Developing Productivity Standards through Analytics [sponsored article]

By John Pitsikoulis and Laura Doty

"Productivity" is defined as the effectiveness of productive effort, measured in terms of the rate of output per unit of input, easily defined and applicable in many manufacturing scenarios. For the line worker in a manufacturing plant, output is basically the number of widgets or components produced. Highly effective manufacturing plants have minimized the workflow variables impacting employee productivity; therefore, the connection between worker activity and output is straightforward. A worker assembles a component by tightening four screws in the same manner, completing the widget in a true production environment.

What makes coding professional productivity measurements different? Imagine if a plant worker has to sift through a bucket of different-sized screws to find four that are the correct length and thickness to assemble the widget, if the component is missing a hole, or if the hole is located in the wrong area of the component. The task now includes multiple steps, breaking the linear model of the production line. A coding environment is not linear and cannot be defined by just the number of charts completed, as the coding professional's true efforts are not being fully captured.

When developing productivity standards, it is critical to evaluate all factors and variables, like new code sets. The implementation of ICD-10 has increased the time and effort for the coding professionals to fully capture the specificity requirements inherent in the new code set. Productivity reporting often is focused on the statistical accuracy of the coding professional and not the depth of coding performed. The development of analytical reports can then be used for actionable activities, like time querying, to consider the impact multifactorial variables have on productivity. Unlike the widget production above, inpatient coding has more than process variations impacting the time to code an account, such as reviewing multiple screens in an electronic health record (EHR) or accessing multiple technology systems for each account.

Measuring the Unmeasurable

Coding is more of an art than a science, and critical thinking skills are a cornerstone of an exceptional coding professional. Productivity is universally based on the decisions one makes and is a reflection of the ability to develop the best conclusion from the information presented. This is precisely the function that critical thinking plays in the coding process; however, the coding professional's thought process when making a judgment or a decision about what is correct is rarely taken into consideration when measuring productivity. Measuring the unmeasurable—the impact a coding professional's critical thinking has on her or his productivity and how much of the outcomes can be attributed to those skills—is an endeavor. However, listening to and observing how two exceptional coding professionals analyze and effectively apply critical thinking skills in the dissection of the most complex of cases will demonstrate the impact critical thinking has on productivity. Honing the critical thinking skills of the coding staff through development education can result in increased productivity, as the coding professionals will process information in a more effective and efficient manner.

Analysis of Variables

Multiple variables influence productivity, with the depth of coding and the patient population being major considerations. Variables that will impact coding productivity include the volume of medical encounters compared to surgical encounters, patient severity, length of stay, percentage of documents complete at discharge, and number of electronic systems in the coding process. With the emphasis on complete and comprehensive coding, there is a direct correlation between the efforts to appropriately assign all codes to a case and coding quality. Therefore, the total number of codes assigned per case is a variable that must be considered when establishing productivity standards.

For example: Cardiac patients often have short LOS, whereas oncology patients often have a longer LOS that will require more time and effort by the coding professionals to review the entire medical record. However, the code assignments for these populations can be vastly different. Are the efforts to code these cases equal or more accurately reflected in the codes assigned per case calculation? The majority of coding professionals would agree that the efforts and complexities to code these two example cases are different; however, productivity is captured and calculated based on the number of cases coded. A codes-per-case calculation variable will provide an accurate reflection of the true efforts required in the ICD-10 environment.

An analysis conducted at a 470-bed acute care facility demonstrated the following outcomes:

- A comparison analysis demonstrated an eight percent increase in diagnosis code assignment and an 11 percent increase in procedural code assignment for ICD-10 compared to historical ICD-9 data.
- Of the total ICD-10 codes assigned by coding staffs, 51 percent were within five MDCs.
- The codes assigned to these five MDCs were assigned to 22 percent of the total DRGs contained within the MDCs.

How can we use data analytics to capture productivity? Consider the following: If calculating productivity based on the effort to assign codes per case versus charts per hour, capture the total codes assignment at the MDC and DRG levels. Take the last six months of completed coding for all payers and ages without exclusions. Work with a report writer to develop an algorithm to capture pertinent coded information at the account level, including the time spent in the record by the coding professional.

From this information, average time per case can be calculated to establish a baseline. The analysis will provide a statistical representation of the effort required to comprehensively code the different encounters. Leveraging the information captured through the EHR will provide a more accurate measurement of the efforts required to code individual encounters. Automating the productivity calculation process creates efficiencies,llowing for increased coding time. This analysis will also provide invaluable outcomes that go well beyond productivity. Outcomes information will provide a better understanding of the patient population to focus performance improvement and education efforts to minimize some of the variables impacting standardization.

John Pitsikoulis is associate director and Laura Doty is senior managing consultant at BRG.

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Original source:
Pitsikoulis, John; Doty, Laura. "Developing Productivity Standards through Analytics [sponsored article]" (Journal of AHIMA website), July 15, 2016.
