

10 “Must-Haves” in a Clinical Quality Management System

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Must-Have #2 Problems Documented in a Structured and Coded Manner, Using Clinical Terminology

Abstract

One of the keys to ensuring a successful clinical quality improvement program is selecting a supporting management technology with certain critical elements. This series of articles highlights these items and describes why they are so important for high-quality patient care and why they set the benchmark for transformative clinical quality.

Introduction

Any technology supporting clinical quality improvement must be built on a database of clinical information that is accurate, accessible, and relevant. Consider quality improvement technology as a dashboard in the vehicle to support increased care quality. Accurate and valid data informs the dashboard for that vehicle—it provides the information you need to make care decisions.

To effectively inform care decisions, clinical quality data must be captured in a structured, clinically-relevant and coded manner. Without structure, the data cannot be used for reporting, analysis, and population management. And, without clinical relevance, it won't reflect the reality of clinical care in a busy practice.

Currently, many practices rely on administrative data to drive their clinical quality improvement efforts. Yet this data is highly optimized to meet a payor's requirement for providing reimbursement to a clinic based on the work performed. As such, this

information is usually documented in a manner that makes it unwieldy for tracking of patient care over time (episodes of care), as well as managing and reporting on care quality. To extend the automotive metaphor, would anyone use miles per gallon, the measure of fuel to go a specified distance, as the sole measure of an automobile's quality? No.

There are many services that also attempt to construct structured and coded clinical data from billing information. While such services may prove beneficial in meeting some scorecarding and pay-for-performance initiatives, they are not truly building the foundation for sustainable quality improvement, depriving practices of a base that will support increased quality of care and an improved bottom line.

A clinical quality management system (CQMS) should capture patient information in a structured and clinically-relevant, coded manner. Data should be entered using a consistent and controlled clinical vocabulary with a variety of ways of naming a problem or diagnosis. This allows the use of natural

and standardized clinical language, making the process of recording the information unobtrusive to the operations of the practice. As an example, there are many terms for Type II Diabetes (“Diabetes Mellitus,” “Type II Diabetes,” “Non-Insulin Dependent Diabetes Mellitus”), but in the end, they all describe the same condition. A CQMS should allow problems to be captured with various terminology, however, these terms must be mapped to a single coded problem (“Type II Diabetes Mellitus”) to allow for easy analysis and reporting.

Use of a clinical classification system will allow a CQMS to map individual terms consistently, in a coded manner to support reporting and analysis. This classification system should support reasons for encounter as well as symptom and lifestyle diagnoses. Coding systems like the International Classification of Diseases (ICD) often do not capture such diagnoses, requiring the care provider to find the “closest fit.” As an example, ICD-9 has no capability of recording the symptom of “feeling sad” or “depressed mood.” Instead the care provider is forced to choose a diagnostic term of “depression.” While this may be acceptable for reimbursement, it can drastically affect care delivery since a diagnosis may be assigned before an evaluation is complete.

The use of a structured and clinically-relevant, coded, classification system is vital to a sound CQMS and provides numerous benefits to a practice:

- Greatly reduces the effort needed to generate disease-specific quality reports (like HEDIS®) by simplifying denominator calculations. Savings of over \$100,000 have been documented using this approach.
- Provides the ability to report on quality improvement and care metrics that are not readily trackable through ICD codes or billing records alone. Many of these metrics are the ones required for pay-for-performance programs.
- Allows providers to record all symptoms and diagnoses for a patient based on their clinical judgment, not reimbursement requirements, providing a true picture of a patient’s health. Care reminders must be based on complete information if they are to be timely, relevant, and correct.

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- Creates systems for recording individual patient episodes of care, the standard for quality of care evaluation.
- Provides an easy way to identify and manage different patient populations. Using a coded database, a simple code can be selected to identify a patient population. Without such a system, all phrases that could possibly be used to describe the condition (including typos) need to be included in the query.

Choosing an effective system of documentation

When choosing a CQMS for use in a practice, be sure to evaluate the methodology used for documenting problems. First of all, in addition to coding for reimbursement, ensure that a classification system exists for capturing problems in a clinical manner—International Classification of Primary Care (ICPC) is an example of such a system.

ICPC is a classification system used in many parts of the world with strong adoption in Europe. ICPC was built to fit the needs of primary care; about 95% of all presenting problems can be represented in this classification standard. Contrast this with ICD-9, which is estimated to represent less than 60% of presenting problems.¹ ICPC can capture a patient’s reason for seeking care, symptom and social problem diagnoses and is episode-oriented, meaning it can track the process of care for a problem over time. It is designed specifically for primary care rather than specialty care.

With the ability to capture reason for encounter, symptoms and social problem diagnoses and problem severity, a very accurate problem list can be built for a patient, and evidence-based guidelines can then be applied correctly. Care guidelines are different for “persistent asthma” than for “intermittent asthma” as they are also different for “feeling sad” than “depression”. A prompt and reminding system that doesn’t have the data to distinguish between these factors could be delivering care reminders that are inaccurate.

Furthermore, verify that a standardized vocabulary is in place for capturing problems, one that provides synonyms and a description for all reasons for an encounter—the Electronic Nomenclature and Classification of Disorders and Encounters (ENCODE™) is one such vocabulary.

ENCODE is a clinical thesaurus of approximately 10,000 clinical terms. It has terminology for symptoms, complaints, risk factors, family history, external causes and reason for encounter. It allows for synonyms and does not include “ragbag” terms (a ragbag term, like “other,” is used when a matching term cannot be found). It is a great tool for capturing problems at the point of care as it allows providers to describe problems in their terminology. Each ENCODE term is mapped to ICPC, ICD-9 and ICD-10, allowing a provider to use their terminology when documenting

problems and know that a properly coded problem list is built “behind-the-scenes.”

To illustrate the differences in ICPC, ICD-9 and ENCODE, *table 1* contains a few ENCODE thesaurus entries for diabetes (along with their ICPC and ICD-9 codes).

As illustrated, there are eight ENCODE terms for type II diabetes, which map to just one ICPC code and three ICD-9 codes. Providers could document type II diabetes eight different ways, but when reporting on this condition, just one ICPC code needs to be used, T90.

The quality of the documentation system used by a CQMS will directly affect the quality of the information it manages. Since a busy practice cannot manage what it does not measure, be sure to select a system that will support a broad range of needs—from detailed problem recording to patient care and quality metrics reporting.

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Table 1 – Comparison of classification codes for various clinical terms used to describe diabetes

ICPC	ICD9	ENCODE Description
A23	V180	Family History of Diabetes Mellitus
A91	7902	Chemical Diabetes
A91	7902	Latent Diabetes
A91	7902	Prediabetes
T27	V655	Fear/Concern about Diabetes Mellitus
T89	25001	Diabetes Mellitus Type 1
T89	25001	Type I Diabetes
T89	25001	Juvenile Onset Diabetes
T89	25003	Brittle Diabetes
T89	25091	Insulin Dependent Diabetes Mellitus with Complications
T89	25001	Insulin Dependent Diabetes Mellitus
T90	2500	Diabetes Mellitus
T90	2509	Diabetes Mellitus with Complications
T90	25000	Diabetes Mellitus Type 2
T90	25000	Type II Diabetes
T90	25000	Maturity Onset Diabetes
T90	2500	Malnutrition Related Diabetes Mellitus
T90	25000	Maturity Onset Diabetes of the Young
T90	25000	Non-Insulin Dependent Diabetes Mellitus
T99	2535	Diabetes Insipidus
U99	5881	Nephrogenic Diabetes Insipidus
W84	64803	Diabetes Mellitus in Pregnancy
W84	64803	Pre-Existing Diabetes Mellitus in Pregnancy
W84	64803	Pre-Existing Insulin Dependent Diabetes Mellitus in Pregnancy
W84	64803	Pre-Existing Non-Insulin Dependent Diabetes Mellitus in Pregnancy
W85	64803	Gestational Diabetes Mellitus

References

1 Peabody JW, Luck J, Jain S, Bertenthal D, Glassman P. “Assessing the Accuracy of Administrative Data in Health Information Systems” *Med Care*. 2004 Nov;42(11):1066-72.