## THE LAST WORD IN PRACTICE ECONOMICS

## **Regain the Opportunity Missed When You Implemented Your EMR**



bout every ten years, I repeat a story explaining the impact of the introduction of the electric motor into the workplace because, from this story doctors can learn to recognize similar opportunities for making efficiency improvements in their practices-ones that would actually lower costs and improve quality.

The story goes like this: In a 1991 paper, Stanford University economic historian Paul David compared the diffusion of computer technology into the workplace to industry's replacement of steam engines by smaller electric motors. Initial introduction of the smaller, more efficient, electric motors inexplicably decreased industrial productivity! David concluded that this was because factory managers at first used these new devices simply as substitute steam engines-much as the first computers were used as substitute typewriters and adding machines.

Francesco Bisignani | Dreamstime

The first positive impact made on productivity by these electric motors took place when factory managers realized that the principal advantage of the new smaller and lighter engines was that they could be moved to where the work was. After creatively re-thinking the way these new machines could be used more effectively, productivity gains rapidly followed. Implementation of this new technology only created gains in the workplace when the to effectively utilize this tool. We need to be cognizant of the fact that through the use of computer technology, information can be delivered anywhere in an office and use this concept to our advantage. We can move these "tools" to where the work is. Tasks

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workflow in which it was inserted was simultaneously redesigned.

A parallel exists between the way these electric motors were eventually used in the workplace and the way that we can effectively use computer technology in our workplace-our practices-to achieve quality and productivity gains. With computers, as with electric motors, the primary problem has not been the tool, but rather, on whether or not our workflow has been redesigned

should be performed at the places in the workflow where they best "fit." Unfortunately, in spite of major advances in technology, many are still not using their computers in this way; rather, in medical practices, the majority of tasks continue to be performed in traditional locations-whether or not those locations make the most sense.

In the early nineties, I began working with doctors who were strug-Continued on page 170

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gling with low profitability in spite of the fact that their practices were extremely busy and still growing. They recognized that costs were increasing faster than their revenue but did not understand why. As it turned out, their primary bottlenecks were created by inefficiencies in virtually all of their business and clinical processes, and these inefficiencies were becoming magnified as their volume and complexity increased.

Before practices could begin to address the inefficiencies identified, they needed to invest in computer technology that would enable them to: 1) enter data one-time at the moment it was created, 2) do work where it made the most sense in their workflow, 3) reduce errors, 4) create parallel pathways, both externally and internally, to eliminate unnecessary work, 5) reduce the number of bottlenecks that created delays, and 6) enable employees temporarily idled to assist in locations where work was backing up. The constraints to effectively implementing technology at that time were the high cost of the hardware needed to locate computer terminals at every point of service and finding affordable software that fully integrated practice management with electronic medical record software without the need for "glitchy" interfaces which had been developed to patch different programs together.

As the cost of hardware continued to drop and more software programs became fully integrated, doctors were still slow to make software purchase decisions because most of them had been burned at least once-purchasing software that either was not ready for prime time or was supported by companies that eventually went bankrupt or were acquired by larger companies with the intent of converting these customers to their software. Unfortunately, most doctors who finally purchased software and located computer terminals in their treatment rooms were not driven by the goal of becoming more efficient but merely by a desire to qualify for Meaningful Use dollars. In the process, many of them overlooked a huge opportunity. If they had considered efficiency improvement when this technology was being implemented, their practices could have attained this goal along with the Meaningful Use dollars with no additional investment of time or money.

## **External "Parallel Lanes"**

The simple installation of computers in every treatment room and pointof-service immediately creates *external* "parallel lanes," enabling doctors and support staff who are temporarily cy on-line, with instructions printed out for the patient—reinforcing what the doctor has already discussed with him/her.

Another example: when a service is provided and entered into the EMR, the correct code and charges are pulled simultaneously and sent directly to check-out where co-pays, deductibles, non-covered services, and patients' portions can be collected on

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idled throughout a busy day to utilize their "down time" effectively—even enabling them to assist staff at distant locations when bottlenecks occur and temporary help is needed. This alone will create some new efficiencies. Ideally, a practitioner also wants to take full advantage of the "internal parallel lanes" created by integrated software to reduce the voluminous number of tasks the doctor and staff need to perform after a patient has been treated.

Fully integrating an electronic medical record, appointment scheduler, billing software, the e-prescription process, and all other practice management features can be viewed as adding *internal* parallel lanes which, in addition to the *external* lanes created by the additional computer terminals, further enhance the opportunity to convert series processes into parallel ones. These internal parallel lanes enable multiple software-related transactions to occur simultaneously—in "parallel"—with one another.

For example, when a prescription is written, not only is legibility improved, but dosing errors are avoided, and the software simultaneously searches for allergies and potential harmful interactions with other medications that the patient may already be taking—thus alerting the doctor to any potential problems. The prescription can then be submitted to the pharmathe date of service—without spending time to re-enter that same data from a paper superbill, or bill the patient at a later date because a superbill had not yet been marked by the doctor.

These "parallel opportunities" made possible through EMR implementation can be captured at no additional expense and in the same amount of time as is required simply for effective integration of an EMR into a practice. Locating additional computer terminals throughout a medical office enables doctors and staff to perform work where it makes the most sense in the workflow, often at vastly different locations from where this work has been performed in the past. Both external and internal parallel lanes created at the time of EMR implementation projects are what will enable a medical practice to effectively redesign workflow in ways that create the kinds of efficiencies that lead to both higher quality and lower costs. PM 



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