Physicians' Outlook on ICD-10-CM/PCS and Its Effect on Their Practice

Save to myBoK

by Valerie Watzlaf, PhD, RHIA, FAHIMA; Zahraa Alkarwi, MS, HIS; Sandy Meyers, RHIA; and Patty Sheridan, MBA, RHIA, FAHIMA

Abstract

Background—The United States is one of the last countries to change from ICD-9-CM to ICD-10-CM/PCS. The compliance date for implementation of ICD-10-CM/PCS is expected to fall on October 1, 2015.

Objectives—Evaluate physicians' perceptions on the change from ICD-9-CM to ICD-10-CM/PCS and its effect on their practice, determine how HIM professionals can assist in this transition, and assess what resources are needed to aid in the transition.

Results—Twenty physicians were asked to participate in one of three focus groups. Twelve physicians (60 percent) agreed to participate. Top concerns included electronic health record software readiness, increase in documentation specificity and time, ability of healthcare professionals to learn a new language, and inadequacy of current training methods and content.

Conclusion—Physicians expressed that advantages of ICD-10-CM/PCS were effective data analytics and complexity of patient cases with more specific codes. Health information management professionals were touted as needed during the transition to create simple, clear specialty guides and crosswalks as well as education and training tools specific for physicians.

Keywords: ICD-10-CM/PCS, focus group, physicians, health information management, electronic health record

Introduction

Improvements in medical errors, identification of top diagnoses for mortality and morbidity, population health, healthcare services planning, and public health decision making are all driven by the classification of diseases and procedures by alphanumeric codes via the International Classification of Diseases (ICD). Clinical classification systems such as ICD focus on categorizing diagnoses and procedures for reporting, reimbursement, quality management, research, and other secondary uses of the data. The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) is the classification system currently in use in the United States for diagnosis and inpatient procedure data collection, but the United States is expected to transition to the International Classification of Diseases, Tenth Revision, Clinical Modification, and International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-CM/PCS) on October 1, 2015. The National Center for Health Statistics is the federal agency responsible for maintaining ICD-10-CM, the classification system that will be used to capture diagnoses and injuries in all US health environments (inpatient and outpatient). ICD-10-PCS will be maintained by the Centers for Medicare and Medicaid services (CMS) and will be used to capture procedures and services in the inpatient environment.

Background and Significance

ICD-10-CM has more than 69,000 codes, which is more than 55,000 more diagnosis codes than ICD-9-CM, and ICD-10-PCS allows for the creation of approximately 72,000 different procedure codes. ICD-10-CM/PCS is expected to provide better capture of diagnoses and procedures that are missed by ICD-9-CM, and extensive training on ICD-10-CM/PCS will be required to achieve accuracy in coding and ultimately reimbursement. The codes used in this new system are more complex, and this level of complexity is expected to facilitate many other uses of this data, such as identifying top causes of mortality

and morbidity, identifying changes in medication management, detecting healthcare fraud, developing patient safety criteria, setting healthcare policy, improving clinical performance, and enabling countless other public health initiatives. Analysis of the benefits of conversion to ICD-10-CM/PCS has been extensive; however, little analysis has been done to identify the methods needed for smooth conversion as physicians struggle with the changes in this massive classification system.

Even though implementing ICD-10-CM/PCS has many positive aspects, 5-23 barriers still occur as a result of perceived inadequacies of the system, extensive education and training, costs associated with this unfunded mandate, its impact on reimbursement, and the presence of multiple, competing priorities and change initiatives. A suggested set of guidelines to follow in the transition process has been developed and may help with the transition. However, few studies have approached physicians to obtain their input as to how health information management (HIM) professionals can assist them in making a smooth transition from ICD-9-CM to ICD-10-CM/PCS. This study aimed to identify what HIM professionals can do to make the change less daunting for physician practices and what the physicians' education, training, and software needs are.

Objective

The objective of this research study was to explore the resources physicians believe they need in order to implement ICD-10-CM/PCS within their practice. The authors collected in-depth data on specific research questions and evaluated those questions to determine how physician needs could be met as they progress with ICD-10-CM/PCS implementation in an electronic environment.

Methods

Participants

Members of the research team included experts in health informatics and information management, epidemiology, and classification systems. All members brainstormed about what types of practitioners and specialties represent key areas within ICD-10-CM/PCS and should be included in the focus group. The specialty areas discussed included oncology/hematology, ophthalmology, endocrinology, behavioral health, neurology, cardiology, pulmonary, gastrointestinal, dermatology, orthopedics, urology/nephrology, obstetrics and gynecology, pediatrics, internal medicine, and general surgery as well as other areas such as emergency medicine and physical medicine and rehabilitation. The research team nominated participants they felt represented one of the key areas in the ICD-10-CM/PCS classification system, were familiar with the topic, were known for their ability to respectfully share their opinions, and were willing to volunteer at least one hour of their time. Once the participants were chosen, each was called or sent an e-mail asking them to participate in a focus group conference call to discuss ICD-10-CM/PCS. An oversampling of about 10 to 20 percent was performed to compensate for those not electing to participate. Incentive payments of \$100 were provided to participants. An Excel spreadsheet was used to track all invitation phone calls and e-mails; this spreadsheet included the date, invitee name, phone number, whether the invitee was able to participate, e-mail address, whether the e-mail invite was sent, and specialty. The research team brainstormed about the choice of a moderator and focused on the following characteristics: excellent listening skills, knowledge of classification systems, ability to keep personal views out of the discussion, status as someone the group can respect, and focus group experience. The research team selected a physician with a background in behavioral health who was an American Health Information Management Association (AHIMA) certified trainer in ICD-10-CM/PCS. The University of Pittsburgh Institutional Review Board approved this study at the exempt level. Other members of the focus group had backgrounds in the following specialties: emergency medicine, ophthalmology, internal medicine, plastic/reconstructive surgery, general surgery, obstetrics/gynecology, psychiatry, family medicine, hematology/oncology, and physical medicine and rehabilitation.

Focus Group Questions

After extensive review of the literature on the subject of ICD-10-CM/PCS and focus group methodology as well as discussion and modification of the questions, the research team established final focus group questions that included the following:

• Engagement Questions: (1) What do you know about ICD-10-CM/PCS? (2) Where did you hear about it? (3) How has your organization/office begun preparation for ICD-10-CM/PCS?

- Exploration Questions: (1) What is your involvement with accounts receivable in your practice? (2) Have you ever had any organized training in coding in the past? If so, what format or modalities worked best for you? (3) Do you code from a superbill? How is coding currently done in your practice? (4) What have you done in your practice thus far to prepare for ICD-10-CM/PCS documentation requirements? (5) What have you done in your practice thus far to prepare for the ICD-10-CM/PCS coding transition? (6) Have you ever used or would you be interested in using data mining to identify practice patterns? (7) What is your number one concern about the transition to ICD-10-CM/PCS in your practice? (8) How do you feel when told about possible damage caused by not coding properly? (9) What type of assistance do you need to ensure a smooth transition to ICD-10-CM/PCS in your practice? (10) How can HIM professionals assist you in making the transition easier?
- Exit Question: What is your top priority today to prepare for the ICD-10-CM/PCS transition in your practice?

Reflection questions (think-back) and requests for examples and choices were also employed in order to obtain more detailed information from participants. Questions were ordered into a logical flow, and prompts and probes were developed for each question. A prompt is a question that can facilitate discussion if the initial question does not elicit a good response, and a probe is a question that explores an issue in more depth.

Focus Group Participation

Three one-hour focus group conference calls were held with physician participants in October, 2013. The invitation to participate in the focus group was made by members of the research team. If the invited physician did not respond to the first invitation, a member of the research team followed up by e-mail, phone call, or in-person visit. In addition, personal e-mails were sent to remind participants of the upcoming focus group conference call, and sample questions were included. Focus groups, which were conducted by the physician moderator with a background in behavioral health and ICD-10-CM/PCS, lasted 60 minutes. All three focus groups were conducted via conference call, and all physician responses to the questions and any further discussion were recorded on the conference call recording. Two researchers, an epidemiologist with a background in HIM (VW) and a doctoral student with a background in health information systems (ZA), took detailed notes of all three focus group discussions. The detailed notes were compared to the recordings for accuracy, and a final written transcript was developed by the primary researcher (VW). Each focus group call included no more than five participants to increase participant response and discussion. Before the focus group questions were asked, participants were asked if they agreed to have the call recorded. Also, focus group etiquette, including keeping all information confidential and providing participants with a chance to review the results in aggregate form before publication, was also discussed. Introductions were made in which physicians summarized their years in practice and their specialty.

Data Analysis

The research team met after the closing of the focus group to go over their notes and discuss any additions or changes and the methods for organizing the information. All recordings were transcribed and compared to the notes taken by the research members. NVivo software was used to organize the transcribed data into themes. Each quote was organized under the questions and then categorized under a specific category, as recommended in Eliot and Associates' *Guidelines for Conducting a Focus Group*. ³⁹ The coding technique involved descriptive coding for demographic data, topic coding for theme and subcategory classifications, and analytical coding for overall categorization of major responses. Also, concept maps were employed to determine which aspects of a particular question were most important and for visual depiction of the results.

Results

Twelve physicians participated in the focus group study. Three focus groups were held. The response rate to the requests for participation was 60 percent (12 of 20). The demographic characteristics of the participants are presented in <u>Table 1</u>.

Table 1

Demographic Characteristics of Respondents (N = 12)

Characteristic	tic Response	
	Mean	SD
Age (years)	54.67	12.71
Years of experience	23.42	12.48
	No.	Percentage
Gender		
Male	9	75.0
Female	3	25.0
Setting		
Hospital (or other facility) only	5	41.6
Private practice only	2	16.7
Both	5	41.6
Medical specialty		
Emergency medicine	2	16.7
Ophthalmology	1	8.3
Internal medicine/geriatrics	1	8.3
Plastic/reconstructive surgery	1	8.3
General surgery	1	8.3
Obstetrics/gynecology	1	8.3
Psychiatry	2	16.7
Family medicine	1	8.3
Hematology/oncology	1	8.3
Physical medicine	1	8.3
Previous use of electronic health records		
Yes	10	83.3
No	2	16.7
Exposure to ICD-10-CM/PCS		
Yes	3	25.0
No	9	75.0

Demographics and Background

The mean age of the participants was 54.67 years with a standard deviation of 12.71 years. Seventy-five percent of the participants were male (n = 9). The average number of years of experience was 23.42 with a standard deviation of 12.48 years and a range of 1 to 40 years. Five physicians worked for hospitals and had their own private practice, while another five physicians worked only for a healthcare facility and two physicians worked only in their private practice. With respect to exposure to electronic health records (EHRs), only two physicians did not use EHRs in their practice at the time of the study. With respect to use of ICD-10-CM/PCS, only three physicians (25 percent) mentioned previous exposure to ICD-10-CM/PCS. Physicians who participated in this study represented a wide range of medical specialties that are listed in Table 1.

Coding and Transition to ICD-10-CM/PCS

The following results were categorized on the basis of the themes produced from the NVivo software and the questions that were asked.

When asked about ICD-10-CM/PCS, only three physicians mentioned previous exposure to the new coding system. However, most participants had concerns about transitioning to ICD-10-CM/PCS and the consequences associated with this transition, such as implications of documentation, compliance, and reimbursement. Furthermore, participants repeatedly stated their needs

for resources to help them smoothly implement ICD-10-CM/PCS. Typical comments related to coding and the transition to ICD-10-CM/PCS are shown in Figure 1. These comments, which relate to specificity, fear, laterality, complexity, and benefits, are also found in other articles in the literature related to the ICD-10-CM/PCS coding transition. For example, Chute et al. 40 state that even though some groups have spent large amounts of money and time on the transition, some other groups, such as physician practices, are not similarly prepared for the transition. An article titled "ICD-10's Ten-Year Reign of Fear" discusses how practices fear the change for many reasons, such as the need to meet quality and performance indicators, increased staff time for modifications, increased staff time for training, decreased productivity of coders and providers, potential for staff turnover, and potential loss of revenue. 41 Furthermore, an article by Carpentier discusses the fear of liability under the False Claims Act due to a change in the coding system and states that limitations on false claims by physicians need to be adopted for at least two years after implementation of ICD-10-CM/PCS. 42 Johns et al. discuss how the specificity and laterality components of the ICD-10-CM system provide benefits as well as additional detail in documentation. For example, for a patient with a wrist fracture with two doctor visits in a month, the ICD-10-CM coding system will include whether the injured wrist was the right or the left, whether the visit was an initial or subsequent encounter, and whether the patient had routine healing or complications. This specificity is not provided under ICD-9-CM. However, this increased specificity may lead to increased levels of documentation. 43

Figure 1: Quotes on Transitioning to ICD-10-CM/PCS

"My number one concern is *the increased specificity of the codes* especially with respect to laterality (right/left) and sequelae/specific details of conditions like stroke will have a major impact on my field of medicine because the level of detail physicians now will need to document is significantly increased."

- "Articles on ICD-10 are fear-based. I try not to go there and do what I am doing."
- "My observation is ICD-10 is scary for most people."
- "We have regular departmental meetings for ICD-10 in the hospital."
- "For primary care physicians, injury areas like sprains and strains are the same. Fractures will be very different, change in mental codes is not that bad, and OB codes are different. In general, it will be different across medical subspecialties." "My knee-jerk reaction is that I don't want these people [HIM] in my life! But that is foolish and it would be helpful to have a training session at least; what changes are all about; upgrade what we are already doing and transitioning us to ICD-10." "We try to compare 9 and 10 to begin the conversion; we looked at most commonly used codes across the region; 1,000 physicians, with 8–9 thousand visits per day and pulled our data and looked at it and when you look at the most commonly used codes, only 6 percent of the codes are not mapped to ICD-10. For orthopedics, 15 percent did not map to ICD-10 and the reason they did not map was because of laterality."
- "Most of the stuff will not affect us directly because we don't do our own coding. They don't direct us in how to code. I learned to code at residency. Coding doesn't affect us as physicians directly."
- "It helps us since most of our patients are complex and we have not been able in the past to put the complexity into it. For OB [obstetrics] codes it will help us because when we deal with high-risk OB, which is my area, we can include more than four diagnoses and for our high-risk OB this will be very helpful."
- "I think ICD-10 coding is a good thing. Originally, I was upset because it will more than double the amount of coding but for benefits I am for them."

Billing and Reimbursement

Outpatient billing was a major concern for physicians because inpatient billing is performed by the hospital. In general, physicians agreed that documentation specificity and consequent code assignment is challenging for their practices. Furthermore, many physicians stated that they usually downcode a patient's diagnosis to avoid claim rejection, audit, and unpleasant consequences of noncompliance. Also, outliers represent a problem for some physicians because such claims usually take extended time for processing, which results in delayed reimbursement. Payment maximization and proper billing practices were identified by physicians as some of the most important areas for potential training and education.

Representative comments from focus group discussions regarding billing, audit, and reimbursement are shown in <u>Figure 2</u>. Physician billing practices, outliers, and concerns regarding proper payment and reimbursement are also noted in the literature 44-46 as major concerns for physicians as they transition to ICD-10-CM/PCS. For example, according to a Physicians Foundation analysis of the future of medical practices, the overall uniqueness of the US payment system causes concern for

physician groups, citing the proliferation of new documentation requirements not only for ICD-10-CM/PCS but also for other requirements such as meaningful use, the Physician Quality Reporting System, Medicare Value-Based Purchasing, Hospital Compare, and accountable care organizations. All of these requirements lead to increased documentation time and reduced clinical productivity, which can affect reimbursement, auditing, and billing practices. Also, according to Potente, the federal government should amend certification requirements to include fraud prevention tools within every EHR. The fraud tools could potentially eliminate all instances of fraud such as upcoding and billing for services not rendered, which make up the majority of instances of healthcare fraud and are most likely to increase with the use of EHRs. Furthermore, according to an article in *GI and Hepatology News*, the delay in the ICD-10-CM/PCS coding system was greeted with relief, especially in smaller physician practices that were not ready to make the change. The law also delayed most postpayment claims audits by Recovery Audit Contractors (RACs) unless evidence of gaming, fraud, abuse, or delays in delivering care is found.

Figure 2: Quotes on Billing, Audit and Reimbursement

"I wish to have feedback on how to deal with outliers (especially for Medicare and Medicaid billing) and what documentation to keep to get reimbursed properly."

"I currently use a billing sheet from 1 page to 7–8 pages long. My concerns are procedures but since it is all set there is no confusion about them. We do about 10 different procedures and not that much confusion."

"For outpatient, I only give a general impression to the billing service; no numbers of the codes and they probably feed that into the system and select the codes hoping what they put in is accurate. If I do this on the inpatient side; if I put my impression in, it would give 10 different diagnoses and each has a separate code."

Twenty-five percent of the participants (three physicians) stated that billing is performed internally by an office or business manager. Also, 42 percent (five physicians) outsource billing to a billing service or company. Two physicians (17 percent) were not sure how billing was performed, and two physicians (17 percent) had direct experience with billing. As far as coding is concerned, 75 percent of the participants (nine physicians) do their own coding or oversee coding. Also, 25 percent (three physicians) have someone else, such as an office manager, business manager, or another staff member, do their coding (see Table 2).

Table 2

Coding, Billing, and Specialty Services

Physician Number	Billing	Coding	Specialty
1	Billing company	Does own coding	ER
2	Billing company	Does own coding	ER
3	Office manager	Office manager	Ophthalmology
4	Billing service	Does own coding	Internal medicine
5	Not sure	Does own coding	Plastic/reconstructive surgery
6	Billing company	Does own coding	General surgery
7	Business manager	Business manager	Obstetrics/gynecology
8	Works with billing	Administrator oversees coding, billing (certified ICD-10 trainer)	Family medicine
9	Done internally	Does own coding (fee for service)	Psychiatry
10	Billing service	Does own coding	Psychiatry
11	Not sure	Someone applies coding, don't know who	Hematology/oncology
12	Works with billing	Does own coding (is a physician champion for coding)	Physical medicine and rehabilitation

Documentation Requirements and Clinical Documentation Improvement

Physicians expressed concern with respect to documentation requirements associated with implementation of ICD-10-CM/PCS, and this concern can also be found in the literature. 50-52 Caskey et al. found that when pediatric ICD-9-CM diagnosis codes of Illinois Medicaid patients were examined, 26 percent were found to be convoluted when mapped to ICD-10-CM. They also found that when these codes were examined for accuracy, 8 percent had implications for reimbursement. Information loss, which includes the potential for a loss of clinically relevant information, occurred with 14 percent of pediatric ICD-9-CM codes. For example, when the ICD-9-CM code of 385.83 (retained foreign body of middle ear) maps to ICD-10-CM code H74.8X9 (other disorder of middle ear and mastoid), a very specific code in ICD-9-CM is mapped to something more general in ICD-10-CM, which could lead to problems in clinical accuracy and changes in clinical documentation improvement methods. The authors of that study concluded that special attention to these codes will be necessary when transitioning to ICD-10-CM.⁵³ McCarty et al. provide a ten-step plan for all types of private practices on how to prepare for the transition with a focus on documentation and billing tools that can be used. 54 Furthermore, in a Medical Group Management Association (MGMA) survey of more than 570 physician practices (more than 21,416 physicians), 89 percent responded that they were concerned or very concerned about clinical documentation changes following ICD-10 implementation. 55 Also, in this study, more were concerned about changes on the outpatient side because they believed inpatient documentation education and training will be conducted by the hospitals. Most physicians are aware that upcoming changes to the coding system will have serious implications for billing and reimbursement. On the other hand, some physicians believe either that the changes will not affect their current documentation or that they are already compliant with ICD-10 documentation requirements. In addition, the granularity and increased specificity of ICD-10 was mentioned repeatedly by physicians, and some believe this difference will require major changes for some specialties and not for others. However, one physician suggested that such specificity would decrease reimbursement. Also, one physician indicated that training and educating new residents should be required to prepare for the transition to ICD-10.

Overall, the following summary provides an overview of the physicians' feelings about documentation requirements and improvements needed as the transition to ICD-10-CM/PCS approaches:

- 1. Wait until issues occur and then make changes, and learn about the changes as they happen.
- 2. Even though ICD-10-CM/PCS will have more specificity and more codes, it will not affect physician practices that much because some specialties do not do many different procedures or treat many different diagnoses.
- 3. Physicians are not seeking out specific training right now and will rely on the billing or EHR vendor to prepare them with system guides, templates, and order sets.
- 4. Documentation will be important for some specialty areas such as trauma, orthopedics, and debridement because these areas in ICD-10-CM/PCS have very specific codes.
- 5. Physicians are uncertain as to how the increased specificity will affect reimbursement.

These issues are reinforced in the MGMA survey, in which 60 percent of physician respondents said it would be much more difficult to include the most frequently used diagnosis codes on a superbill, 42 percent stated it would be much more difficult to document a patient encounter under ICD-10, and 67 percent said it would be much more difficult for the clinician to select the appropriate diagnosis code under ICD-10. 56

Representative quotes regarding documentation requirements for ICD-10-CM/PCS are shown in Figure 3.

Figure 3: Quotes on Documentation Requirements for ICD-10-CM/PCS

"We did not see a big deficit in our surgical dictation, like type of medical devices. We found that surgeons have been doing a great job in procedure notes and other notes in the chart such as nurse's notes and other places in the chart."

"We have not gotten feedback for ICD-10 and in obstetrics/gynecology that would be very helpful."

"We will get some updated modules online; a panel counting (a message displayed in the EHR; counting down to ICD-10 implementation). Has not been directly addressed to us yet. We have a giant banner of ICD-10 implementation countdown." "Feedback from our billing service on how to improve coding and documentation; charts are sent back with a note on how much we could have generated and how much actually we did back up by documentation."

"I don't know how it is going to work for ICD-10 (selecting which part of the colon for diagnosis and then selecting the procedure code for that specific spot)."

"We are looking for diagnosis coding patterns; review for billing and for specific codes; we give physicians three scores in

three areas (diagnosis accuracy, E/M accuracy, and back-office procedures)."

"I am pretty detailed too; document a lot of stuff in the record so information is all there. Some people cut and paste but this doesn't help to update the record. I haven't done any comparisons about what I am going to bill in ICD-10."

Electronic Health Records

The physicians who participated in this study represent a wide spectrum of clinical specialties. All but two of those physicians mentioned using an EHR system. Table 3 provides a list of all EHR systems used by the physicians. When asked about their experience with the EHR, physicians indicated efficiency, accuracy, reporting capabilities, and higher technical functionalities as requirements for the ICD-10-CM/PCS transition. Only two physicians mentioned that they do not currently use any electronic system; the reason cited was lack of proper training for their staff. While some physicians acknowledge the greater potential of EHR systems in today's healthcare environment, some find them distracting and inefficient. Furthermore, some physicians hope to utilize the capability of information technology to enhance their billing by connecting the EHR system to billing applications and automatically updating the codes. These results coincide with the findings of the MGMA survey, in which 78 percent of physicians responded that their EHR would or did need an upgrade in order to accommodate ICD-10-CM codes. Persentative quotes from focus group discussions regarding EHR use and ICD-10-CM/PCS are shown in Figure 4.

Table 3

List of Electronic Health Record (EHR) Systems Used by Participants

List of Electronic Health Record (EHR) Systems Used by Participants Number of Physicians	EHR System Used	Clinical Specialty
2	FirstNet and T-System with online modules for guides on needed documentation	Emergency medicine
1	Compulink with links to Epic and Cerner PowerChart	Ophthalmology
1	Allscripts for orders, etc., in house; paper records for outpatients	Internal medicine/geriatrics
1	Nextech system	Plastic and reconstructive surgery
1	eClinicalWorks	General surgery
2	Cerner PowerChart	Obstetrics/gynecology; psychiatry
1	Epic	Family medicine
2	Epic and Cerner PowerChart	Hematology/oncology Physical Medicine and rehabilitation
1	No EHR	Psychiatry

Figure 4: Quotes on Major Priorities for EHR Use and ICD-10-CM/PCS

[&]quot;Top priority today is to make sure *all the functionality* in our EMRs [electronic medical records] are ready for the transition."

[&]quot;Linking EMR to the billing company which is difficult to interface (biggest concern is disrupting cash flow)."

[&]quot;Efficiency: used to see 30-50 patients a day but now dropped to 20-30 patients a day so this is time consuming."

[&]quot;Timeliness and accuracy of EMR; partners need to learn a new language. The other two concerns are: (1) We use a scribe

[—]someone in the room with me; they are going to have to learn a new language and it is difficult for them; (2) We need to

be careful about who to hire, and their intellectual ability to learn a new language."

"Efficiency, I need to implement an EHR soon and it extends their [staff] day by 1–2 hours; slows us down and limits the number of patients that we see and training the medical assistant and we have scribes that write faster than they type so navigating the screens is a problem with the EHRs that I have seen and my staff are constantly multitasking. So, this is not going to be possible and makes us much less efficient."

"Been using an EHR for 15 years and I tell people that we are data rich and information poor. It is hard to pull reports to get things done."

Training and Development

When asked about their need to transition to ICD-10-CM/PCS, physicians identified training as a major requirement for conversion. The physicians suggested the following training needs: (1) proper coding and documentation requirements for each code set and clinical specialty, (2) payment maximization and other billing activities such as dealing efficiently with outliers, (3) training by professional associations for residents and physicians on how changes are going to affect their clinical specialty, (4) utilization of the EHR system to increase efficiency of clinical processes, and (5) development of easy training materials to help educate physicians and engage them in the transition process. According to a physician interviewed in Exscribe eNews, physicians are very busy, and a training video is the worst way to train them on ICD-10. Also, as we found out from the physicians in our focus group, the interviewed physician from Exscribe eNews stated that physicians do not need to know every single code but only those that relate to their specialty of practice. Figure 5 provides representative quotes from focus group discussions regarding education and training in preparation for ICD-10-CM/PCS. The need for training and development related to subspecialties is also supported by research performed by DeAlmeida et al. In their evaluation of the ICD-10-CM documentation for specific chapters, they found that educating and training of clinicians specific to their area of practice is key to accurate documentation. Frequent refresher sessions are also needed to maintain the specificity required for ICD-10-CM/PCS coding.

Figure 5: Quotes on Education and Training in Preparation for ICD-10-CM/PCS

"I have not done anything except read an article or two about how codes are going to increase in ICD-10. I am relying on my billing service to do that. With respect to the hospital, they have not really given us any formal training for ICD-10 at all." "Hospital coding is totally depending on ICD-9 and as they convert to 10, they will do the training (for inpatient). But that is inpatient. What about outpatient? The hospital will train you as they have a vested interest. For outpatient, I don't know." "Hiring an HIM [professional] full-time to help with the coding systems, educate billers and coders on how to maximize reimbursement (like you downcode this)."

"An HIM professional could help with the EMR conversion timeline. Yes, anything to support my practice and make it efficient, to comply and to maximize reimbursement; feed me information about that."

"I have a small practice; I am not using an EMR and am still writing notes. I would love to have information on the new codes and how that it is going to affect my patients' insurance; need a cheat sheet on how to translate the two different codes (crosswalk)."

"HIM could be involved in developing training materials that are palatable for physicians, who typically don't want to spend very much time on training for things like this. It's hard to engage them so finding a set of materials that they will respond to positively would be valuable."

"For OB, training comes from professional organizations about documentation requirements for each individual OB code." "For surgeons, nothing came from formal groups; most of the information regarding ICD-10 preparation and training would come from the hospital side as they have the best interest in training the physicians mainly for hospital utilization and reimbursement purposes."

Data Analytics

Most of the participating physicians do not currently have experience with data analytics. They would like feedback on the level of billing of Evaluation and Management (E/M) codes to get reimbursed properly (avoiding downcoding as well as upcoding). Some are interested in documentation requirements of ICD-10-CM/PCS that pertain to their specialties. Most do

not use data analytics for the purpose of internal auditing. Some have not done data analytics but do some type of benchmarking among their partners to examine E/M coding and billing. Some use computers to analyze every partner and every procedure that they bill and every E/M code and ICD-9-CM code they use. Some still have paper charts and therefore cannot do extensive data analytics.

The physicians who participated in the focus groups would like the whole process to be less "fear based" and more based on the idea "we want you to do the right thing and we want you to get appropriately reimbursed." This finding is especially true for physicians in private practice who have limited billing support and training and are responsible for their own reimbursement. Therefore, they would like to see fewer fear-based articles and more educational training that focuses on doing the right thing and supporting the physician who wants to get properly reimbursed. This finding is supported by Manchikanti et al., who explain the fears and anxieties of physicians as they prepare for ICD-10, citing concerns related to data accuracy, the learning curve, the level of detail needed to support payment claims due to increased specificity in ICD-10, and the overall use of data analytics to extract quality data for public health surveillance. 60

Some physicians in the focus groups use a national company to do data analytics on a regular basis for data research but do not use data analytics personally. Also, they get regular feedback on practice patterns, such as critical care outliers. Most said they are very detailed in their documentation. "Some people cut and paste but this doesn't help updating the record" was one physician's comment. Most have not done any comparison about what to bill for in ICD-10-CM/PCS when compared to ICD-9-CM.

HIM Professionals' Assistance

Physicians were also asked how HIM professionals could assist them and their practice in the transition to ICD-10-CM/PCS. Most did not know of any training yet for ICD-10-CM/PCS but believed it would occur through either their EHR vendor, their hospital, their specialty association, or their billing service. Most believed that simple resources are necessary for physicians in order to have a smooth transition to ICD-10-CM/PCS and that the approach should be positive and not fear based. Resources that summarize the most important codes and the accompanying documentation that is necessary for proper reimbursement are of utmost importance for physician practices. Education and training are key to a successful transition, and HIM professionals should be at the center of the development and distribution of effective education and training materials for physician practices (see Table 4).

Table 4: Health Information Management (HIM) Professionals' Assistance in the Transition to ICD-10-CM/PCs with Quotes from Focus Group Participants

Category	Responses
Training performed/preparation for ICD-10-CM/PCS	Most do not know of any training yet but assume it will occur as the transition to ICD-10-CM/PCS approaches. A few have had limited training.
Summary of physicians' needs	 "Need a crosswalk of how OB codes convert to ICD-10 with a simple chart or table." "How are we training people to document in the record to be able to code correctly. Need to know what changes in documentation we will need that will affect what we are going to put in the record." "Think about approach-don't be fear based but positive-HIM can help by developing crosswalks about the 10 most common diagnoses; what they mapped to in ICD-10 for every specialty, something like that will be helpful for docs, i.e., approach for dummies." "ICD-10 for dummies dumbed down by specialty. Conversion approach for ICD-10; by specialty instead of overwhelming us by all details, like the top -10 list." "Summarize the top 10 reasons claims are being rejected. You are not making 20 mistakes but one mistake 20 times so fixing that one mistake cleans it up pretty well." "Hiring a HIM [professional] full-time to help with the coding systems, educate billers and coders on how to maximize reimbursement."

- 7. "Provide information and knowledge which is power, and "they could help us implement the right processes. "Anything that allows generating the work that supports our practice and someone can feed me information, make it more efficient, to comply and to maximize reimbursement for the work that we do."
- 8. Training-"half day to help us make the conversion." "That should be their role. They could be involved in developing training materials that are palatable for physicians, who typically don't want to spend very much time on training for things like this. It's hard to engage physicians so finding a set of materials that they will respond positively to would be valuable."
- 9. "More information on the new codes and how that it is going to affect my patients' insurance; DSM has many modifiers already so if there was a consistency across or a cheat-sheet on how to translate the two different codes (crosswalk). Navigate between ICD-10 and DSM and new codes; for patients to get their reimbursement efficiently by the insurance company without going back and forth for the right code. Real need for the HIM professional here."
- 10. "Love to have a patient registry based on diagnosis; then be able to use the EMR to stratify diagnoses and show how many patients are within each one; if have standardized diagnostic criteria see how people are getting treatment in a similar fashion or having follow up."
- 11. "Where HIM can help you is to get that structured documentation to make it simple and easy, help you and your team understand where people fit in that diagnostic criteria, and then help you to monitor and give reports on your data so that you will be able to look at the quality of care and outcomes and have some confidence that the diagnosis codes that you are stratifying with are accurate and being used appropriately."

Each focus group discussion ended with physicians describing their top priorities for the transition to ICD-10-CM/PCS. The physicians' priorities can be summarized as follows:

- 1. EHR vendor/software efficiency, functionality, timeliness, accuracy and readiness for the transition and overall effectiveness. Physicians were very concerned about the time it takes to use the EHR and how it leads to less time with patients.
- 2. Increase in documentation specificity, which takes time away from patients and being an advocate for patients.
- 3. Learning a new language. The physicians expressed the need for a "Rosetta Stone for ICD-10," not only for physicians but also for their partners, scribes, and other personnel who will also need to learn the new language.
- 4. Inadequacy of current education and training methods and content.

Discussion

The change to ICD-10-CM/PCS is planned to occur on October 1, 2015. It will affect the way that physicians run their practices, but the change to ICD-10-CM/PCS, according to the 12 physicians in this focus group, is not as daunting as some may expect. The participating physicians seemed ready for the change and wanted a more positive outlook on the change than what had been explained to them previously. Both the focus group physicians and the literature suggest that HIM professionals can help by developing education and training materials that are specific to the physician specialty and are not overwhelming. 61-63 Physicians voiced concern that hospitals will train them on ICD-10-CM/PCS because it will benefit the hospital but they would be responsible for their own practices, and they wanted to know what types of training on ICD-10-CM/PCS would be specific to their specialty practices. Timeliness is key because physicians said that the change to electronic charting has greatly extended their work day rather than being more efficient as they had expected. The change to ICD-10-CM/PCS is a new language, not only for physicians, but also for their staff. With a new language should come a new way to teach it, with simple, creative tools that make the learning and the change easy, affordable, efficient, and effective. Physicians repeatedly asked for simple tools such as "ICD-10 for Dummies" or a "Rosetta Stone for ICD-10." Simple, concise, clear changes that are displayed not with fear but with the positive aspects of this change emphasized are what the physicians repeatedly explained they needed most. Most of the physicians we talked with were ready to embrace the change to ICD-10-

CM/PCS and looked forward to ways in which they could mine new types of data that could help them with their patients and their practices. Crosswalks that are specific to physician subspecialties are needed. Physicians said that they do not need all of the coded information and crosswalks that are now available, but they do want resources that are specific to their specialty and can minimize the amount of time it takes them to document, code, and bill appropriately so that they get the correct reimbursement for their services.

Follow-up

We followed up with the physicians in the focus groups to determine what impact, if any, the delay in ICD-10-CM/PCS implementation to October 1, 2015, will have on their physician practice. Below are some of their comments:

- "The delay of implementation of the ICD-10 has not had any effect on my practice. I honestly don't feel positively or negatively about the delay as I just take life one day at a time. When it comes it comes and we will deal with it."
- "Because we have an [EHR system] and use display names that have codes attached/hidden behind them, the delay did not impact our implementation too much. At the time of the delay announcement, we had 90 percent of the terms already in our system. In our system, we have the display name, the code in ICD-9, and the code in ICD-10 attached. On September 30th of whatever year, we change the pointer in the files so that it reads the ICD-10 code on October 1st instead of the ICD-9 code on September 30th. For the clinician, nothing changes because they see the same display name. There were a few concepts we could not implement due to their definition changing when ICD-10 is rolled out. MI is the example I use as it changes from 8 weeks to 4 weeks and our old MI code has a parenthetical statement in the display name. Old MI (> 8 weeks); old MI (> 4 weeks). For the terms that change significantly, we had developed "diagnosis calculators" that guide the clinician to the correct term. The orthopedic physician types in "femur fracture," the computer logic reads the deficiencies, and a click button calculator fires with the options: Visit type: initial, subsequent; type of healing: routine, etc. They click on the options and the calculator comes up with the final ICD-10 compliant display name and code. They cannot close the chart until the ICD-10 compliant diagnosis is entered. From the clinical side the delay had little impact. From an IT systems perspective, it will give us more opportunity to do testing internally as well as with some of our vendors who were barely (if at all) going to be ready."

Limitations

Limitations of this study include not having a representative sample of all ICD-10-CM/PCS coded areas within the physicians' areas of expertise. We tried to include all ICD-10-CM/PCS coded areas but were only able to include physicians in the specific areas listed in Table 1. Physicians were included from Pennsylvania, Colorado, California, Illinois, and Texas, so another limitation is that the physicians did not represent all geographic locations and therefore their responses are not generalizable to all physician groups. However, the diversity and broadness of scope of the physicians' areas of expertise helped to include rich and diverse data. Other limitations include not using a face-to-face focus group, focus group members' not feeling comfortable discussing sensitive information, and having one or two people dominate the conversation. This last limitation can be remedied by using a very good moderator who can glean information from each member of the focus group consistently and fairly.

Conclusion

Spending time with their patients is what physicians want to do. Can HIM professionals provide the tools to enable them to do that? The physicians that we spoke with indicated that the simplistic, specialty-focused, positive approach for learning the ICD-10-CM/PCS system is not what they have been exposed to yet. If the ICD-10-CM/PCS implementation is going to work for everyone involved, HIM professionals need to seek out new ways to engage physicians with this system. Also, the new ways do not have to be elaborate. Physicians repeatedly stated that they need simple systems and approaches focused on their specialty practices to make the ICD-10-CM/PCS transition work. Only then will the ICD-10-CM/PCS implementation be effective and efficient.

Acknowledgment

This study was supported in part by the CAREinnoLab of Care Communications, Inc., and the Department of Health Information Management in the School of Health and Rehabilitation Sciences at the University of Pittsburgh (I# 0038385).

Valerie Watzlaf, PhD, RHIA, FAHIMA, is an associate professor in the Department of Health Information Management at the University of Pittsburgh School of Health and Rehabilitation Sciences in Pittsburgh, PA.

Zahraa Alkarwi, MS, HIS, is a doctoral student in the Department of Health Information Management at the University of Pittsburgh School of Health and Rehabilitation Sciences in Pittsburgh, PA.

Sandy Meyers, RHIA, is a research specialist at Care Communications in Chicago, IL.

Patty Sheridan, MBA, RHIA, FAHIMA, is president of Care Communications in Chicago, IL.

Notes

- Centers for Medicare and Medicaid Services (CMS), Road to 10: The Small Physician Practice's Route to ICD-10. "ICD-10 Basics." Available at http://www.roadto10.org/?page_id=1643 (accessed July 21, 2014).
- [2] Centers for Disease Control and Prevention (CDC). "Classification of Diseases, Functioning, and Disability: International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)." Available at http://www.cdc.gov/nchs/icd/icd10cm.htm (accessed July 21, 2014).
- [3] Averill, R., R. Mullin, B. Steinbeck, N. Goldfield, T. Grant, and R. Butler. *Development of the ICD-10 Procedure Coding System (ICD-10-PCS)*. Available at http://www.cms.gov/Medicare/Coding/ICD10/Downloads/2014-pcs-procedure-coding-system.pdf (accessed July 21, 2014).
- [4] Centers for Disease Control and Prevention (CDC). "Classification of Diseases, Functioning and Disability: International Classification of Diseases (ICD-10-CM/PCS) Transition." Available at http://www.cdc.gov/nchs/icd/icd10cm_pcs_background.htm (accessed July 21, 2014).
- [5] American Health Information Management Association (AHIMA) position statement. "US Must Adopt ICD-10-CM and ICD-10-PCS: Immediate Action to Upgrade Medical Code Set Standards Needed." *Journal of AHIMA* 76, no. 9 (2005): 26, 28.
- 6 AHIMA. "AHIMA Prepares for ICD-10-CM/PCS." AHIMA Advantage 12, no. 7 (2008): 10.
- [7] Bowman, S. "Coordination of SNOMED-CT and ICD-10: Getting the Most out of Electronic Health Record Systems." *Perspectives in Health Information Management* (Spring 2005).
- [8] Bowman, S. "Why ICD-10 Is Worth the Trouble." Journal of AHIMA 79, no. 3 (2008): 24–29.
- 19 Butler, R., and R. Mills. "ICD-10 Reimbursement Mappings." Journal of AHIMA 80, no. 4 (2009): 66–69, 71–72.
- [10] Butler, R. "The ICD-10 General Equivalence Mapping: Bridging the Translation Gap from ICD-9." *Journal of AHIMA* 78, no. 9 (2009): 84–85.
- [11] Fenton, S., and S. Bowman. "Implementing ICD-10-CM/PCS in the US: Implications for Health Services Research." Presented at Academy Health, Chicago, IL. June 2009.
- [12] Grider, D. "ICD-10-CM/PCS: The Time for Preparation Is Now." CMA Today 42, no. 1 (2009): 8–10.
- [13] Henderson, T., J. Shepheard, and V. Sundararajan. "Quality of Diagnosis and Procedure Coding in ICD-10 Administrative Data." *Medical Care* 44, no. 11 (2006): 1011–19.
- [14] Jayne, K., and R. Casey. *Introduction of ICD-10 in Australia: Backcoding and Comparability Factors*. Bethesda, MD: World Health Organization, 2001.

- Naik, M., and H. A. Nygaard. "Diagnosing Dementia—ICD-10 Not So Bad After All: A Comparison between Dementia Criteria According to DSM-IV and ICD-10." *International Journal of Geriatric Psychiatry* 23, no. 3 (2008): 279–82.
- Quan, H., B. Li, L. D. Saunders, G. A. Parsons, C. I. Nilsson, A. Alibhai, and W. A. Ghali. "Assessing Validity of ICD-9 and ICD-10 Administrative Data in Recording Clinical Conditions in a Unique Dually Coded Database." *Health Services Research* 43, no. 4 (2008): 1424–41.
- [17] Rode, D. "Why ICD-10 Can't Wait." Journal of AHIMA 79, no. 10 (2008): 18–20.
- [18] Steindel, S. "International Classification of Diseases, 10th Edition, Clinical Modification and Procedure Coding System: Descriptive Overview of the Next Generation HIPAA Code Sets." *Journal of the American Medical Informatics Association* 17, no. 3 (2010): 274–82.
- [19] Skull, S. A., R. M. Andrews, G. B. Byrnes, D. A. Campbell, T. M. Nolan, G. V. Brown, and H. A. Kelly. "ICD-10 Codes Are a Valid Tool for Identification of Pneumonia in Hospitalized Patients Aged > or = 65 Years." *Epidemiology and Infection* 136, no. 2 (2008): 232–40.
- [20] Watzlaf, V., J. H. Garvin, S. Moeini, and P. Anania-Firouzan. "The Effectiveness of ICD-10-CM/PCS in Capturing Public Health Diseases." *Perspectives in Health Information Management* 4 (2007): 6.
- [21] Ruhl, J., and W. Zumar. "ICD-10 Essential for Healthcare Registries." Journal of AHIMA 84, no. 1 (2013): 64-66.
- Rode, D. "Embracing ICD-10 Advocacy: HIM Professionals Must Offer Implementation Help to Physicians." *Journal of AHIMA* 84, no. 2 (2013): 16–18.
- Rose, A. "Transitioning a Physician Practice to ICD-10." *Journal of AHIMA*83, no. 11 (2012): 70–72.
- [24] Quan, H., S. Drosler, V. Sundararajan, E. Wen, B. Burnand, C. Couris, P. Halfon, J. M. Januel, E. Kelley, N. Klazinga, et al. "Adaptation of AHRQ Patient Safety Indicators for Use in ICD-10 Administrative Data by an International Consortium." Agency for Healthcare Research and Quality (AHRQ) Health Services Research Projects, 2006. Available at http://www.ahrq.gov/downloads/pub/advances2/vol1/advances-quan_52.pdf.
- Nachimson Advisors, LLC. The Cost of Implementing ICD-10 for Physician Practices—Updating the Nachimson Advisors Study: A Report to the American Medical Association. 2014. Available at http://himss.files.cms-plus.com/FileDownloads/icd-10-costs-for-physician-practices-study(1).pdf.
- Boyd, A., J. John, M. Burton, M. Jonen, V. Gardeux, I. Achour, R. Q. Luo, I. Zenku, N. Bahroos, S. Brown, et al. "The Discriminatory Cost of ICD-10-CM Transition between Clinical Specialties: Metrics, Case Study, and Mitigating Tools." *Journal of the American Medical Informatics Association* (2013). doi:10.1136/amiajnl-2012-001358.
- [27] Hohl, Corinne M., A. Karpov, L. Reddekopp, and J. Stausberg. "ICD-10 Codes Used to Identify Adverse Drug Events in Administrative Data: A Systematic Review." *Journal of the American Medical Informatics Association* (2013). doi:10.1136/amiajnl-2013-002116.
- [28] Castagnini, A., A. Bertelsen, and G. E. Berrios. "Incidence and Diagnostic Stability of ICD-10 Acute and Transient Psychotic Disorders." *Comprehensive Psychiatry* 49, no. 3 (2008): 255–61.
- Chute, C., S. Huff, J. Ferguson, J. Walker, and J. Halamka. "There Are Important Reasons for Delaying Implementation of the New ICD-10 Coding System." *Health Affairs* 31, no. 4 (2012): 836–42.
- [30] Creed, F. "New Research on Medically Unexplained Symptoms: Much Remains to Be Done before DSM V and ICD-10 Can Provide Satisfactory New Classification." *Journal of Psychosomatic Research* 66, no. 5 (2009): 359–61.
- Finch, C. F., and S. Boufous. "Do Inadequacies in ICD-10-AM Activity Coded Data Lead to Underestimates of the Population Frequency of Sports/Leisure Injuries?" *Injury Prevention* 14, no. 3 (2008): 202–4.

- [32] First, M. B., and D. Westen. "Classification for Clinical Practice: How to Make ICD and DSM Better Able to Serve Clinicians." *International Review of Psychiatry* 19, no. 5 (2007): 473–81.
- Lawrence, D. "Getting Up to Code: While Some Wait for Vendors to Save Them from ICD-10, Savvy CIOs Are Taking the Reins Early." *Healthcare Informatics* 25, no. 11 (2008): 26–28.
- [34] Qian, Z., Q. He, H. M. Lin, L. Kong, D. Liao, J. Gong, C. M. Bentley, and H. Wei. "Exploring Uncertainty of the Change from ICD-9 to ICD-10 on Acute Mortality Effects of Air Pollution." *Environmental International* 34, no. 2 (2008): 248–53.
- [35] Richardson, D. B. "The Impact on Relative Risk Estimates of Inconsistencies between ICD-9 and ICD-10." *Occupational Environmental Medicine* 63, no. 11 (2006): 734–40.
- [36] Rivers, P. A., J. A. Frimpong, and M. A. Rivers. "Transitioning from ICD-9-CM to ICD-10-CM: The Examination of Potential Barriers." *Journal of Health Care Finance* 35, no. 2 (2008): 76–83.
- [37] AHIMA. ICD-10-CM/PCS/PCS Transition: Planning and Preparation Checklist. 2011. Available at http://journal.ahima.org/wp-content/uploads/ICD10-checklist.pdf.
- [38] Bloomrosen, M. Bowman, S.; Zender, A., <u>Achieving ICD-10-CM/PCS Compliance in 2015: Staying the Course for Better Healthcare—A Report from the AHIMA 2014 ICD-10/CAC Coding Summit.</u> Perspectives in Health Information Management.
- [39] Eliot and Associates. *Guidelines for Conducting a Focus Group*. 2005. Available at http://assessment.aas.duke.edu/documents/How to Conduct a Focus Group.pdf.
- [40] Chute, C., S. Huff, J. Ferguson, J. Walker, and J. Halamka. "There Are Important Reasons for Delaying Implementation of the New ICD-10 Coding System."
- [41] Sullivan, T. "ICD-10's Ten-Year Reign of Fear." Government Health IT 6, no. 5 (2011): 10–33.
- [42] Carpentier, P. J. "The Risk of Getting Paid: Why ICD-10-CM May Increase Physician Liability under the False Claims Act." *Quinnipiac Health Law* 16 (2013): 117–48. Available at http://www.quinnipiac.edu/prebuilt/pdf/SchoolLaw/HealthLawJournalLibrary/Volume16 Carpentier.pdf.
- [43] Johns, H., C. Havens, D. Robinson, B. Pothakamuri, D. Paul III, and A. Coustasse. "ICD-10 in the United States: Better Late Than Never." Presented at the Midwest Business Administration Association Conference, Chicago, Illinois, February 28, 2013.
- [44] Goldsmith, J. The Future of Medical Practice: Creating Options for Practicing Physicians to Control Their Professional Destiny. The Physicians Foundation, 2012. Available at http://www.utahmed.org/docs/FutureMedPractice.pdf.
- [45] Potente, R. "Maximizing the Future: The Case for Mandating Fraud Prevention Tools in Electronic Health Record Software." *Law School Student Scholarship* 547 (2014). Available at http://scholarship.shu.edu/student_scholarship/547.
- [46] Schneider, M. E. "President Signs SGR Patch and ICD-10 Delay into Law." GI and Hepatology News 8, no. 6 (2014): 1.
- [47] Goldsmith, J. The Future of Medical Practice: Creating Options for Practicing Physicians to Control Their Professional Destiny.
- [48] Potente, R. "Maximizing the Future: The Case for Mandating Fraud Prevention Tools in Electronic Health Record Software."
- [49] Schneider, M. E. "President Signs SGR Patch and ICD-10 Delay into Law."
- [50] Caskey, R., J. Zaman, H. Nam, S. Chae, L. Williams, G. Mathew, M. Burton, J. Li, Y. Lussier, and A. Boyd. "The Transition to ICD-10-CM: Challenges for Pediatric Practice." *Pediatrics* (2014). doi:10.1542/peds.2013-4147.

- [51] McCarty, J., N. Swanson, D. Dougherty. "In Private Practice: 10 Steps to ICD-10." *The ASHA Leader* 19 (2014): 36–37. doi:10.1044/leader.IPP.19032014.36.
- [52] Murphy, K. "Physician Practices Very Concerned about ICD-10, Says MGMA." *EHR Intelligence*, February 5, 2014. Available at http://ehrintelligence.com/2014/02/05/physician-practices-very-concerned-about-icd-10-says-mgma/.
- [53] Caskey, R., J. Zaman, H. Nam, S. Chae, L. Williams, G. Mathew, M. Burton, J. Li, Y. Lussier, and A. Boyd. "The Transition to ICD-10-CM: Challenges for Pediatric Practice."
- [54] McCarty, J., N. Swanson, D. Dougherty. "In Private Practice: 10 Steps to ICD-10."
- [55] Murphy, K. "Physician Practices Very Concerned about ICD-10, Says MGMA."
- [<u>56</u>] Ibid.
- [<u>57</u>] Ibid.
- Exscribe. "Health Information Managers Work to Calm Physicians' Fears over ICD-10." *Exscribe eNews*, October 29, 2013. Available at http://www.exscribe.com/exscribe-e-news/health-information-managers-work-to-calm-physicians-fears-over-icd-10.
- DeAlmeida, D., V. Watzlaf, P. Anania-Firouzan, O. Salguero, E. Rubinstein, M. Abdelhak, and B. Parmanto. "Evaluation of Inpatient Clinical Documentation Readiness for ICD-10-CM." *Perspectives in Health Information Management* (Winter 2014).
- [60] Manchikanti, L., F. Falco, A. Kaye, and J. Hirsch. "The Disastrous But Preventable Consequences of ICD-10." *Pain Physician* 17 (2014): E111–E118.
- [61] Murphy, K. "Physician Practices Very Concerned about ICD-10, Says MGMA."
- [62] Exscribe. "Health Information Managers Work to Calm Physicians' Fears over ICD-10."
- [63] DeAlmeida, D., V. Watzlaf, P. Anania-Firouzan, O. Salguero, E. Rubinstein, M. Abdelhak, and B. Parmanto. "Evaluation of Inpatient Clinical Documentation Readiness for ICD-10-CM."

Article citation:

Watzlaf, Valerie J.M.; Alkarwi, Zahraa; Meyers, Sandy; Sheridan, Patty Thierry. "Physicians' Outlook on ICD-10-CM/PCS and Its Effect on Their Practice" *Perspectives in Health Information Management* (Winter, January 2015).

Driving the Power of Knowledge

Copyright 2022 by The American Health Information Management Association. All Rights Reserved.