

How Much is Your Quality System Costing You?

BY ZANE R. KENISTON

Thinking of your quality management system in medical terms can help ensure a long, healthy life for your organization.

AS OPERATING COSTS CONTINUE TO RISE, owners must analyze the financial health of their business.

Among the many questions asked should be: How much is it costing the company to have and maintain a quality management system (QMS)?

This brief discussion does not include the costs of any quality certifications that the company maintains. Such certifications, and there are many, are like icing on a cake; they attract potential customers and add a bit of flavor. But without the cake, it's just icing. The same is true with any quality certification. Without the company, what good is it?

So, in this discussion we will consider the following points:

- Reactive versus preventive system management
- Reducing costs through effective corrective actions

Health Care and Your QMS

Among the many costs associated with doing business are health-care costs, and these continue to rise. Efforts to reduce these costs include emphasis on preventive health care (PHC). There are very few that will deny the benefits of PHC.

For this discussion, let's compare your QMS with the PHC model (see Table 1). Wouldn't you agree that a visit to the emergency room is far more expensive than a scheduled exam at your doctor's office? It is logical then that we would want to identify negative health issues before they become an emergency.

If a company, however, is focused primarily on product nonconformance (a reactive attitude) without giving thought to the impact that the whole quality management system has on product, it is much like using the emergency room to care for

our ailments, whether or not they are an emergency—extremely expensive!

Of course there are unforeseen occurrences that demand a trip to the emergency room, but it is safe to say these are the exceptions and not the rule.

Table 1

	Product Nonconformance	Emergency Room Visit
Competent Person	<ul style="list-style-type: none"> • Inspector • Supervisor 	<ul style="list-style-type: none"> • Nurse • Doctor
Disposition	<ul style="list-style-type: none"> • Use As-Is • Repair • Rework • Scrap 	<ul style="list-style-type: none"> • Band-Aid and Aspirin • Suture • Surgery • Organ Donor
Timeliness	Before end of shift	Triage

On the other hand, when we visit our physician for a routine check-up, the doctor queries us about how we have been doing. They are seeking input from us that might help them to determine if there is a health issue. Usually, while they are asking questions, they are checking the vitals: blood pressure, pulse, breathing, etc.

If they sense or determine that there might be an issue, they will often set up an appointment for further diagnostic tests, such as a blood test. The results of these tests will add to their ability to discern whether or not there is cause for concern and whether further treatments should be administered. In many cases where there is a finding, the doctor will write a prescription for the patient with follow-up instructions. QMS functions much the same way. If regular "check ups" are made on QMS, then the health of the quality system can be monitored, improved, and sustained (Table 2 further illustrates the comparison between PHC and QMS).



Zane R. Keniston is the owner of Keniston Technical Services.

Quality Corner is a monthly feature that covers topics ranging from how to specify a certified company to how long it takes to become a certified company. If you are interested in browsing our electronic archive, please visit www.aisc.org/QualityCorner.

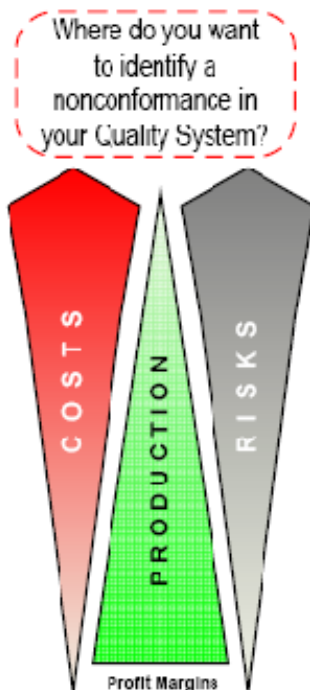
Table 2

	Corrective Action	Doctor Visit
Competent Person	Internal Auditor	Doctor
Patient	Quality System	Patient
Patient Advocate	Executive Management	Parent/Spouse/Friend
Event	Internal Audit	Annual checkup
Findings	Process Nonconformance	Symptom
Possible Action	Corrective Action	Prescription
Follow-up	Institute corrective action; Responsible person to monitor and report to management	Patient fills and takes prescription; Date set for follow up visit / tests

Several things can be extracted from the health-care analogy:

- First, costs associated with the QMS are significantly reduced when a regular and thorough internal audit is performed by a qualified auditor. Potential nonconformances within the quality system can be identified and controlled.
- Second, the competent person must be just that. Otherwise, the probability of a costly misdiagnosis increases.
- Third, as is true with a physician’s prescription, a corrective action issued for the quality system only works if management implements (fills the prescription) and follows through (takes the prescription per the doctor’s instructions) on the corrective action.
- Fourth, sometimes the corrective action does not accurately address the systemic root cause. There can be several reasons for this; the auditor needs additional process-based training, the diagnosis was incorrect, etc. If so, then the protocol would be to revisit the corrective action and modify it with the goal of caring for the “disease.”
- Fifth, sometimes the patient needs an advocate, someone who speaks, pleads, or argues in favor of the patient. In the case of a QMS, executive management needs to be the advocate; otherwise, the health of the quality system will suffer.

Figure 1



Identifying a Nonconformance

This brings us to the next important question for an owner or executive management: When do I want to identify a nonconformance?

It is logical to identify any nonconformance, real or potential, as early as possible so that the costs associated with correcting the problem are minimal and savings are maximized. That is why any fabricator or erector worth their salt will conduct a comprehensive review of their contract documents so that any “Oh, by the way” problems are identified and addressed.

In Figure 1, the logical place to identify a nonconformance is at the bottom of the diagram where costs and risks

are the lowest and production (profit margins) is at its greatest.

But how is it possible to achieve these results? Again, as stated at the outset of this article, we are not involving any quality certification in this discussion. Even so, a healthy QMS will use a corrective action program to effectively keep costs and risks down while at the same time protecting and increasing production.

Think back to the analogy of the corrective action program as a doctor’s prescription. Obtaining a prescription normally requires a visit to the doctor. Likewise, to arrive at a corrective action, it normally requires an effective internal audit conducted by a competent internal auditor.

It can be seen in Figure 2, located on the following page, where the savings are to be found. Your QMS is composed of procedures and product; the money is in the product, and so are many of the costs. Thus, it is critical to the health of the entire system to keep product costs as low as possible.

To achieve this, quality must be built into the product. Again, think of the internal audit as a routine visit to the doctor’s office, whereas product nonconformance (shown by a “red tag” in Figure 2) is a visit to the emergency room.

Everything within the QMS (the solid rectangular box with rounded edges) is within the control of the quality system. Once product leaves the system, control over costs begins to rapidly diminish. As control decreases, potential costs and risks increase. Therefore, it is imperative that the company gain control of the process at every conceivable step: contract review, detailing, purchasing, etc.

For example, do you remember the feeling in the pit of your stomach when you realized that a long-lead item was missed by your estimator and did not get picked up in contract review? Or how about the time that purchasing missed stating on the mill order that the 15 W14x120s are to be used as columns, and your QC person is telling you that all 15 are out of tolerance for sweep? These become the ugly “Oh, by the way” items that your customer or supplier brings to your attention.

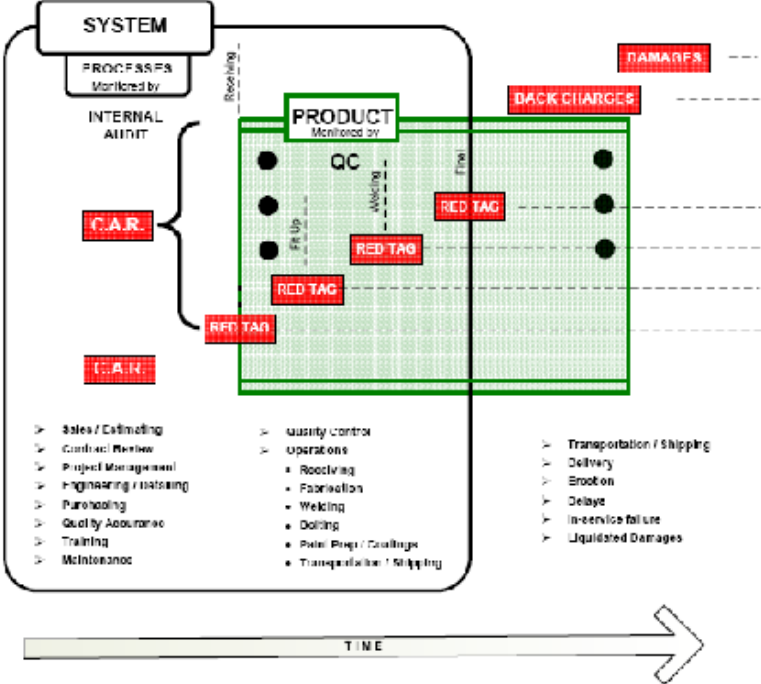
Not a healthy situation, physically or financially. Yet the savings associated with clearing up such a potential nonconformance are substantial. But to prevent the situations like this, you must seek preventive action. Make the internal audit and corrective action system pay for itself.

Routine Checkups

So how much is your quality management system costing you? If your focus is on product nonconformance without much regard for process nonconformance, you are making regular visits to the “emergency room” and your QMS is very expensive.

Figure 2

Quality Management System



But you might counter by saying “We only ship product that is conforming.” Bravo! But focusing on preventive measures, your quality processes, and enforcing these processes is where your savings will come from—because a process-based QMS builds a high level of confidence into the product.

In Dr. W. Edward Deming’s 14-point “Roadmap for Change” point 3 states: “Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.”

So, consider making routine checkups of your quality management system part of your standard operating procedure. Doing so will reduce costs and risks while at the same time increase production and the bottom line. **MSC**