Using ICD-10 for immediate quality of care and coding improvement

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The immediate focus of most HIPAA organizations and their vendors is on the conversion and mitigation of potential risks related to ICD-10 implementation. Many of those risks relate to the data fog that will ensue for at least 18 months following the October 1, 2013, implementation. Some organizations have thought about what will happen after the data fog clears—the long-term advantages that ICD-10 will likely offer include better identification of fraud or abusive practices, improved ability to manage care and disease processes, and tracking public health and risks. However, few have thought about the immediate opportunities that ICD-10 offers starting on the first day of implementation.

Organizations do not have to wait two or more years for historical ICD-10 data to improve condition management, enhance population management, or engage in outcomes analysis. With a little foresight, organizations may even be able to use ICD-10 to improve coding.

CONDITION MANAGEMENT

The clinical precision of coding for some conditions is greatly expanded with ICD-10 compared with ICD-9. Organizations can use this precision to immediately improve condition management. Using asthma as an example, with the ICD-10 differentiation of mild, moderate, and severe intermittent and persistent asthma (shown in Figure 1), organizations can send reminders to persistent asthmatics on appropriate use of controller medications. Electronic medical record (EMR) rules can be set up to prompt physicians to ask patients about their recent acute exacerbations, and can incorporate more refined clinical care guidelines based on a patient's asthma severity.

FIGURE 1: ICD-10 DIFFERENTIATIONS OF ASTHMA

J4520:	MILD INTERMITTENT ASTHMA, UNCOMPLICATED
J4521:	MILD INTERMITTENT ASTHMA WITH (ACUTE) EXACERBATION
J4522:	MILD INTERMITTENT ASTHMA WITH STATUS ASTHMATICUS
J4530:	MILD PERSISTENT ASTHMA, UNCOMPLICATED
J4531:	MILD PERSISTENT ASTHMA WITH (ACUTE) EXACERBATION
J4532:	MILD PERSISTENT ASTHMA WITH STATUS ASTHMATICUS
J4540:	MODERATE PERSISTENT ASTHMA, UNCOMPLICATED
J4541:	MODERATE PERSISTENT ASTHMA WITH (ACUTE) EXACERBATION
J4542:	MODERATE PERSISTENT ASTHMA WITH STATUS ASTHMATICUS
J4550:	SEVERE PERSISTENT ASTHMA, UNCOMPLICATED
J4551:	SEVERE PERSISTENT ASTHMA WITH (ACUTE) EXACERBATION
J4552:	SEVERE PERSISTENT ASTHMA WITH STATUS ASTHMATICUS
J45901:	UNSPECIFIED ASTHMA WITH (ACUTE) EXACERBATION
J45902:	UNSPECIFIED ASTHMA WITH STATUS ASTHMATICUS

ICD-10 codes can even be used to assess a segment of the population's progress toward goals and treatment success. Imagine the program efficiencies and targeted modifications that organizations can make when they are readily able to analyze the variation in complication rates between the different asthma severity levels. In addition to the value added for patients, the organizations will also be better able to report asthma management effectiveness.

Another efficiency that can be gained is in organizations with focused disease management programs, which will be able to eliminate the need for human intervention to "screen out" false positives such as intermittent asthmatics or the wait for claim analysis with algorithms to infer those with persistent asthma. One ICD-10 code can trigger a more appropriate referral to disease management programs. Even complex tools to stratify the population into those needing the highest levels of intervention can be greatly enhanced by knowing a physician has identified the patient as a severe asthmatic.

The codes can also be used to analyze condition drug management. Again taking the asthma example, organizations can identify which providers are not prescribing inhaled corticosteroids for newly diagnosed persistent asthmatics, and not bother the other providers with unnecessary notices on intermittent asthmatics.

Care managers will also have access to encounter data that will help better plan care transitions and follow-up after emergency care. Knowing whether a patient admitted for status asthmaticus is a known mild intermittent or severe persistent asthmatic can help guide the care planning evaluation and post-discharge follow-up plan, such as the potential need for referral to a pulmonologist and a post-discharge follow-up call. Naturally, these data-driven efficiencies rely heavily on the physicians' precision of ICD-10 coding.

POPULATION TRACKING

ICD-10 codes will also be useful in immediate evaluation of managed populations. This time we use ICD-10 encounter codes as an example. ICD-10 has 123 encounter codes, (examples in Figure 2), distinguishing the type of exam and whether there were normal or abnormal findings. A quick analysis of these codes for a provider's practice will better reflect the overall severity and acuity of the patients treated; that's more than ICD-9 codes ever did. This type of analysis will help in describing how providers' time is used and the frequency of abnormal findings in the population. If one provider seems to always be behind, it may be a matter of a patient population with more abnormal findings or it may mean more thorough assessments.

FIGURE 2: ENCOUNTER CODE EXAMPLES

Z0000:	GENERAL ADULT MEDICAL EXAMINATION WITHOUT ABNORMAL FINDINGS / Z0001 WITH ABNORMAL FINDINGS
Z00121:	ROUTINE CHILD HEALTH EXAMINATION WITH ABNORMAL FINDINGS / Z00129 WITHOUT ABNORMAL FINDINGS
Z0070:	EXAMINATION FOR PERIOD OF DELAYED GROWTH IN CHILDHOOD WITHOUT ABNORMAL FINDINGS / Z0071 WITH ABNORMAL FINDINGS
Z0100:	EXAMINATION OF EYES AND VISION WITHOUT ABNORMAL FINDINGS / Z0101 WITH ABNORMAL FINDINGS
Z0110:	EXAMINATION OF EARS AND HEARING WITHOUT ABNORMAL FINDINGS / Z01110 FOLLOWING FAILED HEARING SCREENING / Z01118 WITH OTHER ABNORMAL FINDINGS / Z0112 FOR HEARING CONSERVATION AND TREATMENT
Z0130:	EXAMINATION OF BLOOD PRESSURE WITHOUT ABNORMAL FINDINGS / Z0131 WITH ABNORMAL FINDINGS
Z01411:	GYNECOLOGICAL EXAMINATION (GENERAL) (ROUTINE) WITH ABNORMAL FINDINGS / Z01419 WITHOUT ABNORMAL FINDINGS

ICD-10 encounter codes may also help in evaluating patient compliance in follow-up with abnormal findings and variations in patient compliance among provider practices. That hypertensive with abnormal results should be high up on the follow-up appointment reminder list.

PREVENTIVE CARE MANAGEMENT

Improving preventive care is a constant in healthcare improvement initiatives. ICD-10 will be able to help be more precise in setting up preventive care systems. Immunizations are always an area of focus. With the specificity of the ICD-10 codes, organizations will be able to customize reminders to reschedule immunizations when care attempts failed due to illness.

FIGURE 3: ICD-10 IMMUNIZATION CODES

Z2801:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF ACUTE ILLNESS OF PATIENT
Z2802:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF CHRONIC ILLNESS OR CONDITION OF PATIENT
Z2803:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF IMMUNE COMPROMISED STATE OF PATIENT
Z2804:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF PATIENT ALLERGY TO VACCINE OR COMPONENT
Z2809:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF OTHER CONTRAINDICATION
Z281:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF PATIENT DECISION FOR REASONS OF BELIEF OR GROUP PRESSURE
Z2820:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF PATIENT DECISION FOR UNSPECIFIED REASON
Z2821:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF PATIENT REFUSAL
Z2829:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF PATIENT DECISION FOR OTHER REASON
Z283:	UNDERIMMUNIZATION STATUS
Z2881:	IMMUNIZATION NOT CARRIED OUT DUE TO PATIENT HAVING HAD THE DISEASE

FIGURE 3: ICD-10 IMMUNIZATION CODES (CONT.)

Z2882:	IMMUNIZATION NOT CARRIED OUT BECAUSE OF CAREGIVER REFUSAL
Z2889:	IMMUNIZATION NOT CARRIED OUT FOR OTHER REASON
Z289:	IMMUNIZATION NOT CARRIED OUT FOR UNSPECIFIED REASON

The codes will also document valid reasons for failure to provide immunizations, allowing a more accurate accounting of a practice's immunization compliance. Analysis of the codes can even help focus efforts to improve immunization rates; for example, by focused follow-up education for preventive service refusals.

PRIMARY CARE MANAGEMENT

ICD-10 codes will provide a lot of information on practice patterns in a primary care practice. Using ruptured ear drum as an example, analysis can determine the portion of patients with a subsequent encounter, and sequela, which may be indicative of over- or underutilization of services.

FIGURE 4: RUPTURED EAR DRUM

S0922XA:	TRAUMATIC RUPTURE OF LEFT EAR DRUM, INITIAL ENCOUNTER
S0922XD:	TRAUMATIC RUPTURE OF LEFT EAR DRUM, SUBSEQUENT ENCOUNTER
S0922XS:	TRAUMATIC RUPTURE OF LEFT EAR DRUM, SEQUELA

The codes may also help evaluate where there is the greatest need and opportunity for new primary care management programs. As an example, wound care codes will help in analyzing the prevalence of various types of wounds, the portion with sequela, and the time over which the healing process takes place. These are all critical factors in determining whether a wound care program would be cost-effective and the potential resources necessary to run such a program.

FIGURE 5: SPECIFICITY OF ICD-10 CODES

431	WOUND SEQUELA CODES – S91301S: Unspecified open wound, right foot, sequela / S91302S left foot, sequela / S91309S unspecified foot, sequela – S91331S: Puncture wound without foreign body, right foot, sequela / S91332S left foot, sequela / S91339S unspecified foot, sequela – S91341S: Puncture wound with foreign body, right foot, sequela / S91342S left foot, sequela / S91349S unspecified foot, sequela
90	CODES FOR ATHEROSCLEROSIS WITH ULCERATION
150	PRESSURE ULCER CODES WITH SITE AND STAGE
120	NON-PRESSURE CHRONIC ULCER CODES WITH SITE AND SEVERITY

OUTCOMES ANALYSIS

What is really exciting is that ICD-10 codes will not only be able to help determine which healthcare management programs are working and which are not; but also for some conditions the codes can help analyze how well, how consistently, and how fast the program is working. A weight loss program is a prime example. The ICD-10 codes will allow body mass index to be tracked for adult and pediatric populations.

FIGURE 6: BODY MASS INDEX CODES

Z681:	BODY MASS INDEX (BMI) 19 OR LESS, ADULT
Z6820:	BODY MASS INDEX (BMI) 20.0-20.9, ADULT
Z6821:	BODY MASS INDEX (BMI) 21.0-21.9, ADULT
Z6822:	BODY MASS INDEX (BMI) 22.0-22.9, ADULT
Z6823:	BODY MASS INDEX (BMI) 23.0-23.9, ADULT
Z6845:	BODY MASS INDEX (BMI) 70 OR GREATER, ADULT
Z6851:	BODY MASS INDEX (BMI) PEDIATRIC, LESS THAN 5TH PERCENTILE FOR AGE
Z6852:	BODY MASS INDEX (BMI) PEDIATRIC, 5TH PERCENTILE TO LESS THAN 85TH PERCENTILE FOR AGE
Z6853:	BODY MASS INDEX (BMI) PEDIATRIC, 85TH PERCENTILE TO LESS THAN 95TH PERCENTILE FOR AGE
Z6854:	BODY MASS INDEX (BMI) PEDIATRIC, GREATER THAN OR EQUAL TO 95TH PERCENTILE FOR AGE

Additionally, ICD-10 will allow more precise reporting on procedure utilization and analysis of complications by procedure approach and device. This may not only be useful in evaluating provider practice patterns, it may also be beneficial in renegotiation of reimbursement rates based on the approach, and device, as illustrated in the iliac artery dilation codes.

FIGURE 7: ILIAC ARTERY DILATION CODES

047H04Z:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY WITH DRUG-ELUTING INTRALUMINAL DEVICE, OPEN APPROACH
047H0DZ:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY WITH INTRALUMINAL DEVICE, OPEN APPROACH
047H0ZZ:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY, OPEN APPROACH
047H34Z:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY WITH DRUG-ELUTING INTRALUMINAL DEVICE, PERCUTANEOUS APPROACH
047H3DZ:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY WITH INTRALUMINAL DEVICE, PERCUTANEOUS APPROACH
047H3ZZ:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY, PERCUTANEOUS APPROACH
047H44Z:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY WITH DRUG-ELUTING INTRALUMINAL DEVICE, PERCUTANEOUS ENDOSCOPIC APPROACH
047H4DZ:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY WITH INTRALUMINAL DEVICE, PERCUTANEOUS ENDOSCOPIC APPROACH
047H4ZZ:	DILATION OF RIGHT EXTERNAL ILIAC ARTERY, PERCUTANEOUS ENDOSCOPIC APPROACH

USING ICD-10 TO IMPROVE CODING

Because of the complexity of ICD-10 and the history of poor coding using ICD-9, which is a much simpler coding scheme, one of the greatest fears is that the United States will go through this huge transition and end up with worse data because providers will be ineffective in their use of the new codes. So how can ICD-10 be used to improve coding?

It is back to the old adage, "what gets measured gets done." More appropriately, as John E. Jones elaborated, “What gets measured gets done. What gets measured and fed back gets done well. What gets rewarded gets repeated.”

Therefore, organizations using the codes for immediate performance measurement, providing feedback, and tying the healthcare improvement to "rewards" will actually improve the ICD-10 coding.

CONCLUSION

We encourage organizations to take the time before ICD-10 implementation to lay out a plan for how they can take advantage of the coding to improve healthcare management. That plan should include the broad scope of condition management, population management, and outcomes analysis.

We have presented just a few examples of where ICD-10 will be able to be put to immediate use to improve healthcare. The best way to start your own initiative is to evaluate where the ICD-10 codes vary dramatically from ICD-9s. Identify which clinical areas in the codes are of the most importance to your organization. Then—be fearless. Do not wait for assurance that the coding is accurate. If you build it, they will come.

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