

Road to ICD-10-CM/PCS Implementation: Forecasting the Transition for Providers, Payers, and Other Healthcare Organizations

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by Tekla B. Sanders, MBA, MHA; Felicia M. Bowens, MSM; William Pierce, RHIA; Bridgette Stasher-Booker, PhD, CSM; Erica Q. Thompson, MD, CDFS; and Warren A. Jones, MD, FAAFP

Abstract

This article will examine the benefits and challenges of the US healthcare system's upcoming conversion to use of the International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) and will review the cost implications of the transition. Benefits including improved quality of care, potential cost savings from increased accuracy of payments and reduction of unpaid claims, and improved tracking of healthcare data related to public health and bioterrorism events are discussed. Challenges are noted in the areas of planning and implementation, the financial cost of the transition, a shortage of qualified coders, the need for further training and education of the healthcare workforce, and the loss of productivity during the transition. Although the transition will require substantial implementation and conversion costs, potential benefits can be achieved in the areas of data integrity, fraud detection, enhanced cost analysis capabilities, and improved monitoring of patients' health outcomes that will yield greater cost savings over time. The discussion concludes with recommendations to healthcare organizations of ways in which technological advances and workforce training and development opportunities can ease the transition to the new coding system.

Key words: International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System; ICD-10-CM/PCS; International Classification of Diseases, Ninth Revision, Clinical Modification; ICD-9-CM; disease classifications; coding

Introduction

On October 1, 2013, the Centers for Medicare and Medicaid Services (CMS) will convert from using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) to using the International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS).¹ The US healthcare industry has not seen a change of this magnitude since the conversion to the use of diagnosis related groups (DRGs). The migration to ICD-10-CM/PCS will allow healthcare providers to categorize diseases, document medical complications, and track healthcare outcomes more effectively.^{2,3,4,5,6,7,8,9,10,11} Improvements expected to occur as a result of the conversion to ICD-10-CM/PCS should enhance clinical documentation of patients' medical conditions; positively impact the health status of rural, underserved, and disadvantaged populations; and improve continuity of care.¹² It is expected that revenue will decrease during the initial implementation period due to decreased productivity. Additionally, possible shortages of qualified coding professionals may occur during the transition period.^{13,14,15} Accordingly, with potential decreases in productivity, attitudes toward the ICD-10-CM/PCS implementation are mixed among healthcare providers, payers, and other healthcare organizations.^{16,17,18,19}

As the US healthcare industry transitions to a more integrated system of care through technological innovations (e.g., the increased utilization of electronic health records, electronic prescribing systems, and health information exchanges), changes are also occurring in the regulatory policies related to coding.^{20,21,22} For nearly 30 years the United States has used the ICD-9-CM system of coding; over time, however, the ICD-9-CM code sets have become archaic in identifying clinical care patterns, and they lack the granularity needed to practice evidence-based medicine.^{23,24,25,26} With advances in medical technology and the expansion of medical procedures, the level of specificity desired in diagnostic and procedural codes is growing.^{27,28} The change to ICD-10-CM/PCS presents an opportunity for US providers, healthcare organizations, and payers not only to expand the ways in which medical procedures are documented for billing purposes but also to enhance the

specificity at which patient-level data may be utilized to improve patient health outcomes, reduce medical errors, enhance quality data reporting, and increase the accuracy of claims payments.^{29,30,31,32} This article will examine the benefits and challenges of converting to ICD-10-CM/PCS, review the costs of implementation, and assess the potential benefits for health outcomes.

Background

Classification of Diseases and the Establishment and Utilization of ICD-9-CM

The systematic classification of diseases associated with mortality and morbidity has been documented since the late 18th century.^{33,34} The classification of diseases has evolved from the Bertillon Classification of Causes of Death and the International List of Causes of Death to the development of the International Classification of Diseases (ICD), which is used worldwide by healthcare providers and organizations.^{35,36} Developed by the World Health Organization (WHO) in 1975 and revised in 1976, the International Classification of Diseases, Ninth Revision (ICD-9) has been utilized globally by countries including the United Kingdom, France, Australia, and Germany to document and track various categories of disease.^{37,38} ICD-9-CM, the clinical modification of ICD-9 introduced by the United States in 1979, increased the number of diagnostic codes and created a coding system to capture inpatient procedural codes in the United States.³⁹ Nevertheless, with advances in medical applications and the continuous development of new, innovative medical procedures, ICD-9-CM no longer produces the desired results necessary to meet the increasing information needs to ensure uniformity within the evolving healthcare industry.^{40,41}

Conversion to ICD-10-CM/PCS

Under the provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the Department of Health and Human Services (HHS) in January 2009 issued a final rule guiding the adoption of ICD-10-CM/PCS.⁴² Developed by the Centers for Medicare and Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC), ICD-10-CM/PCS is poised to take full effect on October 1, 2013.^{43,44,45,46} The switch to ICD-10-CM/PCS signals the country's shift to a universal coding system that could offer a more precise representation of procedures and services being performed by providers and healthcare organizations across the United States.⁴⁷ ICD-10-CM/PCS will more accurately illustrate the types of medical conditions encountered by providers and other healthcare organizations, thereby reducing redundancy of healthcare, improving patient health outcomes, decreasing medical errors, and enhancing reporting of healthcare quality data.^{48,49} Additionally, it will possibly aid in the reduction of fraud and abuse and increase the overall accuracy of medical claims payments.⁵⁰ The transition to ICD-10-CM/PCS may also afford the United States opportunities to disseminate public health disease and surveillance data globally.^{51,52}

Differences between ICD-9-CM and ICD-10-CM/PCS

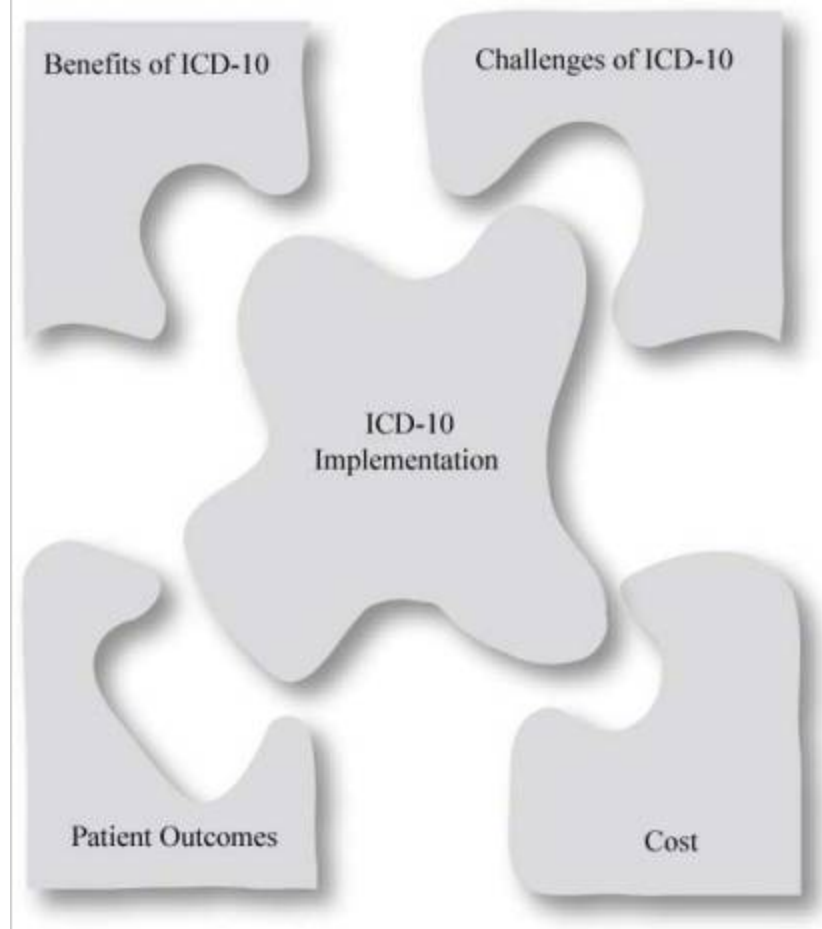
The migration to ICD-10-CM/PCS signals a major upgrade to the country's current coding system. With the conversion, the number of available diagnosis and procedural codes will significantly increase. Under ICD-9-CM, approximately 17,000 codes are currently available for use.^{53,54} In contrast, ICD-10-CM/PCS will consist of more than 155,000 codes and will be able to more effectively implement new codes as the evolution of medical technology and medical procedures continues.^{55,56} ICD-10-CM/PCS offers numerous advantages over ICD-9-CM that underscore the importance of migrating to the new version. For providers, payers, and other healthcare organizations, the advantages of ICD-10-CM/PCS include the expansion of injury codes, the reduction in the number of codes necessary to accurately describe a medical condition due to increased specificity of diagnostic codes, and the inclusion of pertinent information vital to measuring ambulatory and managed care encounters.^{57,58} As a result, the shift to ICD-10-CM/PCS heightens the US healthcare system's ability to more accurately gauge healthcare services, improve the monitoring and surveillance of diseases, and produce quality healthcare data to improve patient outcomes.⁵⁹

Migration to ICD-10-CM/PCS

For entities covered under HIPAA (e.g., “health plans, healthcare clearinghouses, and ... healthcare providers”), the move to ICD-10-CM/PCS will require understanding both the benefits and the challenges of implementation, recognizing the cost

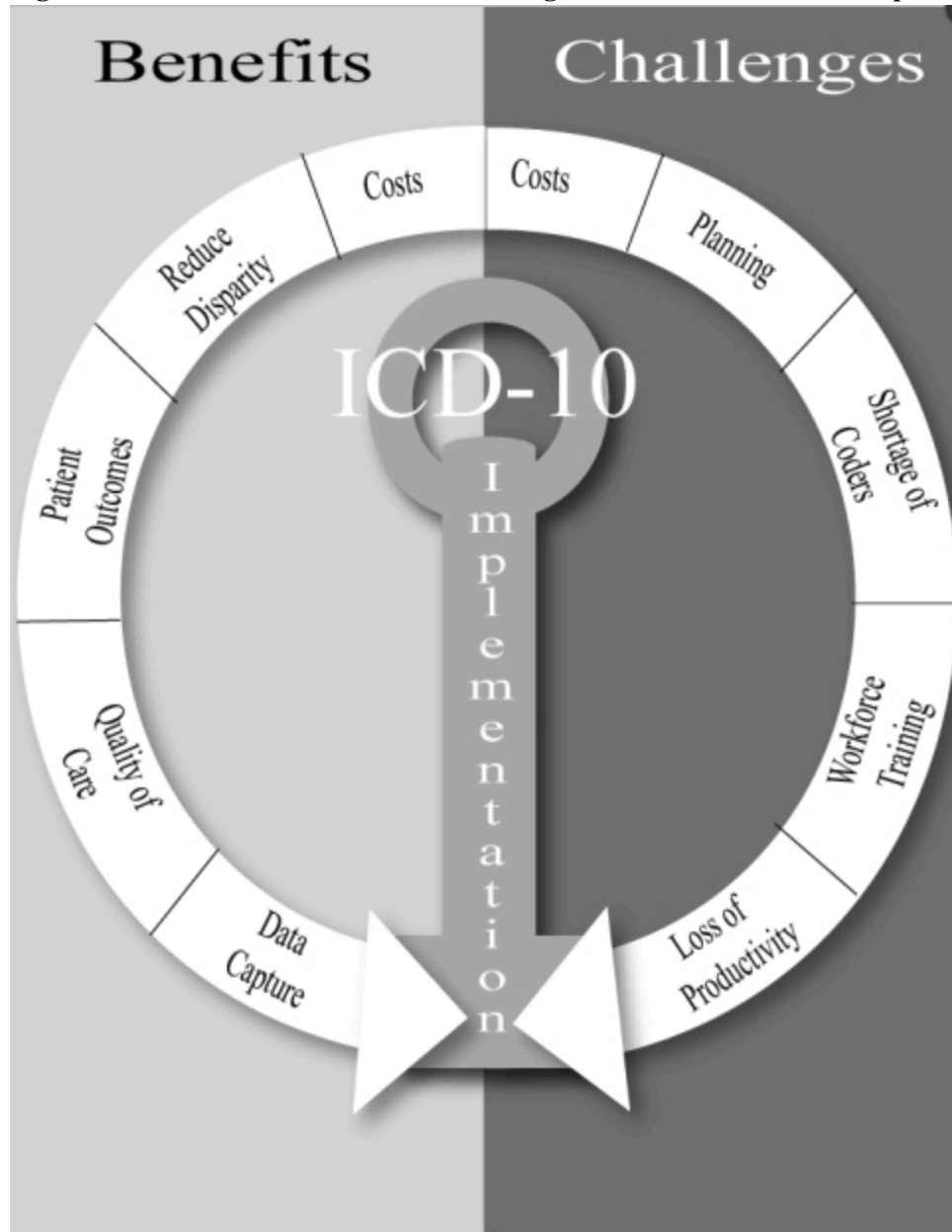
associated with converting to ICD-10-CM/PCS, and identifying the potential benefits to improving patient outcomes, as illustrated in [Figure 1](#).^{60,61} With the October 1, 2013, deadline steadily approaching, providers, payers, and other healthcare organizations must prepare for the transition that lies ahead. In the following sections, the perceived benefits and challenges of ICD-10-CM/PCS conversion are discussed, costs of ICD-10-CM/PCS implementation are reviewed, and the potential benefits of ICD-10-CM/PCS for improving patient outcomes are presented.

Figure 1: Essential Components of ICD-10-CM/PCS Implementation



Perceived Benefits of Implementation

The transition to ICD-10-CM/PCS has been described as both essential and beneficial to the progression of the US healthcare system.⁶² As the US healthcare industry continues to advance medically and technologically, a more modern coding structure is required to reflect and support these developments.⁶³ To that end, ICD-10-CM/PCS offers many benefits that will in turn improve major areas of concern, as illustrated in [Figure 2](#). The country's push for implementation is not a new undertaking because various divisions of the US healthcare industry (hospitals, professional healthcare organizations, medical/surgical device manufacturers, etc.) have advocated and embraced the idea of implementing ICD-10-CM/PCS for many years.⁶⁴ ICD-10-CM/PCS will provide more precise classification and reimbursement of medical procedures and allow providers to query data related to health conditions to improve patient health outcomes.^{65,66} The new coding structure will facilitate improvements in cost reduction, improve quality of care for patients, and update the way healthcare data are captured to positively affect health outcomes.^{67,68}

Figure 2: Perceived Benefits and Challenges of ICD-10-CM/PCS Implementation

Benefit: Enhanced Quality of Care

Through the utilization of ICD-10-CM/PCS, providers will be able to increase the capture of data on diagnoses that can be used for assessing and improving the quality of care for certain chronic health conditions.⁶⁹ Numerous updates have been made to basic terminology and the disease classification system to create consistency with existing clinical practice. The specificity offered in the new classification system will support healthcare professionals in their delivery of services in addition to enabling assessment and improvement of the overall quality of patient care.⁷⁰ The utilization of the ICD-10-CM/PCS coding system will increase the efficiency of disease management and documentation for provider performance programs.⁷¹

Benefit: Cost

According to a HHS estimate, the conversion to ICD-10-CM/PCS will cost an annual estimated cost of \$2.6 million at a present value discount of 3 percent and \$2.3 million at a present value discount of 7 percent over 15 years.⁷² Despite these figures, the advancement of the nation's coding system will equip healthcare providers and payers with better information in their attempts to control costs.⁷³ The increased accuracy of payments and reduction of unpaid claims will produce cost benefits that overshadow the expenses of migration to ICD-10-CM/PCS.^{74,75} These savings have been projected by HHS to

surpass costs within five years.^{76,77,78} It is anticipated that a reduction in healthcare costs will result from the employment of a more specific coding system and ultimately produce great incentives and quality outcomes for years to come.

Benefit: Data Capture

The United States in recent years has faced many public health and bioterrorism events (e.g., the Gulf oil spill and outbreaks of the West Nile virus and *Salmonella* infection).⁷⁹ The country's immediate response to such events has been limited due to the US healthcare system's dependence on ICD-9-CM.⁸⁰ The initial tracking of these public health and bioterrorism incidences was hindered due to the country's inability to effectively record, document, and report occurrences.^{81,82} The transition to ICD-10-CM/PCS will allow the United States to efficiently report statistical information for dissemination to public health and disease surveillance systems including the World Health Organization.⁸³ The use of a classification system similar to those established in other developed countries would allow the United States to more effectively track and monitor medical conditions and health outcomes.⁸⁴

Perceived Challenges to ICD-10-CM/PCS Conversion

As US providers and payers embark on the tedious migration from ICD-9-CM to ICD-10-CM/PCS, numerous challenges include concerns with planning, implementation costs, possible shortages of qualified coders, and the need to address workforce training and education shortfalls to prevent losses in productivity and reductions in revenue. With each challenge, various obstacles lie ahead as providers and payers prepare to meet the 2013 deadline. Left unresolved, these challenges will significantly disrupt the ICD-10-CM/PCS implementation and conversion process.

Challenge: Planning

The transition to ICD-10-CM/PCS will be complex and somewhat cumbersome. The migration to ICD-10-CM/PCS will necessitate that multiple key personnel on both the clinical and administrative sides of healthcare and payer organizations come together to meet the challenges.⁸⁵ Conversion to ICD-10-CM/PCS will require implementation teams (comprising administrators and other key department managers) to meet and strategically plan months ahead of the actual implementation.^{86,87} It will require the “synchronization and symmetry” of entire healthcare organizations.⁸⁸ Additionally, healthcare organizations will need to effectively and efficiently develop implementation plans and plans to communicate scheduled timelines.^{89,90,91} Moreover, providers and payers will also need to keep each other informed of their respective implementation timelines.^{92,93} Working closely together in a collaborative effort, providers and payers will ultimately guide the implementation process, which will determine the level to which ICD-10-CM/PCS implementation is successful.⁹⁴

Challenge: Cost

Another challenge that could potentially hinder the conversion process is the estimated cost associated with transitioning to ICD-10-CM/PCS. Recent literature suggests that the estimated cost associated with converting to ICD-10-CM/PCS will exceed \$25,000, depending on the size of hospitals, physician offices, or other healthcare entities.⁹⁵ It is estimated that for small physician practices composed of three physicians, the cost for converting to ICD-10-CM/PCS will average around \$83,000.^{96,97} Medium-sized physician offices (ranging from 9 to 10 physicians), on the other hand, are predicted to spend on average an estimated \$285,000 on the conversion.⁹⁸ For larger physicians' offices, the cost associated with converting is estimated to average \$2.7 million, and the cost could reach \$15 million to \$20 million for hospitals and other large healthcare entities.^{99,100,101} In light of the estimated cost associated with converting to ICD-10-CM/PCS, it will become essential for hospitals, physicians, payers, and other healthcare entities to thoroughly plan for the conversion process to ensure all required tasks are outlined and properly budgeted for so that a complete picture of expected expenses can be determined.

Challenge: Shortage of Qualified Coders

In addition to planning and cost, the reduction in qualified coding professionals may also impede the implementation process. Transitioning to ICD-10-CM/PCS will require coders to learn a more complex coding system, which may be intimidating for some.¹⁰² With the average age of today's coding professional estimated at age 54, the healthcare industry could experience an unprecedented shortage of qualified coders because many may opt to retire instead of learning the new coding

requirements.^{103,104} As a result, providers, payers, and other healthcare organizations may have to invest resources to recruit and train new coding professionals.¹⁰⁵ Failure to maintain adequate numbers of coders could potentially create backlogs in record processing, which could lead to a reduction in revenue streams.¹⁰⁶

Challenge: Workforce Training and Education

While the transition to ICD-10-CM/PCS will necessitate the advance training of inpatient and outpatient coders, training will also be necessary for other healthcare personnel.^{107,108} For physicians and other healthcare workers, the transition will signal a change in the way patient encounters must be documented for timely reimbursement and the collection of critical patient data.¹⁰⁹ As clinicians prepare for the transition to ICD-10-CM/PCS, it will be important for them to recognize how ICD-10-CM/PCS will impact their ability to properly identify diagnosis and procedure codes.¹¹⁰ As a result, the level of accuracy required for complete documentation will require physicians to be more detailed in their reporting of patient interactions.^{111,112} Failure to efficiently and accurately document patient encounters will result in possible backlogs, which will ultimately delay the processing of claims and impact the flow of incoming revenue for hospitals, physicians' offices, and other healthcare facilities.¹¹³

Challenge: Loss of Productivity

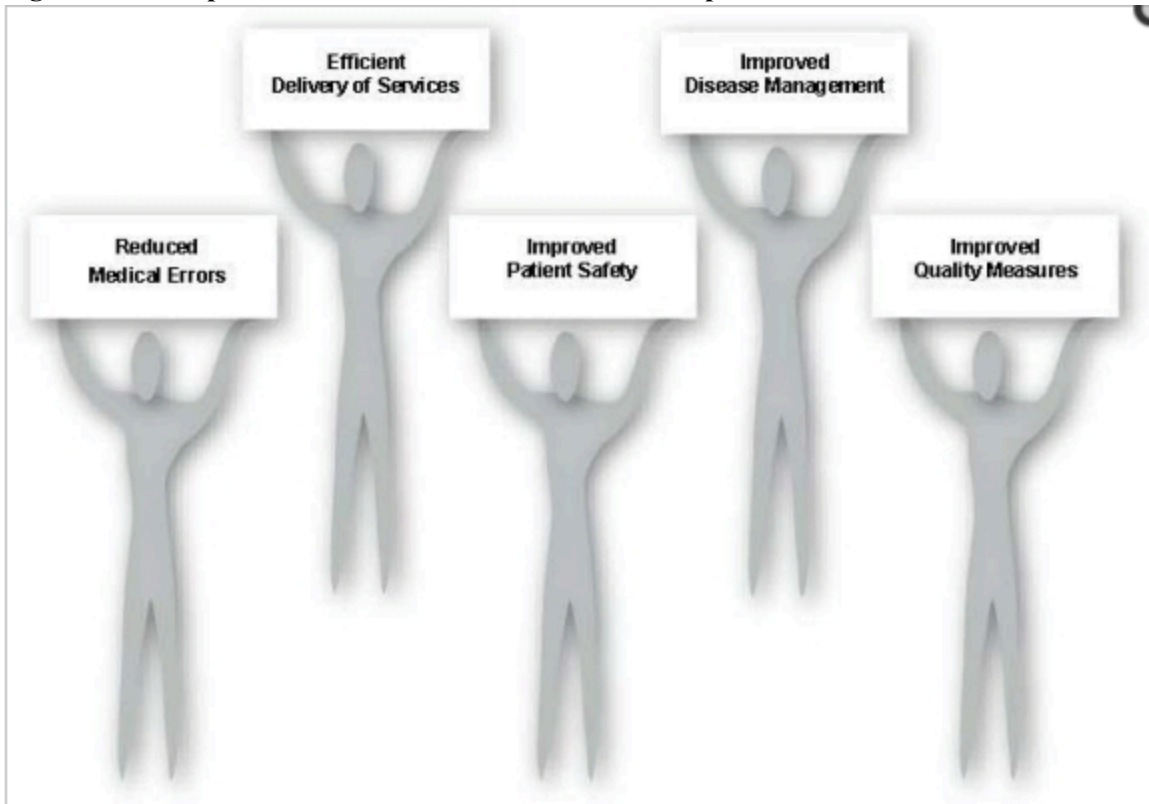
The potential reduction in productivity may serve as an additional barrier to ICD-10-CM/PCS migration. As providers and payers begin the migration to ICD-10-CM/PCS, the transition may affect various departments throughout healthcare organizations, resulting in periods of reduced productivity.^{114,115} Hence, it will be essential for various departments within healthcare and payer organizations to communicate levels of readiness to reduce or eliminate disruptions.¹¹⁶ Physicians' encounters with patients will require more detailed descriptions of activities conducted during the encounters.¹¹⁷ This will in turn supply coders with the level of detail necessary to process claims. Failing to thoroughly document these encounters will result in delays in coding patient encounters and in processing claims and will affect the overall time frame of payment.^{118,119}

Overview of ICD-10-CM/PCS Implementation and Conversion Costs

In an effort to ensure quality, reduce fraud, and provide surveillance of diseases, policy makers will continuously have to reframe healthcare legislation over time to enhance the collection and transfer of health information, as demonstrated with the enactment of HIPAA.¹²⁰ The transition to ICD-10-CM/PCS may result in substantial implementation and conversion costs. For covered entities, the cost associated with migrating to ICD-10-CM/PCS is based on a variety of factors that include training personnel, purchasing equipment and software, and renegotiating contracts.^{121,122} While the precise cost of implementation and conversion may vary for providers, payers, and other healthcare organizations, the potential benefits of ICD-10-CM/PCS implementation, including improvement of data integrity, reduction of fraud and abuse, the ability to conduct enhanced cost analyses, and the improved monitoring of patient health outcomes, will yield greater cost savings over time.^{123,124}

Implications for Improving Quality of Healthcare and Patient Outcomes

Through uniformity of coding and more detailed data capture, ICD-10-CM/PCS offers potential benefits to patients, providers, payers, and other healthcare organizations. The utilization of ICD-10-CM/PCS has the potential not only to improve the efficiency of the delivery of healthcare but also to enhance patient healthcare outcomes for individuals in rural, underserved, and disadvantaged populations.¹²⁵ In addition, as illustrated in [Figure 3](#), the implementation of ICD-10-CM/PCS may also foster improvements in chronic disease management, patient safety, quality measures, and the reduction of medical errors.¹²⁶

Figure 3: Anticipated Benefits of ICD-10-CM/PCS Implementation

Conclusion

As the push for healthcare reform persists, the increased desire for specificity in health information will continue as the country seeks to improve health outcomes and advance the overall quality of healthcare. Consequently, the conversion to ICD-10-CM/PCS is not only necessary but essential as the US healthcare industry moves toward an integrated health information network.^{127,128} The migration to ICD-10-CM/PCS, although it may present challenges initially for providers, payers, and other healthcare organizations (e.g., system changes, training and education, productivity losses, and contract renegotiations), offers substantial benefits overtime. These benefits include the improvement of public health surveillance data for treatment and research, the increased level of detail available for diagnosis of diseases, the development of treatment protocols that are culturally sensitive, the refinement of payment systems, and the improvement of fraud and abuse identification.^{129,130} Nevertheless, the degree to which these benefits are realized will essentially depend on the level of commitment that providers, payers, and other healthcare organizations are willing to invest to ensure successful implementation. Accordingly, as covered entities plan and contemplate the type of investments (e.g., workforce training and education and system changes) necessary to achieve full implementation of ICD-10-CM/PCS, they should examine the utilization of emerging technologies such as computer-assisted coding (CAC) systems to aid in the transition to ICD-10-CM/PCS.¹³¹ The implementation of a CAC system may offer additional support as organizations review, validate, and utilize medical and surgical diagnostic and procedural codes based on documentation captured by clinicians.¹³² In addition, provider organizations should also consider the continuous development of workforce training and education for both inpatient and outpatient coding professionals. By offering continual training opportunities, organizations will be able to ease potential frustrations that coders may experience with learning a new coding system and encourage experienced coders to remain in the workforce.¹³³ Nonetheless, despite the potential setbacks, the transition to ICD-10-CM/PCS will lead to improved data integrity and propel the US healthcare system into the 21st century.

Contributor Information

Tekla B Sanders, MBA, MHA, is the director of the Health Services Core at the University of Mississippi Medical Center's Institute for Improvement of Minority Health and Health Disparities in the Delta Region in Jackson, MS.

Felicia M Bowens, MSM, is the director of evaluations and Health Information Technology Core project manager at the University of Mississippi Medical Center's Institute for Improvement of Minority Health and Health Disparities in the Delta Region in Jackson, MS.

William Pierce, RHIA, is a systems analyst at the University of Mississippi Medical Center's Institute for Improvement of Minority Health and Health Disparities in the Delta Region in Jackson, MS.

Bridgette Stasher-Booker, PhD, CSM, is project director for the Administrative Core at the University of Mississippi Medical Center's Institute for Improvement of Minority Health and Health Disparities in the Delta Region in Jackson, MS.

Erica Q Thompson, MD, CDFS, is the director of the Health Education and Disease Intervention Core at the University of Mississippi Medical Center's Institute for Improvement of Minority Health and Health Disparities in the Delta Region in Jackson, MS.

Warren A Jones, MD, FAAFP, is the executive director of the University of Mississippi Medical Center's Mississippi Institute for Improvement of Geographic Minority Health, principal investigator of the University of Mississippi Medical Center's Institute for Improvement of Minority Health and Health Disparities in the Delta Region, and principal investigator of the Mississippi STD/HIV Prevention Training Center in Jackson, MS.

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