There Are Critical Reasons for Not Further Delaying the Implementation of the New ICD-10 Coding System

By Richard Averill, MS, and Sue Bowman, MJ, RHIA, CCS

Abstract: On April 17, 2012, the Department of Health and Human Services (HHS) published a rule proposing postponement of the implementation date for the International Classification of Diseases, 10th Edition diagnosis codes (ICD-10-CM) and procedure codes (ICD-10-PCS) by one year to October 1, 2014. An article in *Health Affairs* titled "There Are Important Reasons For Delaying the Implementation Of The New ICD-10 Coding System" asserts that the ICD-10-CM conversion will be "expensive, arduous, disruptive, and of limited direct clinical benefit." Contrary to the conclusions in this article, implementation of the ICD-10-CM and ICD-10-PCS code sets will provide major advantages over the existing ICD-9-CM code set. Implementation is long overdue and will provide significant cost benefits. Any further implementation delay will increase the cost of the transition as well as perpetuate the costs and negative consequences associated with continued reliance on imprecise diagnosis and procedure information.

On February 16, 2012, Secretary Kathleen Sebelius announced that HHS would be re-evaluating the date by which certain healthcare entities have to comply with the reporting of diagnosis and procedure data using the International Classification of Diseases, 10th Edition diagnosis codes (ICD-10-CM) and procedure codes (ICD-10-PCS). On April 17, 2012, HHS published a rule proposing postponement of the implementation date for ICD-10-CM/PCS by one year to October 1, 2014.[1]

In the April 2012 issue of *Health Affairs*, an article entitled "There Are Important Reasons For Delaying the Implementation Of The New ICD-10 Coding System" attempted to summarize the reasons why the implementation of ICD-10-CM/PCS should be delayed.[2] However, the reasons for moving forward with ICD-10-CM/PCS have been well documented, including in testimony presented during eight days of hearings held by the National Committee on Vital and Health Statistics (NCVHS) between 1997 and 2003 as well as in the January 2009 final rule adopting ICD-10-CM/PCS. Indeed, in the April 17, 2012, proposed rule regarding a one-year delay in ICD-10-CM/PCS implementation, the critical need for a timely adoption of ICD-10-CM/PCS is discussed. This article will address the ICD-10-CM/PCS implementation issues raised in the *Health Affairs* article and supply evidence why the speedy implementation of ICD-10 is both beneficial and vital to the healthcare industry.

Cost Benefit

The *Health Affairs* article questions the cost benefit of implementing ICD-10-CM/PCS. Surprisingly, there was no discussion of the RAND report on the cost benefit of implementing ICD-10-CM/PCS.[3] NCVHS commissioned RAND to do an independent evaluation of the cost benefit of implementing ICD-10-CM/PCS. While there have been other studies to quantify ICD-10-CM/PCS implementation, the RAND study also quantified the benefits.[4] The impact analysis in the January 2009 final rule adopting ICD-10-CM/PCS as the standard for administrative healthcare transactions drew upon the RAND study, as well as other sources, and estimated the total costs of training, productivity losses, and systems changes to be approximately $2.75 billion.[5] Total benefits over 15 years (2011–2025) from more accurate payments, fewer rejected claims, fewer fraudulent claims, better understanding of new procedures, and improved disease management were estimated at $4.5 billion.

Since the RAND study is the most thorough and rigorous independent study of the cost benefit of ICD-10-CM/PCS, any meaningful questioning of the cost benefit of implementing ICD-10-CM/PCS would need to critique the RAND study and demonstrate the flaws in its assumptions and conclusions. Unfortunately, the *Health Affairs* article provides no specific analysis of the cost benefit of implementing ICD-10-CM/PCS other than raising the question and providing some anecdotal examples.

Delay Impact

The cost of delaying the implementation of ICD-10-CM/PCS was not addressed in the *Health Affairs* article. Since the final rule was issued in 2009, the healthcare industry has made significant investments in the ICD-10-CM/PCS transition. Each year implementation is delayed, transition costs increase. During the delay, ICD-9-CM versions of systems will continue to be updated. This will necessitate any conversion work already performed to be updated, retested, and reintegrated. A large part of the cost of conversion is the setup time associated with computer system conversion issues and the training of staff to be proficient in ICD-10-CM/PCS. Any substantial delay essentially wipes out the training and setup investment. The proposed rule estimates that 30 percent of the investment expended to date in preparation for the transition to ICD-10-CM/PCS will be lost due to a one-year delay, and that the amount will double with a two-year delay. In addition, significant ongoing costs are being incurred by the failure to replace the ICD-9-CM code set. Continued use of the out-of-date and imprecise ICD-9-CM code set results in costs associated with:

- Inaccurate decisions or conclusions based on faulty or imprecise data
- Administrative inefficiencies due to reliance on manual processes
- Coding errors related to code ambiguity and outdated terminology
- Worsening imprecision in the ICD-9-CM code set due to the inability of the structure to adequately accommodate requested modifications
- Ongoing maintenance of both the ICD-9-CM and ICD-10-CM/PCS code sets

Development and Maintenance of ICD-10-CM Diagnosis Codes

The authors state "that ICD-10-CM is based primarily on the international version of ICD-10 that the World Health Organization published in 1990-more than two decades ago. Furthermore, this version evolved in drafting committees working from 1982, thirty years ago." This implies that ICD-10-CM is no longer up to date. But the authors fail to mention that ICD-10-CM has been updated annually since its original development to incorporate updates to the WHO version of ICD-10 as well as to respond to requests from physician organizations and other members of the public for additional codes and other modifications that maintain currency and clinical relevance. Many of these modifications were quite extensive (e.g., 2010 revision of leukemia and lymphoma code categories). Thus, ICD-10-CM diagnoses have been kept up to date since the initial version was released, demonstrating that ICD-10-CM is flexible and able to accommodate expansion, whereas ICD-9-CM is not. In fact, ICD-10-CM was one of the major starting points for the development of ICD-11.

The authors also state that the compliance date for ICD-10-CM/PCS was "pushed back" from 2008 to October 2013 to allow the healthcare industry to "adapt their information systems to accommodate a phenomenal increase in new diagnostic and payment codes." This is simply not accurate. The proposed rule for the adoption of ICD-10-CM/PCS was published in August 2008 with a proposed compliance date of October 1, 2011. In the final rule published in January 2009, the compliance date was changed to October 1, 2013, in response to public comments from the industry regarding the amount of time needed for training and systems conversion and testing.

The Number of ICD-10-CM Diagnosis Codes

The *Health Affairs* article appears to imply that the large increase in the number of ICD-10-CM codes creates a burden that may "simply amount to clutter." However, there is no meaningful discussion regarding why the volume of codes creates a burden. It is correctly pointed out that about 20,000 of the 68,000 ICD-10-CM diagnosis codes represent distinct disease entities. The expansion in the number of diagnosis codes is largely due to modifiers such as laterality (left, right) and episode of care (initial, subsequent).

While the use of such modifiers substantially increases the number of codes, the modifiers represent useful distinctions that are straightforward and unambiguous to code. Indeed, the CPT procedure coding system used by physicians contains 30 Level I modifiers, such as bilateral procedure and multiple procedures. In addition, there are more than 30 HCPCS Level II modifiers that are applicable to the physician setting, such as right side and left side. The reporting of the procedures for physician billing is comprised of the basic five-digit CPT code plus up to four modifiers. The possible combinations of the CPT code plus the different modifiers create essentially a limitless number of possible unique CPT code and modifier combinations. Yet using CPT codes and modifiers for physician billing seems to present no burden for physicians.

The authors note that ICD-10-CM devotes 60 percent of its codes to injuries. However, the example given for the expanded level of detail in the injury section is a lamppost injury that is actually from the external cause section of codes, not the injury section. While admittedly the external cause section of ICD-10-CM is very detailed, the authors fail to mention that the external cause codes are not required to be reported by any payer, with the possible exception of worker's compensation claims for which such information is especially valuable. Also, the expansion of the injury and external cause sections in ICD-10-CM has often been cited as a major benefit of ICD-10-CM. For example, a letter from the Johns Hopkins Bloomberg School of Public Health to the NCVHS Subcommittee on Standards and Security stated that "ICD-10-CM represents a significant improvement over the ICD-9-CM and the ICD-10 will open new opportunities in injury research and trauma services evaluation."[6] This letter also stated: "To further research [in the area of non-fatal injuries], we must be able to more accurately classify the nature of the injuries sustained and correlate the nature of injury with the mechanism of the injury, treatment, and outcome. The proposed ICD-10-CM will provide us with a much improved ability to accomplish this task."

Waiting for ICD-11

The *Health Affairs* article appears to argue that waiting for ICD-11 would be preferable to implementing ICD-10-CM/PCS. It is noted that it took the US eight years to adapt the WHO version of ICD-10 and create ICD-10-CM for use in this country. Regardless of the benefits of ICD-11, the US would need a national version to allow for the annual updating required by Congress and US stakeholders. Assuming that the development timeline for a national version or clinical modification of ICD-11 could be cut in half down to four years, it would then take an additional two years to get through the HIPAA rulemaking process. As with ICD-10-CM/PCS, the industry would want at least a three year period for converting systems to ICD-11.

Assuming that ICD-11 becomes available on schedule from WHO in 2016, then the earliest the US could move to ICD-11 would be 2025, or 13 years from now. Many highly desirable objectives for ICD-11 are mentioned by the *Health Affairs* authors. However, with the scheduled availability of the WHO version of ICD-11 four years away, whether ICD-11 will actually be able to achieve those objectives in practice is currently speculation.

The authors appear to suggest that waiting for ICD-11 is desirable because of its anticipated alignment with SNOMED CT, which would eliminate the need for cross-mapping tools between ICD-11 and SNOMED CT. Whether such a degree of alignment will actually be achieved at this early stage of ICD-11 development, again, is speculation. The authors fail to mention that a cross-mapping between ICD-10-CM and SNOMED CT already exists and is publicly available.[7] The Department of Health and Human Services' Health IT Standards Committee recommended that ICD-10-CM replace ICD-9-CM as a standard for problem lists in stage 2 meaningful use.[8] It is somewhat contradictory that the authors of the *Health Affairs* article are members of the Health IT Standards Committee that made this recommendation, and yet the views expressed in their article seem inconsistent with the committee's recommendation.

The idea of waiting for ICD-11 seems out of context with the reality of the pace at which other payment and regulatory changes are occurring. The article seems to argue that because there is so much change occurring, delaying ICD-10-CM/PCS would be a way of better managing the magnitude of the change. However, when the changes are interrelated and interdependent, that strategy is not a viable option. The enormous investment that is being made in accountable care organizations, meaningful use of electronic health records, and value-based purchasing are all predicated on having more precise and detailed diagnostic and procedure information. All parts of the system need to move forward simultaneously in order to achieve the overall desired results.

A replacement for the ICD-9-CM coding system is long overdue. It should have been replaced more than 10 years ago. The ICD-9-CM coding system simply lacks the capacity to keep pace with changes in medical practice and technology. With ICD-9-CM, healthcare professionals often don't know precisely what was wrong with patients or how they were treated. Therefore, it is not always entirely clear what we are paying for and what kind of quality of care we are getting.

Waiting 13 years to replace ICD-9-CM would seriously jeopardize this country's ability to evaluate quality and control healthcare costs. Conversion to ICD-10-CM/PCS now will provide an easier and smoother transition to ICD-11 at some point in the future, after ICD-11 has been completed and released by the WHO and is ready for US implementation. By preparing systems now to accommodate ICD-10-CM/PCS, they will be better able to accommodate the transition to ICD-11.

While the US is looking forward to the many advantages promised by ICD-11, implementation of ICD-11 is not imminent and the adoption of health information technology is moving forward at a rapid pace. Timely implementation of ICD-10-CM/PCS

will minimize the level of retrofitting needed to upgrade to ICD-11.

In any case, the process of implementing ICD-10-CM/PCS began nearly 20 years ago. The US needs to move forward and complete this implementation so that it is more ready to adopt ICD-11 in a timely manner at some point in the future. Implementing ICD-10-CM/PCS is an important step on the pathway to ICD-11.

Coding Clinical Data with ICD-10-CM

The *Health Affairs* article argues that the ability to code clinical data in ICD-10-CM is not materially better than in ICD-9-CM. To support this contention, the authors claim that a Canadian study concluded that "the functional capacity of ICD-10-CM was not materially different than that of ICD-9-CM." This representation of the Canadian study's conclusions is completely misleading.

The Canadian study compared the functional capacity of the WHO version of ICD-10 to ICD-9-CM.[9] It did not, as the authors claim, compare ICD-10-CM to ICD-9-CM. In fact, the study was performed several years prior to the release of ICD-10-CM. The National Center for Health Statistics spent eight years developing a clinical modification (CM) of the WHO version of ICD-10 to create ICD-10-CM for use in this country. The CM modification to the WHO version of ICD-10 was done to provide additional clinical specificity. The US evaluation of the WHO version of ICD-10 concluded that ICD-10 was not significantly better than ICD-9-CM for morbidity applications to warrant implementation, and that a clinical modification of the ICD-10 would be a significant improvement and worth implementing. This led to the development of the US clinical modification (CM). Indeed, Canada also subsequently adapted the WHO version of ICD-10 to create a Canadian version that contained additional clinical specificity (ICD-10-CA). A study focused on the WHO version of ICD-10 has no relevance to the ability to code clinical information with ICD-10-CM.

The authors state that when a woman receives a bilateral prophylactic mastectomy because of family history and the presence of the BRCA2 gene, there is no mechanism for coding this genomic variant as an indication for surgery. This example is used by the authors as evidence for the limited ability of ICD-10-CM to code clinical information. In ICD-10-CM this patient would be coded as follows:

Z40.01 Encounter for prophylactic removal of breast
Z80.3 Family history of malignant neoplasm of breast
Z15.01 Genetic susceptibility to malignant neoplasm of breast

As can be seen from the above ICD-10-CM codes, a prophylactic breast removal, a family history of breast cancer, and a genetic susceptibility to breast cancer can all be coded in ICD-10-CM.

A study by one of the authors is cited as a demonstration that ICD-10-CM is not materially better than in ICD-9-CM for coding clinical data. The authors acknowledge that the study was "small and somewhat dated." Yet the study is the basis of the conclusion that ICD-10-CM lacks needed clinical specificity. Unfortunately, there is no meaningful discussion of the criteria for judging the need for including specific clinical specificity in a diagnostic coding system. Eight years were spent determining the level of additional specificity that would be needed across a wide range of applications from reimbursement to public health reporting. More than a dozen medical and surgical specialty organizations reviewed and provided clinical input during the development of ICD-10-CM. These groups and others continue to provide clinical input through the ICD Coordination and Maintenance Committee process.

Further, ICD-10-CM has been routinely updated for the past decade to accommodate requests to incorporate additional specificity. In the context of the electronic health record, it is not necessary to include in the diagnosis coding system information that is readily available from other sources in the record. ICD-10-CM is a classification system, not a terminology system, and as such is not intended to capture a level of granularity such as specific gene abnormalities. That level of detail is available elsewhere in the medical record, such as laboratory data. Incorporating clinical data in ICD-10-CM is a balance between meeting the needs of specific applications and having an administratively practical system.

In fact, the *Health Affairs* authors do not acknowledge the value of health statistics and administrative data, both of which rely on the International Classification of Diseases and are the basis for much of health policy. The authors also do not

acknowledge the value of using the same base classification for mortality and morbidity data, nor for using a classification that is comparable to that used in most other countries in the world.

The detail added to ICD-10-CM, including attributes such as laterality and episode of care, does not represent "clutter" as the *Health Affairs* authors allege. For example, the addition of information about episode of care allows the collection of more detailed health information from post-acute settings than is available with the use of ICD-9-CM, as well as the ability to differentiate multiple encounters for the same injury versus the occurrence of a new injury. The clinical detail incorporated into ICD-10-CM was not added arbitrarily, but at the request of the medical community and other users of health information because it was felt to be clinically relevant and meaningful for a variety of secondary uses of coded data. These uses go well beyond reimbursement, including measuring the quality, safety, and efficacy of healthcare services, establishing health policy, conducting research, and tracking public health risks.

The benefits of ICD-10-CM, including its improvement over ICD-9-CM, have been well-articulated over the past 10 years-including the RAND study mentioned earlier, field testing results, National Committee on Vital and Health Statistics hearings, ICD-9-CM Coordination and Maintenance Committee meeting materials, and the proposed and final rules for adoption of the ICD-10-CM/PCS code sets.

Procedure Coding

The international version of ICD-10 was developed by the World Health Organization and covers only diagnoses, not procedures. Thus, there is no worldwide standard for procedure coding. In the US, the AMA's CPT procedure coding system is used for all physician and outpatient reporting and payment. For inpatient care, CMS has the responsibility of developing and maintaining the procedure coding system that is currently the ICD-9-CM procedure coding system (PCS). ICD-10-PCS was developed by CMS to replace ICD-9-CM procedures. A delay in the implementation date of ICD-10-CM diagnoses would presumably also delay the implementation date of ICD-10-PCS. The *Health Affairs* article only addressed the issue of diagnosis coding and did not address the issue of procedure coding.

The inadequacy of ICD-9-CM is most acute in its procedure portion. Since the 1970s, when ICD-9-CM was developed, the advances in surgical technology, devices, and methods have been revolutionary. The simple four-digit structure of ICD-9-CM procedure codes is incapable of adequately representing the scope of these changes. For many procedures, basic information such as whether the procedure was performed as a percutaneous, endoscopic, or open procedure is not "codeable."

As a result of the limited remaining space in ICD-9-CM procedures, CMS has had to use "adjunct codes," a mix-and-match scheme that uses a single code for the procedure itself, followed by as many as four additional codes that are not themselves procedures but simply added pieces of information about the procedure performed, such as the device used, the extent of the procedure, or the device material.

This strategy for prolonging the shelf life of ICD-9-CM procedures allows CMS to add additional information without having to create detailed unique codes. Unfortunately, having to code as many as five codes to describe a single procedure makes coding and interpretation of the data difficult and creates a high risk for incomplete and incorrect coding. ICD-9-CM procedure codes are simply no longer a viable means of reporting the scope and complexity of modern medicine.

In contrast, ICD-10-PCS has a clear and unambiguous unique code for each procedure that includes all necessary detail. ICD-10-PCS is a sophisticated, modern procedure coding system from both a computer science perspective and a medical content perspective.[10] It contains a clear English language definition of all terminology and is based on a uniform multi-axial structure. As with ICD-10-CM diagnoses, the 71,918 ICD-10-PCS procedure codes represent a substantial increase in the number of codes. In the multi-axial structure of the seven-character ICD-10-PCS code, each character represents a specific concept (e.g., anatomic site). There are only 3,121 unique concept values representing all the different anatomic sites, root procedures, devices, surgical approaches, etc. Each seven-character ICD-10-PCS code is an allowable combination of these 3,121 individual concept values. Thus, while there is an increase in the number of codes, ICD-10-PCS actually makes documentation and coding more straightforward because it is based solely on 3,121 well-defined concepts.

The inadequacies of ICD-9-CM procedures are particularly acute for a system such as MS-DRGs that uses procedures as one of its primary axes of classification. From a payment perspective, the limitations of ICD-9-CM procedures have clearly compromised the accuracy of the MS-DRGs. Many diverse procedures are coded with the same ICD-9-CM procedure code,

necessitating that they all be assigned to the same MS-DRG even though the individual procedures may have very different costs and outcomes-resulting in inaccurate payments and assessments of hospital performance.

The inadequacies of ICD-9-CM are similarly acute for measuring quality. For example, the Deficit Reduction Act of 2005 (P.L. 109-171) requires that any increase in payment due to the occurrence of certain post-admission complications be eliminated if the complications could "reasonably have been prevented."[11] The ability to judge the preventability of a post-admission complication is severely constrained by the current limitations of ICD-9-CM. ICD-9-CM provides no information on the nature of a surgical complication (e.g. breakdown, displacement, leakage, obstruction, perforation, protrusion) and provides minimal detail on the anatomic site or any devices used in the procedure.

Consider a patient who has a damaged portion of the femoral artery replaced with a synthetic graft and develops a post-op leak in the graft, requiring the incision to be reopened and the graft repaired. In ICD-9-CM the surgical complication would be coded as 996.1 (Mechanical complication of other vascular device/implant/graft) with the procedure 39.49 (Revision of vascular procedure). In contrast, in ICD-10-CM/PCS the surgical complication would be coded as T82.332A, T82.332D, or T82.332S (Leakage of femoral arterial graft, with the 7th character indicating the type of encounter) with the procedure 04WY0JZ (Revision of synthetic substitute in lower artery, open approach). Clearly, ICD-10-CM/PCS provides much more precise information on the complication and the procedure needed to address the complication.

ICD-10-CM/PCS Implementation is a Process and Not a Single Date

ICD-10-CM/PCS implementation is a massively distributed public process that began in 1993. It has taken 19 years of continued effort by multiple federal agencies and countless individuals in the public and private sector just to get this far. The industry has spent the last 19 years preparing to implement ICD-10-CM/PCS. These efforts include: developing a clinical modification (CM) of the WHO version of ICD-10; developing a new procedure coding system (PCS); hiring contractors to support both systems; having extensive comment periods for both systems; testing both systems; developing preliminary crosswalks; adopting the WHO version of ICD-10 for mortality reporting in 1999; conducting pilot studies; performing cost benefit analysis studies; developing and publishing coding guidelines and references; holding hearings; receiving NCVHS endorsement; publishing a proposed rule; publishing a final rule; adopting ICD-10-CM/PCS as a HIPAA standard; establishing an implementation date; producing ICD-9-CM/ICD-10-CM/PCS mappings; conducting programs to train coder trainers; revamping coding curriculums; converting MS-DRGs to ICD-10-CM/PCS; conducting ICD-10-CM/PCS industry conferences; conducting extensive government outreach programs; releasing ICD-10-CM/PCS MS-DRG grouper software; converting hundreds of payment and code edit and care management systems to ICD-10-CM/PCS; conducting more outreach and education; performing annual ICD-10-CM/PCS updates via public process; adopting and implementing the Version 5010 transaction standards; announcing a delay in the implementation date; and publishing yet another proposed rule. And, of course, there was resistance from one or another sector of the industry at and between every step. However, the purpose and value of ICD-10 prevail despite such resistance. The delay proposed by the *Health Affairs* authors would put this massive effort in jeopardy.

Conclusion

The title of the *Health Affairs* article implies that it provides the rationale for delaying the implementation of ICD-10-CM/PCS. However, the article never really states the rationale for a delay. Is it because implementation of ICD-10-CM/PCS will be disruptive and costly? There is no discussion of how a delay makes it less disruptive or costly. Is it because ICD-10-CM/PCS "offers no material improvement over the current system"? The only support for the contention that ICD-10-CM/PCS offers no material improvement is offered by a small and dated dataset for diagnoses, and evidence is not even addressed for procedures.

The article puts considerable effort into criticizing specific aspects of ICD-10-CM/PCS but provides no rationale as to why those criticisms justify further delaying the implementation of ICD-10-CM/PCS. The authors essentially assert that all the other mandated changes in the healthcare system take priority over the implementation of ICD-10-CM/PCS. But they fail to acknowledge that many of the mandated changes are interrelated, interdependent, and predicated on the availability of more precise and detailed diagnostic and procedure information. Finally, the authors advocate for the adoption of ICD-11, even though ICD-11 is several years away from completion and has not yet been evaluated for use in the US.

Although no delay is preferred, the proposed one-year delay strikes a reasonable balance between providing sufficient time for small providers and small hospitals to become compliant, minimizing the financial burden on entities that have been actively planning and working toward being compliant on October 1, 2013, and moving this country to a modern diagnostic and procedure coding system within a reasonable time period.

Richard F. Averill is senior vice president of clinical and economic research at 3M Health Information Systems, Inc. Sue Bowman (sue.bowman@ahima.org) is senior director of coding policy and compliance at AHIMA.

Notes

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