Time and Motion Analysis

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The major contributor to total cost in any service business is the direct labor. In health care, it represents at least 35% of total cost, with indirect labor contributing another 15% plus employee benefits of 10% to 15%. Clearly, 65% of the bill for health care is for paying the clinicians and support staff to perform their duties.

If the human asset were 100% productive, then the money would be well spent. The problem is that no measurement has been devised to weigh productivity and gage efficiency. The clinical professional has resisted standards as “assembly line” and piecework methods that dilute their effectiveness.

Now that the main buyer wants to control and reduce its outlay per case for the care, time and motion become a concern of the provider. Issues of time required for each task and benefit or outcome produced have gained prime importance. Yet, the clinical professionals still resist. Interestingly, when the tasks are analyzed and arrayed for the treatment of illnesses by systems analysts, it becomes apparent that the skills required for more than half the tasks are not those of a licensed professional.

A Speech Therapist once admitted that “one-half of what I do could be done by a monkey,” meaning, of course, that repetitive tasks can be picked up by an extender. Once an analysis is done of the treatment approaches and assigned to a skill level adequate to handle the intervention, the cost per case goes down dramatically.

In addition, the frequency of the task is also of importance. If the intervention can be done by an extender under the supervision of the licensed clinician, and can be done once a shift rather than twice per shift, the cost per case is reduced. The goal is to improve the outcome by focusing on the intervention. The duration of the treatment is then the next venue for analysis. According to the results of a well-known study, after completing the analysis of hundreds of programs over the last 10 years, it was found that the clinical outcomes could be improved by reducing the number of interventions by focusing on the outcome.

For example, in the skilled nursing facility I ran in Elgin, Illinois, I discovered that the therapists would decertify patients who had “plateaued” to the rehab aides and there would be immediate improvement. While investigating the reasons, I found that the consistency of the daily programming done by extenders was more productive than extended visits to the therapy room. In all cases, the outcome goals motivated the extenders to consistently perform ambulation, feeding, bathing, toileting, and grooming programs seven days per week.

With this added intensity, which was costing less per day, the patients were getting better and many had been restored to their highest level of functioning and returned to the community. This was just the beginning of the positive results of my “skill to bill” and “learn to earn” job function design, career ladder progression, and team extenders carrying more of the clinical responsibility.

Time per task was not the primary issue in developing labor standards for each intervention. We did not stop-watch anyone. We developed ranges of minutes for each task and put it into a programmatic framework, which meant that a program should take a certain list of tasks and each task should take a certain amount of minutes. The estimates became psychological goals and did not inhibit quality. This gave the staff a time to beat, so they could become more efficient. Once they knew the outcome, and it became the goal, all else became secondary.

The clinical staff began to appreciate not having to perform menial tasks for their level of experience. The lower level staff took the challenge of taking on more responsibility for the purpose of learning, and the opportunity of moving up the professional ladder. This combination helped me turn a horrible operation into a quality driven operation.

Sample of a task analysis:

Job functions for treatment program: Gait Training

Day shift and evening shift	**Standard**	**Actual**
Stand and balance patient	5 minutes	5
Affix gait belt	1 minute	1
Cue patient to move lower extremities as taught by PT	1 minute	1
Ambulate patient for measured distances	10 minutes	15
Cue breathing and muscle control	1 minute	1
Sit patient and remove gait belt	1 minute	2
Record outcome of exercise	3 minutes	2
Total program	***22 minutes***	***27***

Variance from standard
5 Minutes

Outcome:

Goal was to ambulate to dining room with steady gait and balance.
Result of intervention was steady ambulation and no shortness of breath.
Program performed signed off by the Rehab aide on each of two shifts.

For a facility of 206 beds with 197 patients, the numbers of programs was an average of 5five per case per day. This totaled 942 programs per day. The staff of 40 in the nursing and therapy departments performed an average of 23 programs each in an eight-hour shift, in the three shifts per day. They were productive 95% of the day, with a 98% efficiency rating against standard time allowances.

This type of organization created a disciplined staff that enjoyed its job because of the results they produced. The process became self-managing as it depended upon their skill to bill, and they continued to learn to earn satisfaction and a future in the health care profession.

My management team decided to map the course and let the staff pursue the outcomes. This created a motivating environment, which eliminated deficiencies

and family complaints. Such empowerment is the key to success for both patient and staff. The end result was a dramatic increase in retention and customer satisfaction.