



Tech Talk

Performing Effective, Value-Adding Audits and Self-Inspections

One of the most challenging activities in the health science industries, but without doubt one of the most important.

Bob Pietrowski explains why audits are central to the establishment and maintenance of a comprehensive Quality Management System and provides some tips on how to get the most out of your audit programme.

Why Audit?

The audit or self-inspection is one of the most important – if not the most important – elements of any Quality Assurance/Quality Management System. It is essential that all aspects of our activities be challenged on a regular basis to determine that premises, environments, practices, procedures and standards are:

- Relevant to the service being provided, to the product being made or to the final product, of which this product may be a component
- Comprehensive and no significant gaps or omissions exist
- Understood by staff at all levels
- Complied with by staff at all levels
- Maintained for maximum effectiveness
- Monitored for continual improvement

This view is reinforced in law in many countries. For example, Article 14 of European Directive 2003/94/EC laying down the principles and practice of Good Manufacturing Practice in respect of medicinal products and investigational medicinal products for human use, states:

“The manufacturer shall conduct repeated self-inspections as part of the quality assurance system in order to monitor the implementation of good manufacturing

practice and to propose any necessary corrective measures. Records shall be maintained of such self-inspections and any corrective action subsequently taken.”

Whilst this requirement refers specifically to those activities undertaken by the manufacturer internally (which is why self-inspections are sometimes called internal audits) there can be little doubt that the regulators require manufacturers and distributors to carry out repeated audits of the total supply chain, including suppliers/vendors, contractors and distributors/shippers of products. For example, under the new European Falsified Medicines Directive, 2011/62/EU:

“The holder of the Manufacturing Authorisation shall either by himself or through an entity contracted by him, verify compliance by the manufacturer and distributors of active substances with GMP and GDP by conducting audits at the manufacturing and distribution sites of the manufacturer and distributors of active substances.”

Moreover, the Directive introduces a requirement “to ensure that the excipients are suitable for use in medicinal products by verifying the appropriate good manufacturing practice”.

Whilst these requirements, which focus on actives and excipients, have arisen as a direct result of incidents, such as the deliberate adulteration of heparin, there can be little doubt that the principle of formally establishing the quality and integrity of all starting materials and components is one which all responsible manufacturers and distributors – of medical devices and nutraceuticals as well as pharmaceuticals – should regard as essential, and one which cannot be achieved by testing alone.

Nor should it be thought that just because FDA are essentially silent on the requirement for audits and self-inspections that they



and other regulators do not expect the manufacturer to assure the quality of its own operations and those of its suppliers and contractors via repeated audits. FDA and other regulators have contributed to and endorsed ICH Q10, Pharmaceutical Quality System, which explicitly recommends audits as a key element in the review of process performance and product quality and also in the management of outsourced activities and purchased materials.

But even if the regulators showed absolutely no interest in audits and self-inspections, they are things that every self-respecting manufacturer would want to carry out for business and ethical reasons.

A well-conceived and professionally executed audit programme delivers numerous important benefits over and above simple regulatory compliance:

- It builds confidence in the Quality System and ensures that it continues to be complete, effective and relevant
- It builds trust, understanding and good communications between individuals, departments, disciplines and companies
- It provides an independent, objective survey of performance, use of resources and, by challenging established practices, it can act as a stimulus for change
- It establishes good relationships between the company and its suppliers, which can be so important if and when problems arise
- It can (and should) identify potential for reduced testing by the receiving company and thereby save valuable resource
- It can help to implement corporate quality policies

The Audit Essentials

The key essentials for an effective audit programme are:

- The Audit Schedule
- The Trained Auditor
- The Audit Plan
- The Audit Report
- Audit Follow-Up

The Audit Schedule

It is a fact of life that we cannot carry out all the audits we need to perform all at once – we don't have the auditors, we don't have the money and we don't have the access to the place of audit to do this. So we have to prioritise!

That prioritisation should be based on RISK:

- To the patient
- To the product
- To the business

You will notice that I have not included "to regulatory action" on that list. I believe that if you attend to the three I have listed (and in particular the first two), then risk of regulatory action will automatically be taken care of.

That risk assessment should determine:

- What activities are audited first, etc.

- The duration of the audit
- Audit frequency

PIC/S has recently published a document on a risk-based approach to scheduling of regulatory inspections and this represents an excellent basis for companies seeking to set their own audit schedule.

The audit schedule should then be:

- Agreed
- Approved
- Communicated
- Adhered to
- Modified in the light of experience

The Trained Auditor

The auditor is an extension of the Quality System. Their task is to limit risk to the patient through prevention of errors. Thus, the role of the auditor is threefold:

Unfortunately, in many organisations, auditing is regarded as a part-time activity which can be undertaken by anyone who happens to be available.

- **A Surveyor** who observes things that are wrong (or capable of going wrong) and who oversees the entire system of assurance
- **A Colleague** who collaborates with those involved in all aspects of the process
- **A Counsellor** who can advise and contribute towards problem solving and maintenance of appropriate standards – providing continued technical support enhances the role and credibility of the auditor

The auditor should never be viewed as a policeman (or woman), trying to catch people out and applying punitive measures to those responsible.

Training the Auditor

Auditors must be properly trained to undertake the task assigned to them. Unfortunately, in many organisations, auditing is regarded as a part-time activity which can be undertaken by anyone who happens to be available. Such an approach will not build trust and respect in the auditee and will ultimately prove to be a costly waste of time for all involved.

An effective auditor will possess the following essential attributes:

- **Appropriate qualification and experience.** The auditor should ideally be qualified, or well trained, in the underlying science and technology and be fully conversant with processes and relevant standards associated with the activity to be audited. In either case, the ability to interpret the standards in a practical and pragmatic way is an essential prerequisite. Beware of anyone who tells you that their experience of auditing will enable them

to perform an effective audit even of products and processes they have no knowledge of.

- **Well informed.** The auditor should have a clear understanding of their company's business objectives and products. They should be able to see their role within the broader Quality Management and Business Management Systems and act in the best interests of both.
- **Open minded.** The auditor must be receptive to new ideas and ways of doing things. Some auditors appear to adopt a policy which can best be described as, "there are two ways of doing this – the way my company does it and the wrong way!" Rather, auditors should assess different approaches on their merits and be prepared to say from time to time, "this isn't the way my company does it – it's better!"
- **Inter-personal skills.** There is a tendency to think that auditing in our industry is all about science and technology, fact and figures; it is not! It's primarily about building human relationships. It is essential that the auditor establishes a good rapport with all the people they come into contact with. Thus, the auditor must be equally comfortable talking with the CEO and the cleaner, and be able to gain their respect and trust. A constructive, fair and balanced approach will always yield results, whereas an officious and aggressive audit full of destructive criticism may satisfy the auditor's ego, but will achieve nothing in terms of cooperation, motivation and, ultimately, assurance of product quality.

This is echoed by ISO 19011, Guidelines for Auditing Management Systems, which states that auditors should have integrity, be fair, exhibit professionalism and confidentiality, be independent and be evidence-based in their approach.

Auditors are not born with all these attributes in equal measure – they must be trained to improve and refine their auditing skills. This can be done in-house, but is probably better done by putting the auditor through a structured training programme which provides key audit skills as well as focussed education in the technical and regulatory subjects pertinent to the role. At NSF-DBA, we provide such a programme via our IRCA certified pharmaceutical quality management system lead auditor course "Effective Pharmaceutical Audits and Self-Inspections", which provides the essential general auditing skills, and additional short courses which provide the background knowledge to enable the auditor to tackle specific audits such as APIs, excipients, computer systems, biotech processes, etc.

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The Audit Plan

Every audit should be conducted in a structured and systematic way, and that requires some sort of plan.

Some companies favour the audit checklist – a structured list of

questions to be asked when auditing a specific department or activity. Checklists have several advantages:

- They can ensure that all activities and issues are covered and important things are not missed
- They deliver consistency – between auditors and between audits

However, checklists can have their disadvantages:

- They can act as a "straightjacket" for the inexperienced auditor and deter them from "following their nose" when something doesn't feel quite right
- Whilst they provide the questions to ask, they often do not provide guidance on what constitutes an acceptable answer
- As a result, they can ensure breadth at the expense of depth

Other companies favour the audit aide-mémoire – a list of key words and phrases which the auditor can use to shape the audit. Thus, an aide-mémoire for a goods receiving area might include key phrases such as:

- Facility design and construction
- Pest control and cleaning
- Temperature control
- Goods receipt/materials management
- Product segregation
- Labelling
- Sampling
- Reconciliation

The aide-mémoire has advantages:

- It ensures that all important issues are covered whilst allowing a degree of flexibility of approach
- It allows the auditor to move on quickly if procedures are satisfactory or, conversely, to concentrate time and questioning on areas of concern

But it also has downsides:

- It puts more reliance on the skill and experience of the auditor
- It creates the potential for inconsistency between auditors

Whichever approach is adopted, auditors must be trained to use them skilfully.

The Audit Report

An audit with no audit report is at best a visit and at worst just tourism!

The report is one of the few lasting records of the audit activity and is crucial to the processes of:

- Assessment of acceptability
- Follow-up and remediation

As such the audit report must be written to an agreed format, which should cover at least the following:

- Details of the audited department or company



- Date of audit
- Auditor
- People seen
- Scope of audit/standards adopted
- Areas/departments/activities audited and those not covered by the audit
- Major findings/observations and (where appropriate) proposals for remedial actions/improvements
- Acknowledgements and thanks
- Appended documentation (site plans, organisation charts, etc.)

In my opinion, every audit report should contain an "Executive Summary", which concisely states the general level of compliance, the major items of concern and proposals for remedial action and timelines. In the case of a vendor audit an overall assessment of acceptability would be included along with proposals for follow-up and re-audit. Senior managers are busy people and will probably not have the time to read the whole report, but a half page Executive Summary can provide them with all they need to understand the overall situation and, where necessary, approve remediation plans.

The audit report, or a redacted version of it, should be provided to the auditee. There should be no surprises for the auditee in the report! All issues and comments in the report should have been covered in the summary session at the end of the audit.

Audit Follow-Up

Every audit should entail some degree of follow-up. This should include:

- Providing the auditee with a copy of the audit report, or a redacted version of it
- Proposals for improvements and/or remedial actions as appropriate
- Request for comments and proposals for remedial actions (with timelines) from the auditee
- Review of proposed action for acceptability and timeliness
- Agreement on procedures for and timing of re-audit

The follow-up is key to assurance of quality and must not be overlooked or given low priority.

A Final Word About the Auditor

Any audit – and any audit programme – is only as good as the people performing the audit!

I have already stressed the importance of selecting the right people and giving them the right training, but it must be

clearly understood that few, if any, companies have sufficient appropriately trained auditors to be able to cover the wide variety of activities, sciences, technologies and processes involved in the modern supply chain to be able to audit them all effectively. This is where third party experts can help. Organisations like NSF-DBA have experienced consultants who together can cover most, if not all, of your auditing needs around the world. It is no surprise, therefore, that numerous health science companies use us and others like us to perform audits for them when they don't have the technical expertise in-house, or to simply contract out all their supplier audits to us.

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Additionally, it is unreasonable to expect vendors to accommodate audits from all their customers at times to suit their customers. And even if they could, they cannot possibly respond positively to the diverse and sometimes contradictory requests made by all those customers. Again, this is where the third party experts can help. The organisation, Rx-360, which is discussed elsewhere in this Journal, was created to provide pharmaceutical manufacturers with the technical resource to perform an in-depth audit of suppliers and then to provide a report which can be used by Rx-360's membership. This satisfies the need to have confidence in the quality standards of the supplier without subjecting the supplier to a deluge of supplier audits from different companies with very different levels of experience and competence. NSF-DBA is proud to be an approved auditor for Rx-360.

In Summary

The audit is a crucial element of any Quality Management System – perhaps the most crucial.

It makes good business sense to regularly assess all aspects of the product supply chain – internally and externally – for compliance with relevant quality standards and appropriate good practices.

Any audit programme is only as good as its auditors – choose them with care, make sure they are fully trained and use external experts when you don't have the necessary skills and resource in-house.

Always make patient risk the primary focus of any audit programme, but don't miss out on opportunities to improve business efficiency and competitive edge.

Some Tips for Auditors

Know What You Don't Know

No one can be an expert in everything. Realise your limitations and don't take on an audit unless you are completely confident that you understand the science, the technology and the key quality critical factors that will enable you to perform a first class audit.

Do Your Homework

There is an old saying "Proper Preparation Prevents Poor Performance".

Before every audit, make sure you learn as much as possible about the department/company, its products and its processes. Sources such as YouTube can be invaluable to give you a "glimpse" of a process you may never have seen before. Similarly, talk to people in your own organisation about the quality of the product/component/service you receive from the supplier. Have there been any problems with quality, useability, delivery, performance etc? Talk to your purchasing department. Are you tied to this vendor or do you have other approved suppliers?

Be Smart, Be On Time, Be Professional

Remember that you are an ambassador for your company or department. Create the right impression.

Agree the Standards

Ensure that the auditee knows the standards to which the audit will be conducted (e.g. EU GMP, 21 CFR Part 211 etc.) and agrees that this is an appropriate standard for the audit.

Have a Plan, But Be Flexible

Have a plan to cover what you want to see and when you want to see it. That helps the auditee as well as you. However, be responsive to the needs of the auditee and local company procedures and be prepared to change that plan when necessary.

Learn to Listen

Remember that you have two ears and only one mouth. Try to use them in roughly that proportion! Good listeners make good auditors.

Never Leave an Area Without Telling the People What You Think

This is just common courtesy. Before leaving any area, department or group of auditees, ensure that you have:

- Thanked everyone for their cooperation
- Given them your general impression
- Communicated any areas of concern and given them the opportunity to respond and, if necessary, correct any misunderstandings

Accentuate the Positive

Auditing is not just about finding non-compliances. Don't be afraid to compliment auditees on things they do well, and always start your report with the good aspects. This will make the auditee more responsive to the items of concern that you intend to cover.

Be Prepared to Offer Solutions, Not Just Problems

If you believe that you can assist the auditee in finding a compliant, cost effective solution to a problem, offer to do so. Remember that you are there to help, not just criticise. However, exercise caution here; sometimes solutions that work in one environment do not work quite so well in another.

Look for Ways to Reduce Costs

For example if a supplier, as part of its QC procedures, is taking a larger sample of material and testing it by a method which is more accurate than that which you use for assessment on receipt, then don't be afraid to recommend that your company drops or severely reduces in-house testing as it is not contributing to quality assurance. Always look for ways to make the audit more than pay for itself.

Smile, Smile, Smile

It's the easiest way to gain trust and cooperation!



If you think that NSF-DBA can help your company, either by providing class leading training for your auditors or by performing audits on your behalf around the globe, please contact us:

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