Productivity: How Do You Measure Up?

by Daniel P. Lorence, PhD

Previous issues of the *Journal of AHIMA*, along with other health information publications, have featured examples of benchmarking and best practices, describing how healthcare organizations use the process of benchmarking to identify the "best in class" achievements for a given organization or process.[1] These measures are then used as reference points or recognized standards of excellence against which similar processes are measured. At its most basic conceptual level, benchmarking involves taking a measurement against a given reference point. For specific HIM measures, however, there are few comprehensive assessments of practice productivity and accuracy that can be used to start internal benchmarking programs.

In response to this need, AHIMA initiated a data collection program that measured, among other things, some simple indicators of productivity and data accuracy that can help members gauge their own practices. These included measures of staff hours, coding productivity, data accuracy, and conversion of patient information to computerized format. This article provides some examples of practice areas that are commonly tracked as management indicators, making them ideal subjects for benchmarking. Space precludes categorizing productivity statistics by organizational size and type, region, patient volume, and other predictive variables that could influence such benchmarks; however, such analysis will be forthcoming in subsequent AHIMA publications. (Managers should be aware, however, that to be meaningful, their benchmarking must involve the comparison of like settings, organizations, and work loads.) Summary statistics for selected indicators are shown below.

summary statistics

	Hospital-based		Outpatient		Other	
	Mean	Standard Error of Mean	Mean	Standard Error of Mean	Mean	Standard Error of Mean
Total Hours Worked Per Week	41.89	.11	41.28	.26	37.30	.21
Hours Worked Per Week Beyond Scheduled Hours	5.03	7.66E-02	4.76	.19	4.95	.11
Inpatient Records Coded Per Day	59.73	1.09	22.67	2.46	17.47	1.32
Outpatient Records Coded Per Day	224.39	7.23	184.34	22.97	100.39	13.02
Hours Spent on Inpatient Coding Per Day	26.47	.79	5.59	.87	5.92	.82
Hours Spent on Outpatient Coding Per Day	19.02	.69	13.87	1.58	8.25	1.15
Percent Claims Returned Due to Coding Error	3.02	6.92E-02	6.92	.44	3.00	.17
Percent Claims Returned Due to Wrong DRG Assignment	2.07	5.50E-02	1.46	.23	1.09	.11
Percent Claims Returned Due to Missing Support Documentation	5.27	.17	7.77	.63	5.06	.29
Percent of Records Captured by Computer	40.32	.48	33.55	1.25	34.12	.76
Percent of Computerized Records Maintained on Paper	78.79	.50	71.86	1.50	65.83	.93

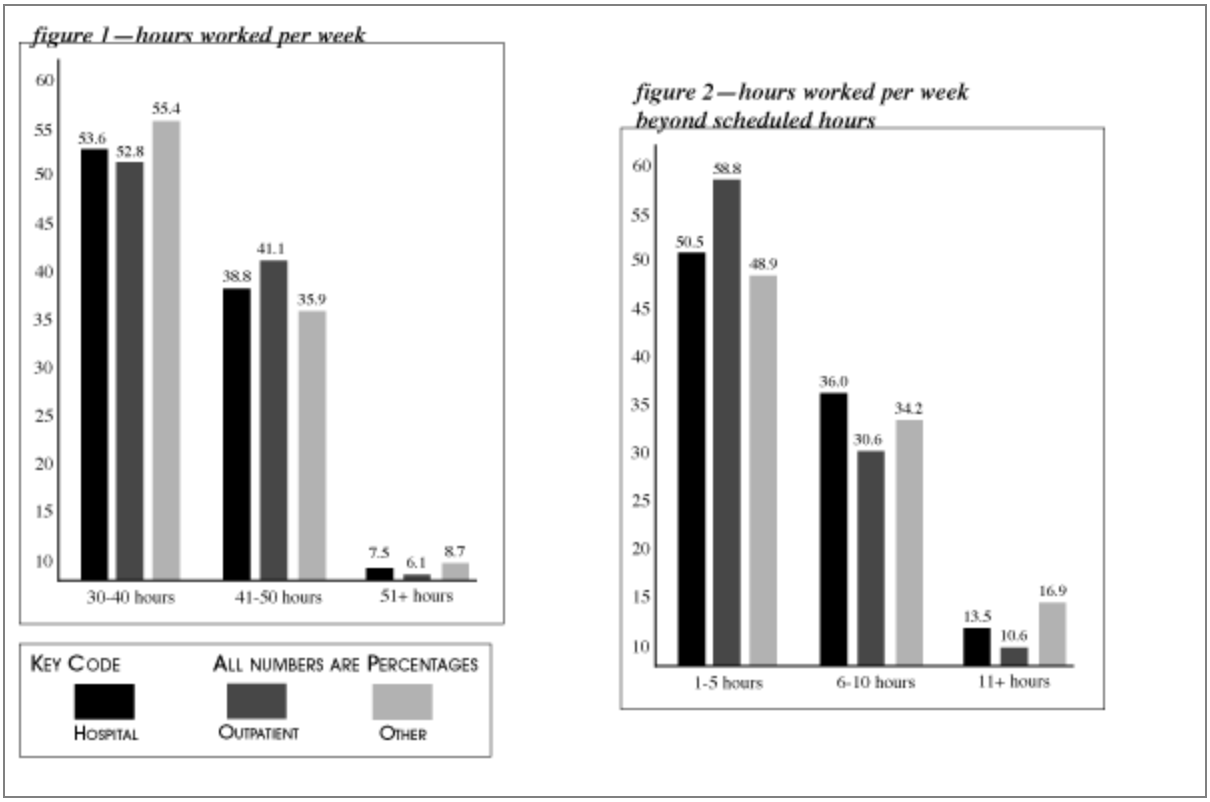
Respondents are grouped by work settings in this way:

- the "Hospital" category includes hospitals and medical centers
- the "Outpatient" category includes group practices and ambulatory care clinics
- the "Other" category includes HMOs, PPOs, and other managed care organizations; long term care and rehabilitation facilities; colleges and universities; consulting firms; government; software companies; pharmaceutical companies; and respondents who were self-employed

Hours Worked

How many extra hours do HIM professionals put in at work? Hospital and outpatient professionals report about the same number of hours worked each week—slightly over 41. Those in other settings, as a whole, work slightly fewer—about 37 hours.

On average, hospital workers put in slightly more than five hours beyond their scheduled work hours per week. HIM professionals in outpatient services settings reported working, on average, about 1.5 hours of overtime. Those in other settings average about 1.7 hours of overtime. Interestingly, a high number of respondents in "other" settings reported working more than 11 hours of overtime per week; this may reflect the more demanding nature of those diverse roles. A comparison benchmark: physicians report routinely working 60-hour work weeks; hospital administrators report 49-hour weeks.[2]



Records Coded per Day

On average, hospitals report coding about 60 inpatient and 224 outpatient records per day. Those working in outpatient delivery settings report coding, on average, about 23 inpatient and 184 outpatient records per day. In other settings, as a whole, HIM professionals average about 17 inpatient records and 100 outpatient records. Coders in hospital-affiliated ambulatory care settings report they are more frequently called upon to perform inpatient coding.

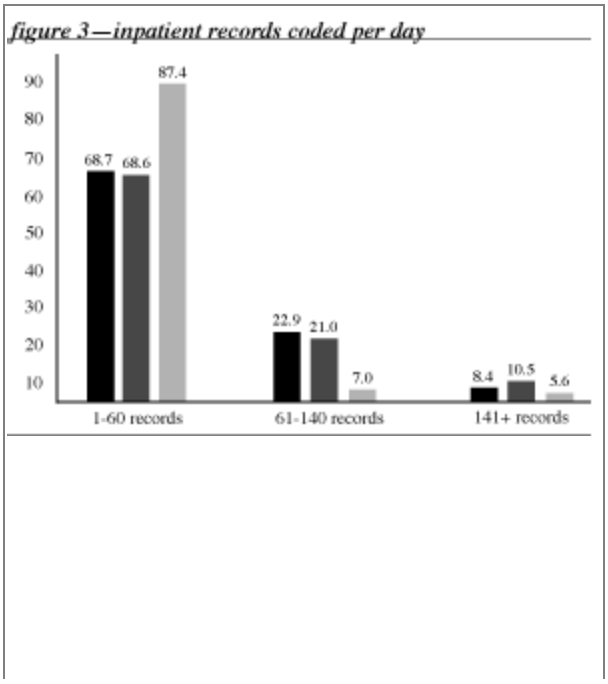
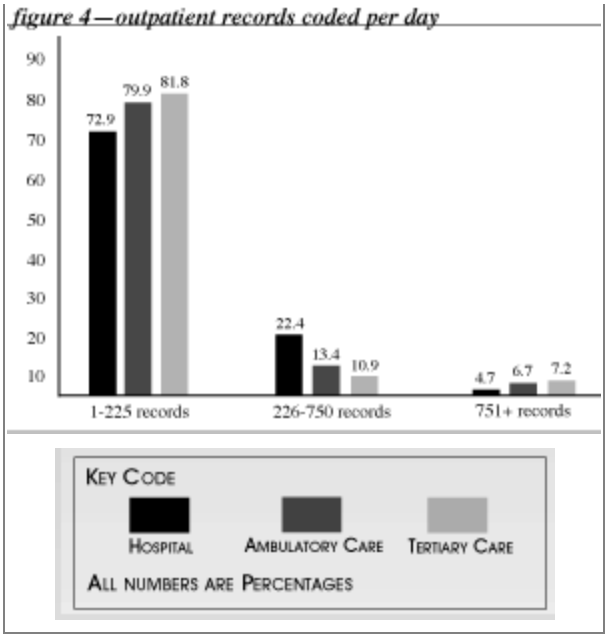


figure 4—outpatient records coded per day



Hours Spent on Coding

An alternative measure of coding productivity is the total number of total staff hours spent coding per day, rather than actual records coded. Hospital professionals report the average collective staff time spent per day coding inpatient records as slightly more than 26 hours, with 19 hours per day spent on outpatient record coding. In outpatient (ambulatory) settings, about six hours are spent per day coding inpatient records, with 14 hours spent on outpatient charts. For those in other practice settings (aggregated), coding time was reported as six hours per day on inpatient records, eight hours per day for outpatient.

figure 5—total staff hours spent on inpatient coding per day

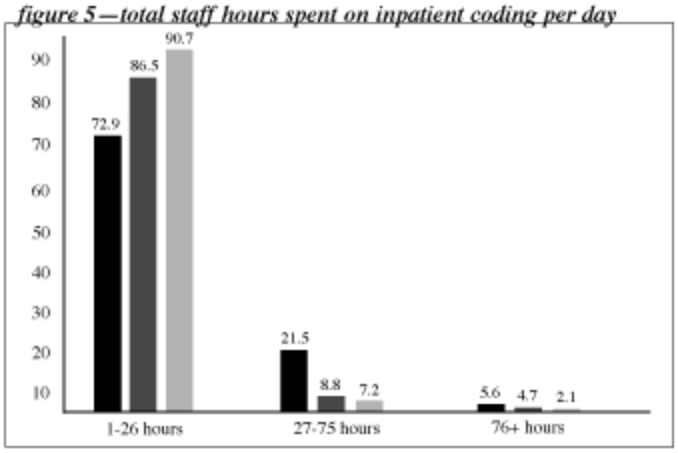
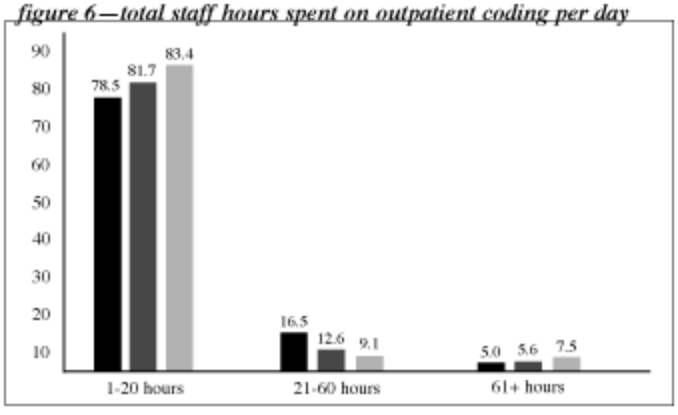
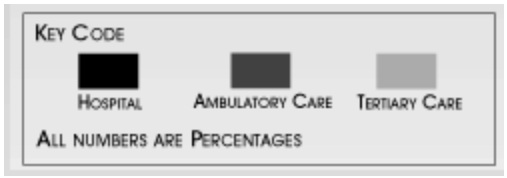


figure 6—total staff hours spent on outpatient coding per day





Returned Claims

The scope of this study precluded a comprehensive assessment of coding accuracy, which, at a minimum, includes some measure of misspecification, resequencing, miscoding, and clerical errors. In this study, many respondents (87 percent) reported that fewer than 5 percent of their records had significant coding errors. As a broader measure of overall data error, this study examined errors in claims data, a common measure used in medical record data assessment studies.3 For those without a well-developed computerized patient record system, electronic claims databases can provide broader indicators of data quality trends that may not be apparent from audits of small paper record samples. Hospital-based professionals reported a greater tendency for missing documentation in returned claims (5.3 percent of claims on average), while coding errors and DRG misassignment were implicated (respect- ively) 3 and 2 percent of the time. In the outpatient setting, however, the interplay changes: coding errors were much more likely to be cited as the reason for a returned claim (about 7 percent), approximating missing documentation as the likely source of error (7.7 percent). In other settings, missing documentation was the source of error about 5 percent of the time, while coding error was identified in 3 percent of submitted claims.

figure 7—claims returned due to coding errors

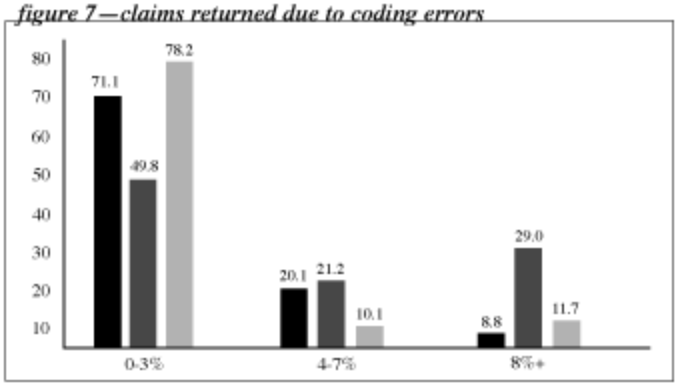


figure 8—claims returned due to wrong DRG assignment

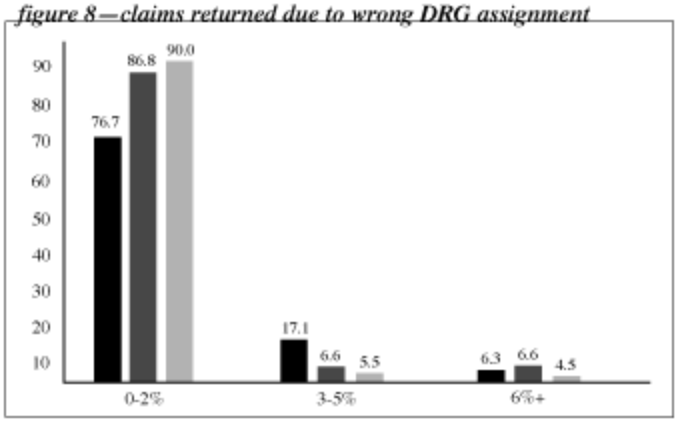
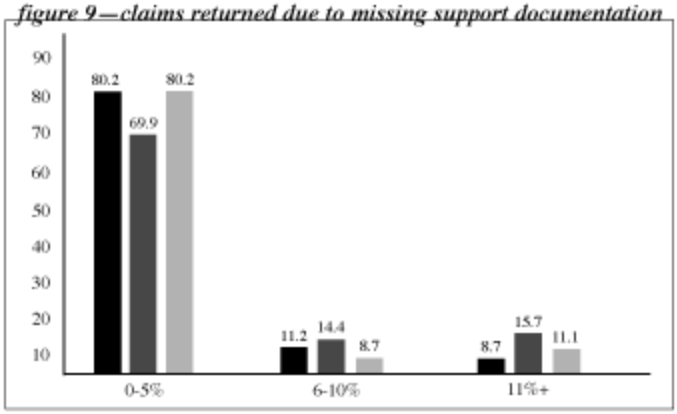


figure 9—claims returned due to missing support documentation



Implementation of the CPR

Adoption of the CPR is one of the most important projects reported by HIM professionals. Paper-based archiving is an associated, and frequently debated, area within this topic. How far along is the industry overall? In hospital settings, HIM professionals report that about 40 percent of their current total patient record information, on average, is captured by computer. Of the computerized records, 79 percent, on average, is also maintained on paper. In the outpatient setting, about 34 percent of patient record data is computerized, with 72 percent of this amount retained on paper. In other settings, overall, about 34 percent of patient data is computerized, with 66 percent maintained in paper form.

figure 10—computerized records

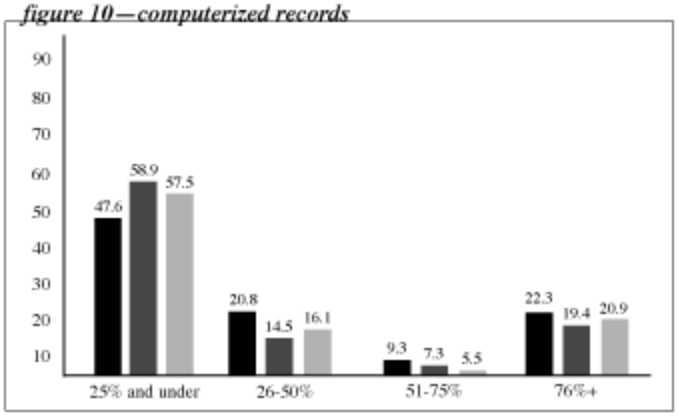
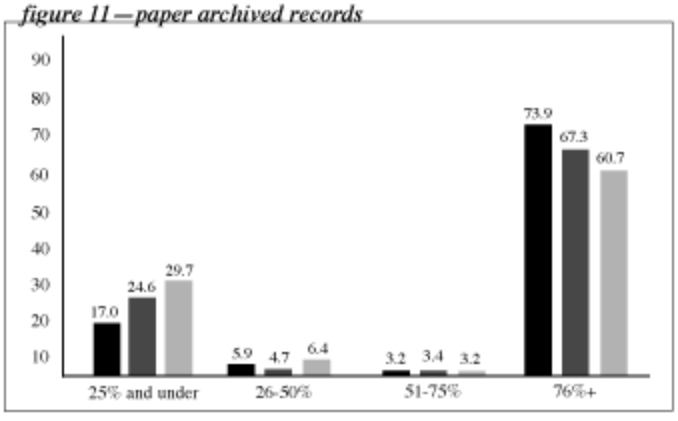
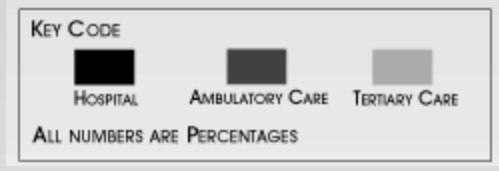


figure 11—paper archived records





Some Qualifications

As mentioned previously, it is imperative that comparative settings be employed when benchmarking practice data. How this is accomplished is generally a management decision, not a rigid rule. Can large urban medical centers, for example, be fairly compared to small rural hospitals when benchmarking data accuracy? What effect does managed care have on HIM practice? Does it matter what region of the country the HIM professional is in? For some indicators, these considerations may not make a significant difference. For others, they matter a great deal. Managers must be aware of the idiosyncrasies of the local environment and make adjustments accordingly.

Managers often tend to view benchmarking data as a weapon rather than a tool. Will someone use the data to criticize the management of a given area? This is not the intent or proper use of such data, since the point of doing benchmarking analysis in the first place is to achieve process improvement, which relies on the natural assumption that there is room to improve. One of the first steps of a benchmarking process is to educate all participants about the goal of improved quality. In analyzing the data, look for reasons, not excuses.

Managers must remember that a data collection effort, no matter how comprehensive, is still a snapshot in time. Were extraneous influences affecting the benchmarked area at the time it was measured? This is frequently an important area of consideration, given the relative volatility of the healthcare industry as a whole. Remember to keep time-sensitive indicators consistent or adjust accordingly.

A common mistake when analyzing benchmarked data is assuming that because two events occurred in sequence, one must definitively cause the other. This leads to false assumptions that will cause an undesirable event: a bad management decision. For example, was the increase in case mix the result of more effective documentation and coding practices, or was there a change in the reimbursement structure that coincided with your improvement program? Association is not causation, and to measure the true causal connection between HIM practices, managers must closely examine any and all extraneous factors that may have an effect on the benchmark in question.

Finally, remember that benchmarking is a management tool, not a substitute for management decision making. The benchmarking process seldom results in enough detail to make an informed decision. It is fairly easy to measure and track the number of hours spent per day coding records, much harder to measure the precise time spent on all the intermediary steps involved in coding a record, and virtually impossible to measure the time each person spends thinking about how to code. Computers help in tracking time spent on specific tasks, but ultimately managers must employ sound reason and judgement to get the full benefit of benchmarked data.

Notes

1. See the *Journal of AHIMA* 69, no. 10 (1998) for examples.

2. American Medical Association. *Socioeconomic Characteristics of Medical Practice*. Chicago, IL: 1997; American College of Health-care Executives. Survey of U.S. Healthcare Executives. Chicago, IL: 1998.

3. Hsia, D.C., W.M. Krushat, A.B. Fagan, J.A. Tebbutt, and R.P. Kusserow. "Accuracy of Diagnostic Coding for Medicare Patients Under the Prospective Payment System." *New England Journal of Medicine* 318, no. 6 (1988): 352-355; Bogdanich, W. *The Great White Lie*. New York, NY: Simon & Schuster Inc., 1991, pp. 129-139.

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