Ready, Set, Automate: Preparing for Automation in Coding Workflows

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Coding departments are in training for a triathlon. They are swimming in regulations, cycling through changes in source documents, and running at breakneck speed to ICD-10-CM/PCS implementation. Luckily, new workflow "gear" is emerging that can help them improve endurance and ensure peak performance.

Computer-assisted coding (CAC) is one such workflow accelerator. It and other workflow automations represent major change, and they require preparation.

In April 2010 AHIMA hosted a CAC summit that brought together experts in merging technology with coding workflow. In advance of the summit, a panel convened to explore the roles and competencies coding professionals require for success in automated workflow environments.

What is the best training regimen? What skills are needed? The panel addressed these questions, led by James Flanagan, MD, PhD, an expert in natural language processing and coding workflow automation.

A brief survey conducted on AHIMA's coding-related Communities of Practice prior to the summit offered a sense of the use of tools that automate code selection. The major finding was that it is now impossible to separate the use of encoders—tools providing codes for selection—from emerging tools that select codes for validation or assign codes without a need for review because their accuracy has been previously confirmed.

Coders will recognize this as similar to how a charge description master works in hospital settings; however, in this case the technology works with diagnosis codes as well as procedure or service codes.

The transformation from paper to electronic records is expected to pick up the pace of workflow automation, requiring coding professionals to step up their conditioning. They require training plans that help them prepare and compete. No coder should be left in the starting block wondering why he or she cannot find a job or was passed over for a promotion.

Input from the summit panel guides AHIMA's ongoing work toward a comprehensive list of roles and competencies that help coding professionals survive and thrive in this changing environment. In the sections following, panel members distill insights that have come from the group's work leading up to the summit.

The Impact of Coding Decision Support

As coding professionals move toward hybrid and electronic record environments, they are exposed to new technologies including natural language processing, structured input, and common document types. These technologies can be integrated with coding decision support tools, such as logic-based encoders and robust electronic coding reference tools. These include AHA *Coding Clinic for ICD-9-CM*, AHA *Coding Clinic for HCPCS, CPT Assistant*, National Correct Coding Initiative edits, CMS Claims Processing Manual, anatomical and drug references, and others.

The traditional clinical coder's role then is aligned with a clinical coding editor role. The accuracy of codes assigned by a computer-assisted coding tool must be validated. The coding professional as editor will recognize inappropriate application of official clinical coding rules and guidelines and verify the application of coding guidelines contained in NCCI edits and national coverage determinations. Attention to the accuracy of correct diagnosis and procedure code assignment is not eliminated through the use of computer-assisted coding tools.

Further, the clinical coding editor may expand the traditional role in clinical documentation improvement. By working with providers on key information dictated in encounter notes, operative reports, and other health record documents, the clinical coding editor will enhance the accuracy of codes assigned through computer-assisted coding.

Structured input will be designed with the updated clinical coding classifications such as ICD-10-CM/PCS in mind, and the clinical coding editor will play a vital part in the successful implementation with providers. The transformation of the clinical coder to clinical coding editor will require the same critical thinking skills in using clinical decision support tools, but it will also engage the coding professional to contribute to the design of these support and provider documentation tools. Thus the clinical coding editor will continually improve the clinical coding process at all stages: development, implementation, and evaluation.
— Kathleen Peterson

Educational Preparation Needed for New Roles

Strong critical thinking is essential when a manual process is completely or partially automated. Coding professionals are needed to ensure that automation will not adversely affect data integrity and reliability; thus competencies in data monitoring and analytics are important in preparing coders for workflow automation.

Adequate clinical instruction helps discern correct representation of services for secondary data reporting from incorrect codes that may be due to a programming glitch or incorrect application of software algorithms. Increasingly, HIM curriculum incorporates technology that reflects these current practice environments.

Workflow topics may be currently included in HIM curricula, but the course may address overall HIM planning and design not specific to the coding process. Due to the increased focus on encoded data within electronic health records and the importance of a highly functional revenue cycle, more attention on coded data workflows might be a useful addition to HIM courses.

Educational approaches are always tied to the level of competencies the field requires, so job descriptions and recruiting messages can be expected to begin describing requirements for technical proficiency in addition to coding skills.
— Gail Smith

New Roles and Required Skills in Automated Environments

Coding workflow automation will create new roles that will require new skills. In the table below, possible roles are matched to required skills and the sources for acquiring them.

For example, many coding professionals will transition from code assignment to code editing, evaluating the codes generated by the CAC technology. This transition requires increased critical thinking skills, such as knowing why a diagnosis or procedure is or is not coded. Coding professionals working remotely will require greater familiarity with technology and security than those with access to on-site technology support.

Role	Skill or Competency	Source for Acquiring
Clinical Coding Editor	Review, discernment Ability to use computer databases, search engines, and information retrieval tools	Use of knowledge bases and decision support tools related to code set rules and guidelines and reporting requirements
Remote Worker	Review, discernment	Use of knowledge bases and decision support tools related to code set rules and guidelines and reporting requirements

	Proficiency with Internet access and computer networks Security awareness and management	Technology training
Template Developer	Data integrity awareness Electronic tool proficiency Content management proficiency Documentation standards	Compliance alerts, documentation guidelines Use of clinical knowledge bases Electronic health record orientation and training
CAC Educator	Teaching skills Educational materials development Training, coaching	Education courses Technology awareness and proficiency
Coding Analyst	Auditing and monitoring skills for productivity and quality monitoring of the coding process Use of electronic tools	Technology training Compliance training Work planning and work assessment training
Quality Analyst	Quality measure knowledge and proficiency Data analytics and data mining from the health record	Technology training Compliance training in monitoring, evaluation, and reporting Quality management orientation and training

For more on roles and related skills for CAC, see "Transitioning to CAC" [in] the July 2010 issue.

Focus on Workflow Efficiency and Technology Tools

Traditionally CAC applications have worked best in single-visit services such as outpatient hospital and physician service encounters. Today trends are showing an increased use of the technology in inpatient settings where the encoding requires assessment of multiple days of information for code assignment.

Outpatient settings frequently employ template-based documentation, whereas natural language processing techniques are more common in inpatient settings, where documents are more free-form driven and created by a dictation and transcriptions process. For each record, the system places codes in a review queue to verify, edit, approve, and finalize.

Information systems competency is required to understand how computer software completes the routines that transform health record documentation data into suggested codes. Computer-assisted coding software automates steps in the workflow that can be safely and efficiently processed by a system and provides new tools that allow the process to be monitored, measured, and improved.
— Kozie Phibbs

What about Job Security?

It was noted during the summit that the best jobs of 2015 are not yet developed, so it is clear that the HIM positions of today may not be the same five years from now.

It is natural to fear that advancements in technology will eliminate coding positions. However, for every task that may be automated there is a new task needed to maintain, monitor, and manage systems. Acceptance of change and a willingness to adapt to increasingly automated workflow will be a key factor in coding roles in the future.

CAC is a step beyond the familiar encoder systems that have been used for more than 30 years. With new skills and competencies, coding professionals will adapt to using and managing the emerging technology environment supporting the coding process. Today's coders will be transitioned into the new roles through technology training and orientation to automated workflows.
— Heather Eminger

Pointing the Way Forward

The need for solid, knowledgeable HIM employees is not decreasing—it is increasing every year. The Office of Economic Advisors in July 2009 projected a 49 percent growth in the healthcare support sector between 2000 and 2016; in comparison, it estimated that other sectors would grow 16 percent over the same period.

However, new job requirements and demands are arriving in waves; today's professionals do not have the luxury of a gentle slope to new roles and skills. Automation requires a keen sense of how processes and people adapt to a changed environment.

The following questions will help strengthen professional development and training routines:

- What percentage of records will be reviewed to validate the results of an automated coding workflow? Does this number decrease over time, or does it stay the same? How is a "no review needed" process determined?
- How will the coding staff communicate with clinicians when questions arise about coding choices or documentation ambiguity? Is it possible for the CAC programs to facilitate concurrent questions or prompting at the point of care to minimize the need for post-event queries?
- How does the change in turnaround time for automated workflows from documentation to encoded data compare to a manual process?
- What medical specialty knowledge exists, and how does a medical science background affect the results of encoded data results using CAC tools?
- What are the technology training gaps in current personnel, and how can these be eliminated?

Qualified coding professionals soon will be expected to be proficient in at least three areas: clinical documentation and content knowledge, required coding systems and reporting requirements and guidelines, and technology awareness or expertise in electronic environments.
— Elizabeth Giustina

Join the Discussion

All coding professionals who are AHIMA members can contribute to the discussion and creation of the list of emerging roles and competencies for coding automation.

Please log on to the Coding Community of Practice at http://cop.ahima.org and access the topic thread titled "Roles and Competencies Required for Coding in a Computer-Assisted Coding Environment." [web site no longer available] Provide feedback for the work ahead by commenting on topics to address in future publications and presentations.

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