%	***	↔	53.5%	73.4%
CDC-E	Q,A	70.1%	67.5%	**	↔	41.4%	70.1%
CDC-H8 (<8.0%)	Q	64.6%	63.1%	***	↔	38.7%	58.8%
CDC-H9 (>9.0%)	Q	23.6%	21.5%	***	↔	53.4%	27.7%
CDC-HT	Q,A	92.8%	94.0%	***	↔	76.0%	90.2%
CDC-LC (<100)	Q	63.3%	62.7%	***	↔	27.2%	45.5%
CDC-LS	Q,A	89.9%	92.1%	***	↔	69.3%	84.0%
CDC-N	Q,A	82.1%	83.1%	**	↔	72.5%	86.2%
CIS-3	Q,A,T	75.5%	80.2%	**	↑	63.5%	82.0%
LBP	Q	88.4%	87.5%	***	↔	72.0%	84.1%
PPC-Pre	Q,A,T	88.4%	91.6%	**	↔	80.3%	92.7%
PPC-Pst	Q,A,T	75.9%	71.7%	**	↔	58.7%	74.4%
URI	Q	97.0%	97.3%	***	↔	82.1%	94.9%
W34	Q,A,T	66.3%	69.0%	**	↑	65.9%	82.5%
WCC-BMI	Q	38.1%	52.8%	**	↑	13.0%	63.0%
WCC-N	Q	46.7%	60.3%	**	↑	34.3%	67.9%
WCC-PA	Q	24.5%	59.8%	***	↑	22.9%	56.7%

34

Talking Points

- Benchmarks, standards, and trend need to be re-evaluated in light of ICD-10.

Source(s)

- DHCS. **2011 HEDIS Aggregate Report for the Medi-Cal Managed Care Program (Dec 2011)**. http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Qual_Rpts/HEDIS_Reports/CA2011_HEDIS_Aggregate_F2.pdf. Accessed 5/20/13.
- DHCS. **Performance Evaluation Report Kaiser Permanente (KP Cal, LLC) Sacramento County (Jun 2012)**. http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Qual_Rpts/1011PlanSpecificPerfEvals/Kaiser-Sac_CA2010-11_PerfEval_Report_F2.pdf. Accessed 5/20/13.

Note(s)

1 DHCS-selected HEDIS performance measures developed by the National Committee for Quality Assurance (NCQA). 2 HSAG's assignment of performance measures to the domains of care for quality (Q), access (A), and timeliness (T). 3 HEDIS 2010 rates reflect measurement year data from January 1, 2009, through December 31, 2009.

4 HEDIS 2011 rates reflect measurement year data from January 1, 2010, through December 31, 2010.

5 Performance comparisons are based on the Chi-Square test of statistical significance with a p value of <0.05.

6 The MMCD's minimum performance level (MPL) is based on NCQA's national Medicaid 25th percentile. Note: For the CDC-H9 (>9.0%) measure, the MPL is based on the national Medicaid 75th percentile.

7 The MMCD's high performance level (HPL) is based on NCQA's national Medicaid 90th percentile. Note: For the CDC-H9 (>9.0%) measure, the HPL is based on the national Medicaid 10th percentile because a lower rate indicates better performance.

* = Below-average performance relative to the national Medicaid 25th percentile. Note: For the CDC-H9 (>9.0%) measure, performance is relative to the Medicaid 75th percentile.

** = Average performance relative to national Medicaid percentiles (between the 25th and 90th percentiles). Note: For the CDC-H9 (>9.0%) measure, performance is relative to the national Medicaid 10th and 75th percentiles.

*** = Above-average performance relative to the national Medicaid 90th percentile. Note: For the CDC-H9 (9.0%) measure, performance is relative to the national Medicaid 10th percentile.

↓ = Statistically significant decrease.

↔ = Nonstatistically significant change.

↑ = Statistically significant increase.



Analytics and Reporting

Summary

- **Analytics concerns the management of uncertainty. It is the process of obtaining an optimal or realistic decisions based on existing data, which often includes claims data**
- **Analytics will be key to the transition**
 - Remediating existing analytics
 - Monitoring ICD-10 implementation
 - Building new functionality
 - Evaluating financial neutrality
 - Interpreting trends and benchmarks
 - Validating of aggregation models
- **ICD-10 provides an opportunity to improve knowledge**



35

Purpose of the slide

Summarize the Analytics and Reporting session by discussing how good analytics are not only impacted by ICD-10 but also critical to monitoring ICD-10 implementation.

Talking Points

- None

Questions

