OFFICE UROLOGY (N SHORE, SECTION EDITOR)

ICD-10: Are You Ready?

Jonathan Rubenstein

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Abstract With the signing of H.R. 4302 (https://beta.congress. gov/bill/113th-congress/house-bill/4302), the implementation date for using ICD-0-CM codes for coding and billing medical encounters in the United States is now scheduled for October 1, 2015. This conversion from using ICD-9-CM codes will be a tremendous change in the way providers and practices deliver health care and could be financially devastating to those who are not properly prepared. Proper preparations will require educating virtually everyone involved in almost every aspect of patient care with a sufficient understanding of ICD-10 language, coding structure, and rules. Vital to this conversion is accurate documentation in the medical records by providers, knowledge of insurance coverage (local and national) rules, and acceptance of those codes by electronic health record systems, clearinghouses, and payors. Early preparation, appropriate education, and proper testing will minimize the financial impact.

Keywords ICD-10 · Implementation · Coding · Urology

Introduction

Coding for medical encounters used to be haphazard. In the United States, International Classification of Diseases and Related Health Conditions (ICD), 9th revision (ICD-9), has been used for coding and billing medical encounters as mandated by the Health Insurance Portability and Accountability Act. ICD is owned and copyrighted by the World Health Organization (WHO), which has authorized the development of an adaption of ICD for clinical use ("Clinical Modification")

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J. Rubenstein (🖂) Chesapeake Urology Associates, PA, 8322 Bellona Ave #202, Baltimore, MD 21204, USA e-mail: jrubenstein@cua.md in the United States. The National Center for Health Statistics is the Federal agency responsible for the clinical modification (CM) of ICD, and all modifications must conform to WHO conventions for the ICD. ICD was originally intended to be used for epidemiological studies, not for billing purposes. Many in the United States feel that ICD-9, which has been in use since 1979, is currently inadequate for modern clinical practice. It is argued that ICD-9 uses outdated language, has a limited structure, lacks details, and has run out of room. The Coalition for ICD-10 states that by still using ICD-9, we cannot "extract important patient health information needed to support modern-day research and to move to a payment system based upon quality and outcomes" (http://coalitionforicd10. wordpress.com/2014/03/26/ask-the-experts-icd-10-facts/).

The 10th revision of ICD (ICD-10) is the newest code set currently available. As compared with ICD-9, ICD-10 has a new structure and more room (up to seven characters, from five) and is more expandable. There are details, such as laterality and etiology, that are found in ICD-10 that are not possible in ICD-9. ICD-10 also contains expanded injury codes, new clinical concepts, new definitions, and updated language. The Clinical Modification of ICD-10 (ICD-10-CM), used for practice in the United States, was developed following a thorough evaluation by a technical advisory panel and extensive additional consultation with physician groups, clinical coders, and others to ensure clinical accuracy and utility.

Originally, ICD-10 was slated to replace ICD-9 on October 1, 2011. A final rule by the Department of Health and Human Services (HHS) in 2009 pushed back the implementation date to October 1, 2013 [1]. The implementation date of ICD-10-CM has since been pushed back twice, the first on August 24, 2012, when the HHS published a new final rule changing the implementation date to October 1, 2014 [2], and then again with H.R. 4302, signed by President Obama in 2014, which created a new implementation date of October 1, 2015 (https:// beta.congress.gov/bill/113th-congress/house-bill/4302).

The transition to ICD-10 has created a tremendous amount of uncertainty and fear in the medical community. Those in favor of the conversion will claim that the increased specificity will save money over time and must be done to collect adequate data that will improve the health of the nation. This was suggested to be true on the basis of the experience in Canada [3]. Those opposed have expressed deep concerns, describing the significant work and costs required to implement this change without any proven benefit to the patient or provider. In certain cases, the financial burden (time, costs, reduced productivity, etc.) could put many out of business. Proper preparation for this conversion is vital to the success of every health care provider. The question is, Are you ready?

Differences Between ICD-9 and ICD-10: Truth Versus Myth

There are many misconceptions about ICD-10. One myth is that ICD-10 is merely an expansion of ICD-9, with increased specificity. The truth is that ICD-10 is a completely new coding system, with a new structure, new categories, new definitions, and new billing rules. There are a number of new features in addition to increased specificity, such as laterality (right vs. left), location (i.e., by quadrant or anatomic area), unilaterality/bilaterality, severity, episode of care (initial, subsequent, visit for sequelae of condition), etiology of the condition, and the such. Only certain conditions contain these details, and certain conditions contain more than one of these details. For example, in ICD-10, to accurately document and code "malignant neoplasm of the testicle," one needs to know the laterality (right vs. left) and etiology (in a descended or undescended testicle). Neither laterality nor etiology is needed for other conditions of the testicle, such as hydrocele, epididvimitis, or testicular torsion.

Another myth is that it will be easy to "crosswalk" an ICD-9 code into the accurate ICD-10 code. The truth is that only a small percentage of codes convert 1:1 between ICD-9 and ICD-10. We can learn from Canada's experience in transitioning to ICD-10 [4] that crosswalks are either not possible or somewhat unreliable at best, due to the incompatibility between the code sets and different underlying principles. Even with an adequate or seemingly adequate superbill or crosswalk, there are also new billing rules, concepts, and exclusions that exist, so it is really best to merely learn ICD-10 by itself.

Many believe that using an electronic health records (EHR) search tool or having a professional coder on staff will allow one to easily choose a correct code. The truth is that an understanding of the ICD-10 structure is paramount, even with tools. ICD-10 is organized by chapters, by body system, disease state, or reason for encounter (Table 1). For example, if "searching" for erectile dysfunction using many EHR

systems, the ICD-10 code F52.21 may be proposed. However, if one understands that Chapter 5 (F00–F99) is the chapter for "Mental and Behavioral Disorders," one would realize that F52.21 may not be a payable code to urologists; rather, most causes of erectile dysfunction that a urologist will see come from Chapter 14 (N00–N99), which is "Diseases of the Genitourinary System" and can be found at the N52 location. The specific etiology of erectile dysfunction is needed for accurate coding. A professional coder or biller can only choose a code on the basis of appropriate documentation. Many providers have a false belief that they have been using ICD-9 appropriately or that they document well. These false beliefs will be exacerbated when using ICD-10.

Some believe that they just need to get by and that they will merely weather the storm. Actually, one should expect at least a bit of a permanent slowdown, even with a mastery of ICD-10, due to the billing and coding structure.

There have been a number of publications that have had some fun at the expense of the ICD-10 code set for containing codes such as "bitten by orca, initial encounter" (W56.21xA), "struck by orca, initial encounter" (W56.22xA), "walked into lamppost, initial encounter" (W22.02xA), and the such. There have even been newspaper articles (http://www.nytimes.com/ 2013/12/30/technology/medical-billing-nears-a-new-era-ofultra-specific-codes.html?pagewanted=all& r=0), books (www.icd10illustrated.com), and a litany of editorials and arguments against the conversion to ICD-10, using these codes to make their point. The truth is that these codes are from Chapter 20, "External Causes of Morbidity and Mortality," which are secondary codes. There are no national requirements for reporting these codes. If there is a state or local mandate requiring these codes to be used, then they should be easily found using a search tool. The Coalition for ICD-10 noted that "most providers have never had to use ICD-9-CM code E845, Accident involving spacecraft, but that has not impacted their ability to use ICD-9-CM" (http:// coalitionforicd10.wordpress.com/2014/03/26/ask-theexperts-icd-10-facts/).

Cost

It is clear that the transition will be very expensive. Many argue that the burden placed on providers is unequal and overly burdensome, and if the cost savings are at the level of the government, then those who benefit should help pay. While it is difficult to accurately define costs to an individual provider or practice, the best estimate and the most widely quoted resources are the two Nachimson Advisors reports to the American Medical Association, the first in 2008 and then with an update in 2014 [5, 6]. These reports are thorough and based upon the best available data at the time of writing. Both fixed costs (such as hardware and software, new staff to run

Table 1ICD-10 chapters, corresponding codes, and chapter title

Chapter	Codes	Chapter Title
1	A00–B99	Certain infectious and parasitic diseases
2	C00–D48	Neoplasms
3	D50–D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
4	E00-E90	Endocrine, nutritional and metabolic diseases
5	F00-F99	Mental and behavioral disorders
6	G00–G99	Diseases of the nervous system
7	H00–H59	Diseases of the eye and adnexa
8	H60–H95	Diseases of the ear and mastoid process
9	I00–I99	Diseases of the circulatory system
10	J00–J99	Diseases of the respiratory system
11	K00–K93	Diseases of the digestive system
12	L00–L99	Diseases of the skin and subcutaneous tissue
13	M00-M99	Diseases of the musculoskeletal system and connective tissue
14	N00-N99	Diseases of the genitourinary system
15	O00–O99	Pregnancy, childbirth and the puerperium
16	P00-P96	Certain conditions originating in the perinatal period
17	Q00–Q99	Congenital malformations, deformations and chromosomal abnormalities
18	R00–R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
19	S00-T98	Injury, poisoning and certain other consequences of external causes
20	V01-Y98	External causes of morbidity and mortality
21	Z00–Z99	Factors influencing health status and contact with health services

the system) and loss of productivity were taken into account. The updated implementation estimates for a small group (3 providers, 2 administrators) are between \$56,639 and \$226,105, for a medium-sized group (10 providers, 1 coder, 6 administrators) between \$213,364 and \$824,735, and for a large group (100 providers, 64 billing staff) between \$2 million to just over \$8 million.

When broken down, there are both preimplementation costs and postimplementation costs. Preimplementation costs include training, assessment, hardware and software upgrades, remediation, and testing. The cost of ICD-10 training was estimated to be around \$750 to \$1,000 per provider, or from \$2,700 to \$3,000 for a small practice to around \$75,000 for a large group. Assessing the practice to determine where ICD-10 impacts patient flow and payment will cost somewhere in the range of \$4,300-\$7000 for a small group to up to \$19,320 for a large group. This is mainly due to the time lost during the assessment process. Many practices will need new hardware and/or new software or both; some EHR and practice management (PM) vendors will include the upgrades as part of their maintenance packages, and some will not. Some practices will need to get a new EHR vendor altogether. In the Medical Group Management Association (MGMA) study of ICD-10 preparedness (http://www.mgma.com/Libraries/ Assets/Government%20Affairs/Advocacy/LEARN/ICD-10-LEARN-results-June2013.pdf), only 32 % of respondents

said their EMR upgrades were included in their maintenance package, along with only 37 % for PM upgrades. If incurred, the costs associated with these upgrades may be minimal or may be up to \$60,000 for a small group practice to up to \$2 million for a large group. The respondents to the MGMA study believe that it will cost about \$10,000 per provider for EHR upgrades or replacement, and the same for PM upgrades or replacement (http://www.mgma.com/Libraries/Assets/ Government%20Affairs/Advocacy/LEARN/ICD-10-LEARN-results-June2013.pdf). Testing costs are estimated to be from \$25,560 to \$105,506 for a small group and from \$538,034 to \$3 million for a large group.

Postimplementation costs include productivity loss and payment disruptions. Due to the increased specificity of ICD-10, there will be a loss of productivity due to increased time for documentation and code selection. Since ICD-10 codes are not straightforward substitutions, there will be a significant learning curve for both clinicians and administrative staff. There will be increased time per visit, whether it is due to more writing or dictating or needing to perform more "clicks" on an EHR system. Nachimson Advisors believes this increased time to be about 15 % higher with ICD-10 than was necessary with ICD-9. In the Canadian experience with implementation of ICD-10, across three care types (inpatient, day surgery, and emergency visits), the number of charts completed per hour fell by 38 %–65 % initially. This improved with experience, but even after 3–6 months, the productivity levels never reached their preimplementation state but remained down 15 %–20 % across all three care types [4]. There is no increase in reimbursement to the provider per chart, so this decreased productivity is not offset by increased reimbursement. Productivity loss is estimated to cost between \$8,500 and \$20,500 for a small group to anywhere from \$726,487 to \$1,666,487 for a large group.

Possibly the most significant cost to practices will be the decreased revenue stream, especially in the first few months after ICD-10 implementation. CMS estimates that the denial rate will increase 100 %–200 % [7], going from about a 2 % denial rate to somewhere in the 4 %-6 % range. If not choosing the correct code initially or if using "unspecified" codes, there could be situation where a payor could ask for documentation and charts to ensure that proper codes are chosen, which would delay payment. Significant changes in reimbursement patterns will disrupt provider cash flow for a considerable period of time. The cash-flow disruption costs associated with an ICD-10 mandate would range anywhere from \$22,579 to \$100,349 for a typical small practice to an estimated \$752,630 to \$3,444,976 for a typical large practice. Many practices are going to be advised to set aside 6 months of cash to cushion the blow of the anticipated cash flow disruption.

Importance of Accurate Documentation

The implementation of ICD-10 will alter the way we practice medicine, since it will change the way we document and we will document on the basis of ICD-10 language and definitions. Therefore, ICD-10 will define how we practice medicine. Patterns that we have used and relationships among codes will need to be relearned because of the different structure and organization of the ICD-10 code set. If a provider is responsible for choosing their own ICD-10 codes, as many providers do using their EHR systems, then the documentation to support the code choice must be placed into the medical record. If one has a coder or biller choosing the codes, it is incumbent on the proper documentation in the medical record. Either way, our documentation will need to change. Codes chosen must be supported by the clinical documentation and vice versa. Payors will also be insisting that documentation supports the code chosen.

Unlike other HIPAA mandates, the conversion to ICD-10 will require deeper involvement by the physician and other providers, since one cannot rely on outside help (EMR, billers, vendors, clearinghouses, etc.) to provide the documentation. Doctors have falsely believed that they have been coding correctly in ICD-9. These issues will only be exacerbated in ICD-10. From the Canadian experience, it was noted that many times the documentation on the clinical record did not

exist or was insufficient to support the detail of the classification system [3].

Understanding the details of ICD-10 is important to minimize the use of "unspecified" codes, to reduce the risk of a denial or a request for charts, which would lead to a delay in billing. In the MGMA ICD-10 preparedness study, 3 % of respondents admitted to using "unspecified" codes over 50 % of the time, and 25 % used "unspecified" codes 11 %–30 % of the time. This is a significant number and shows the lack of specificity in ICD-9 that will be improved with ICD-10 or shows the lack of understanding of coding (http://www. mgma.com/Libraries/Assets/Government%20Affairs/ Advocacy/LEARN/ICD-10-LEARN-results-June2013.pdf).

Some Examples of ICD-10 in Urology Coding

For urologists, many codes will be found in Chapter 14 (N00-N99, "Diseases of the Genitourinary System"). However, urologists will likely use codes from almost every chapter. Malignant Tumors, including genital, urinary, and sites of metastasis, will be found in the C00-C99 section of Chapter 2 ("Neoplasms"), while benign tumors are found in the D00-D48 section of the same chapter. While urinary tract infections (acute cystitis with hematuria, acute cystitis without hematuria, pyelonephritis, and the such) are found in Chapter 14, other infectious diseases, such as sexually transmitted diseases, that a urologist commonly sees may be found in Chapter 1 (A00-B99, "Certain Infectious and Parasitic Diseases"). Hypogonadism is an endocrine disease (testicular hypofunction) and is found in Chapter 4 (E00-E90, "Endocrine, Nutritional and Metabolic Diseases"), as are the diabetes codes (of which urologists will need to have at least a general understanding). Erectile dysfunction codes are found in Chapter 14 (N52- section), along with male sexual dysfunction codes (N53-), whereas the symptoms of sexual dysfunction is found at R37, while premature ejaculation is located in Chapter 5 (F00-F99, "Mental and Behavioral Disorders"). Urologists may commonly see diagnoses such as varicocele (found in Chapter 9, "Diseases of the Circulatory System," at I86.1), hernias (Chapter 11, "Diseases of the Digestive System," K40- codes), congenital abnormalities of the genitalia or urinary tract (Chapter 17, "Congenital Malformations, Deformations and Chromosomal Abnormalities"), among others.

Some of the chapters contain codes for unique circumstances. The appropriate code for patients who present for evaluation or screening or follow-up may be found in Chapter 21 (Z00–Z99, "Factors Influencing Health Status and Contact with Health Services"). For example, patients may present to a urologist for "encounter for sterilization" (Z30.2), "encounter for screening for malignant neoplasm of the prostate" (Z12.5), or "personal history of malignant neoplasm of the prostate" (Z85.46). Codes for patients who present with certain signs or symptoms but without a diagnosis are often found in Chapter 17 (R00-R99, "Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified"). In general, codes in this chapter point perhaps equally to two or more diseases or to two or more systems of the body that need further evaluation. Examples of "R" codes in urology include elevated PSA (R97.2), abnormal semen analysis (R86.8), and hematuria (R31.-). If, in the course of the evaluation of a patient with signs or symptoms, a diagnosis is made, the diagnosis code should be used. For example, if a patient presents with gross hematuria, the code R31.0, "Gross Hematuria," should be chosen, whereas if, in the course of evaluation, it is determined that the hematuria is due to acute cystitis, the code N31.01 "acute cystitis with hematuria" should be chosen.

Chapter 19 (S00-T98, "Injury, Poisoning and Certain Other Consequences of External Causes") is a unique chapter for urologists, since codes in this chapter require a seventh character, describing the episode of care. In this case, the seventh character A indicates the initial visit, D indicated a subsequent visit, and S indicates visit for the sequelae of the condition. Since the seventh character must always be in the seventh position, and not all codes are six characters long, a placeholder "x" (or multiple placeholder "x"'s) may be necessary to create the correct code. For example, minor laceration of the right kidney is found at S37.04; one of the right kidney is found at S37.041. If it is the *initial encounter*, the correct code would be S37.041A; for a subsequent encounter, the code would be S37.041D; and for an encounter for the sequelae of the condition, the code would be S37.041S. There are other conditions and other chapters for which a seventh character is also necessary, but these are often for nonurologic conditions.

Within the diagnosis codes, there are unique ICD-10 details that are not found in ICD-9, such as laterality (right vs. left), unilateral or bilateral, location, etiology, and episode of care. Not all conditions contain all these levels of detail; rather, only some conditions that could have laterality or location-specific codes actually do have unique codes (Table 2). For example, malignant neoplasm of the kidney requires documentation and coding based upon laterality (left vs. right), not based upon location in the kidney, episode of care, or pathology. For urethral stricture disease, there are unique codes for male or female; for posttraumatic, postprocedural, or postinfectious; and for the location within the urethra. When coding for priapism, one should document the etiology according to the available ICD-10 codes available: due to drug (such as intracavernosal injection or alpha blocker), due to trauma, or due to an underlying condition (such as sickle cell or lymphoma). The "unspecified" code should be used only if none of the other codes accurately describe the condition, not out of convenience.

 Table 2
 Some urologic examples of ICD-10 specificity and documentation requirements for correct code choice

Urologic Condition	Specificity Required for Correct Code Choice
Malignant neoplasm of kidney	Laterality
	Right
	Left
	Unspecified
Malignant neoplasm of testis	Laterality
	Right
	Left
	Unspecified
	Etiology
	Undescended testicle
	Descended testicle
Renal laceration	Laterality
	Right
	Left
	Unspecified
	Severity
	Minor
	Moderate
	Major
	Episode of care
	Initial visit
	Subsequent visit
	Visit for sequelae of
Priapism	Etiology
1	Due to trauma
	Due to drug
	Due to diseases classified elsewhere
	Due to other
	Unspecified
Erectile dysfunction	Etiology
	Vascular
	Arterial
	Venous
	Combined arterial and venous
	Due to diseases classified elsewhere
	Due to drug
	Postsurgical
	Due to radical prostatectomy
	Due to radical cystectomy
	Due to urethral surgery
	Due to simple prostatectomy
	Due to other surgery
Azoospermia	Etiology
nzoospennia	Organic
	Due to extra testicular course
	Due to extra-testicular cause
	Due to infaction
	Due to infection

Table 2 (continued)

Urologic Condition	Specificity Required for
	Collect Code Choice
	Due to obstruction of efferent ducts
	Do to radiation
	Due to systemic disease
	Other
Urethral stricture	Location
	Meatus
	Anterior
	Bulbar
	Membranous
	Etiology
	Postprocedural
	Postinfectious
	Posttraumatic
Penile cancer	Location
	Prepuce
	Glans
	Body
	Overlapping sites
	Unspecified

What You Need to Do Now

Table 3 describes a list of items to accomplish to prepare your practice for the ICD-10 transition.

Education

Training should involve everyone in the practice, from administrators to those involved in the initiation of patient care, those directly involved in patient care, to those who are involved in the billing process. Training should be tailored toward the individual roles and should be both general ICD-10 training and specialty specific. Administrators and front office staff might need only basic training; those who are more directly involved in patient care and documentation must understand details, specificity, and documentation requirements, while billing staff will need to also understand billing

Table 3 What you need to do now

Training: provider, staff, administrator, coders (general and urology specific)
Assess where ICD-10 will impact the practice, improve superbills
Electronic health record and practice management upgrades
Improve documentation
Perform internal and external testing
Obtain payor rules and regulations
Anticipate slowdown, adjust schedules, and consider increasing line of credit

rules, such as exclusions and sequencing, and health plan coverage rules and regulations. Coders and billers may need more anatomy- and physiology-based training than what was needed for ICD-9. ICD-10 requires a more detailed knowledge and understanding of anatomy and physiology. At a minimum, one should research and list their individual 25 most frequently used ICD-9 codes and understand how those will convert to ICD-10 and the specificity required. This will allow for a detailed understanding of the coding rules for the majority of their individual practice.

On the basis of experience from Canada's transition to ICD-10 [3], it is not sufficient to take a minimalist approach when it comes to this training. The "fear of change" factor needs to be minimized, since one of the greatest obstacles from the Canadian experience was the resistance to change. There must be a personal investment of time and energy for all involved in this conversion. Success will ultimately depend upon the personal commitment and investment in proper education. There will be a learning curve postimplementation despite proper training. Experience from Canada demonstrated that those who gave of their personal time and energy to educate themselves were the most successful in the conversion. This experience showed that a period of about 6 months using the system on a daily basis in an acute general hospital allowed the coding staff to become proficient enough in using the new system that they almost returned to their previous productivity levels [3]. It also showed that a 5-day self-learning package and 2-day in-person training was insufficient for the acute care coders.

Assessment

Practices need to invest the time to assess the areas of their practice where ICD-10 code changes will impact their patient flow. Forms may need to be revised, a superbill (if used) will need to be significantly updated, and billing policies updated when payor rules and regulations are released. It will be important to determine whether certain staff members require more clinical knowledge. A change in workflow may be needed, and one needs to see whether certain staff members will take on different roles and be more involved in the documentation process. There may be increased roles of nurses and those at registration to assist. There will have to be improved communication with billing staff, even possibly getting coders to be more engaged in the work flow.

EHR and PM Upgrades

It will be important to determine very early on whether EHR and PM hardware and software need to be upgraded or even replaced. Vendors should be contacted early on in the process. Practices should try to negotiate the upgrades into their normal contracts if possible.

Improve Documentation

Providers must improve their documentation. Documentation must be specific and support the codes chosen. Payors will be increasingly demanding better documentation, since incomplete documentation may be used as a reason to delay or deny payment for services.

Testing

Testing must be timely and complete. According to the American Health Information Management Association website, the Centers for Medicaid and Medicare Services (CMS) announced that initial testing had a very high success rate. In its week of ICD-10 testing in March 2014, over 90 % of the more than 127,000 claims with ICD-10 codes that were submitted to the Medicare fee-for-service (FFS) claims systems received electronic acknowledgements confirming that their claims were accepted. Some regions reported acceptance rates as high as 99 % (whereas the normal FFS Medicare claims acceptance rates are in the 95 %-98 % range). The testing process did not reveal any significant problems and included negative testing, where testers knowingly inserted errors in the claim to make sure the system rejected the claim as appropriate (http://journal.ahima. org/2014/06/06/cms-announces-results-of-week-of-icd-10acknowledgement-testing/).

Obtain Payor Rules

Coverage rules will likely change, since payors themselves will be releasing lists of acceptable ICD-10 codes for payment for certain conditions and procedures. It is vital to obtain these rules as early as possible, maintain the lists, and realize that these may vary from payor to payor.

Budget

One of the more difficult parts of the transition to predict is the cost to the individual provider and practice. Experience from Canada suggests that practices should anticipate a moderate to significant slowdown, especially early in the conversion process [3]. There will be increased time for provider documentation and code selection. Practices should anticipate delays in payments. Practices need to consider reducing their providers' schedules to see fewer numbers of patients, or at least to anticipate working longer hours especially early in the transition period. Practices should also consider increasing lines of credit due to a reduction in cash flow, which may never get back to preimplementation levels. Canadian experience also suggested

that timelines and budgets were grossly underestimated due to unavoidable dealys and unknown variables that were not anticipated [7].

Conclusion

Implementation of ICD-10 will be complex and will impact most areas of a practice. Although the implementation date was pushed back to October 1, 2015, this does not mean that there should be any further delay in preparations. Practices need to assess the impact of the change on their workflow and to make the necessary process and system changes. Training should be thorough and should be required for all who may have any direct or indirect impact on patient care. Completing this work will support a smooth transition to ICD-10 in time for the compliance deadline. Practices should consider increasing lines of credit and anticipating a decrease in productivity that may never fully be recovered from. Earlier preparation and adequate training will minimize the financial impact of the transition.

Compliance with Ethics Guidelines

Conflict of Interest Dr. Jonathan Rubenstein declares no potential conflicts of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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