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Q&A:
FDA Medical Device Investigator Offers Insights on Inspection

From contact lenses to thermometers to artificial hips, chances are every American has used a medical device at some point. More than 20,000 companies worldwide manufacture over 80,000 brands and models of medical devices for the U.S. market.

In order to protect the health of Americans, the Food and Drug Administration (FDA) makes sure that medical devices and other regulated goods worth $1 trillion annually are safe and effective.

For this article, MasterControl Inc., a leading software provider for life sciences and other regulated industries, interviews Lori A. Carr, a medical device specialist with the FDA's Office of Regulatory Affairs (ORA) in the Denver District Office. ORA is the lead office for all of FDA's field activities. Investigators (also called consumer safety officers) like Carr are on the front line of safeguarding public health, conducting about 22,000 inspections of domestic and foreign manufacturers a year.

Carr, who has 12 years of experience inspecting medical device firms, provides insights on the inspection process and common issues related to it. Cindy Fazzi, MasterControl copywriter and editor, conducted the interview by phone.

*[Language enclosed in brackets was added by the editor].

Q: Can you clarify the relationship between ORA and the Center for Devices and Radiological Health (CDRH) as far as inspection of medical device manufacturers is concerned?

> **Lori Carr:** CDRH and ORA work together in ensuring the safety and reliability of medical devices. CDRH employees, who work in the FDA headquarters, review cases, injunctions, pre-market approval submissions, etc. They issue field assignments. ORA investigators, who are out in field offices, conduct the actual inspection of medical device firms, including pre-market, post-market, and GMP [Good Manufacturing Practice] inspections.

Q: You made a presentation at an industry conference recently about the most common problems of medical device companies with regard to quality audits. Can you talk about that?

> **Lori Carr:** Medical device firms may choose to conduct internal quality audits either using a system-based approach or a procedure-based approach. The firms determine what approach works best for them depending on the nature of their operations. The system approach will be broader and may include CAPA, design, production, and management, including system procedures and personnel training. The procedure approach will focus on just one aspect, for example the SOPs for every single manufacturing process.
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> From what I've seen, firms that choose the procedure-based approach have more problems. They usually fail to look at the execution of the procedure. They would have their own schedule of what and when to audit, but they would fail to follow what they intended to do. That's a cause for a [Form FDA 483] citation. Another big problem is the choice of internal auditors. Firms are not supposed to ask an employee to audit an area that this person is directly responsible for because that person may be less than forthcoming. The auditor's objectivity is important. But too often, we find auditors auditing their own areas.
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> [Under the FDA's Quality System Regulation, medical device manufacturers are required to conduct audits to ensure that the quality system is compliant (Sec. 820.22). In a presentation, Carr noted the following as the most common audit-related problems.]
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> - No audit procedures.
> - No audit schedule.
> - Schedule (or changes to it) was not approved.
> - Schedule is not followed.
> - Schedule does not include required areas according to the firm's own requirements.

- When audits are not conducted according to the proper procedure (checklist), there's no documented reason for it.
- Poor auditor training or no evidence of auditor training.
- No re-audits (or change in schedule) despite failed audits from CAPA.
- No tie-in to CAPA or management review.
- Audit procedure does not require challenging the system in terms of sample size, time frame being covered, and review of records.
- Audit is inadequate because it looks only for existence of procedures and records, not the accuracy or completeness of records.
- No procedure for (or records of results) of any informal audits.

Q: As an investigator, what are the things that you look for in a company's CAPA process?

Lori Carr: Following QSIT [Quality System Inspection Technique], one of the key things I look at is how the firm handles nonconformances, including incoming raw materials nonconformances, in-process nonconformances, and finished device nonconformances.

Let's say there's a nonconformance directly related to a consumer complaint. I would ask: What happened to the end-user? Why did it happen? Is it because of a defective component or raw material? Is it an end-user error? In other words, get to the root cause of the nonconformance. The biggest problem for many firms is not getting to the root cause — they fail to analyze, to follow through. It's what we call failure to "close the loop."

It's not enough to say that the device failed and it was reworked. Some firms will say, "It broke, but it's not a big deal." As an investigator, it's a big deal to me — always! I want to know what happened. Why did it break? Did you fix it? How did you fix it? Once the firm investigates, it can trend nonconformances, and if necessary, go back to the design.

Q: What are the things that you look for in terms of training control?

Lori Carr: Investigators want to make sure that employees have the knowledge and ability to do their jobs and that they are trained on all aspects of GMP. We also want to see firms allocate adequate resources for training. I've seen companies that are short-staffed in quality assurance and have not trained enough people to do a complete device history record review. It seldom happens that a company will get a 483 citation because solely of training. Usually, the citation on training is tied to a problem in CAPA or design, or some other quality issues.

Q: The FDA is promoting the concept of "risk-based" approach in quality management. Can you give an example of how medical device manufacturers can apply this concept?

Lori Carr: Risk-based approach means FDA will inspect the higher-risk firms, usually Class II and III, more often than Class I. These firms should evaluate their own level of risks. Most of the time, they are pretty good at this because they don't want their medical device to fail.

Q: On average, how long does it take you to conduct an inspection?

Lori Carr: Typically, it takes four to five days to conduct a QSIT four-subsystem inspection in a medium-size company without any major problems. But for a firm with 500 employees and a lot of problems, maybe even a Warning Letter, then it could take up to four months. The longest inspection I've conducted so far lasted six months.

[QSIT is a process used by FDA field staff for inspecting medical device manufacturers' compliance with 21 CFR Part 820 and related regulations. It's designed to help FDA investigators focus on key elements of a firm's quality

system. A QSIT subsystem inspection is based on "top-down" approach, meaning the investigator looks at the firm's systems for addressing quality before looking at specific quality problems. Rather than check every aspect of the firm's quality system, the subsystem approach focuses on elements that are most important in meeting the requirements of the Quality System Regulation, which are key quality indicators.]

Q: What's your advice to companies facing an FDA inspection?

Lori Carr: For a routine GMP inspection, which takes place every two years, we usually announce the inspection at least five days prior to the inspection date. The announcement is meant to allow the firm to inform all employees about the inspection, organize all quality plans and documentation, and prepare everything that will help make the inspection go smoothly. We don't expect people to mull over every single document. My advice is simply to be ready and to assist the investigator as much as possible during the process. If, however, there's a Warning Letter involved, then it won't be a pre-announced inspection. We'll just show up on your door.

Q: How would you describe the current relationship between FDA and medical device manufacturers?

Lori Carr: FDA has always emphasized enforcement, but it's also interested in a cooperative relationship — in partnership — with the industry. What I see in both domestic and international firms is that they prepare for a certain type of investigator. In Europe especially, a firm is likely to get the same auditor from notified bodies year after year. So the firm prepares according to that auditor's style. Obviously, investigators [or auditors as they are commonly called in Europe] will inspect differently, based on their skills and experience. My advice is: Get your system to be compliant so you're prepared for every type of investigator who will come your way. If your system is compliant and if it's ready on a daily basis, then it doesn't matter who the investigator is.

Q: As far as FDA inspections are concerned, do you see any advantages in maintaining an electronic quality management system over a paper-based system?

Lori Carr: For certain companies — such as those with multiple facilities — an electronic system can definitely be more efficient.

About MasterControl Inc.
MasterControl Inc. has been at the forefront of providing quality management software solutions since 1993. Hundreds of companies worldwide use MasterControl to help ensure compliance with FDA regulations such as 21 CFR Parts 11, 210-211, 820, 606; ISO quality standards such as ISO 9000, ISO 13485, ISO 14000; and Sarbanes-Oxley Act requirements. In addition to providing off-the-shelf products, MasterControl also offers comprehensive technical and customer support, including product training, implementation, and validation services.

For additional industry white papers about automating quality and regulatory processes, visit www.mastercontrol.com, or call, 800-825-9117.

MasterControl's integrated quality management system helps connect quality processes enterprise-wide. The solution provides automatic triggers to ensure tasks for handling quality-related incidents don't fall through the cracks. MasterControl's integrated architecture ensures that the completion of one system process automatically launches the next quality sub-system until the process loop is closed. Managers have analytical and reporting capabilities at their fingertips to track and manage each quality process through completion.

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