June 22, 2011 (Wednesday) 55th EOQ Congress

CONCURRENT SESSIONS **Wednesday 8:30 – 12:30**
KEMPINSKI HOTEL CORVINUS **Erzsébet tér 7-8, Budapest V.**

REGINA BALLROOM III. **Wednesday 11:00 – 12:30**

22.1. QUALITY IN PHARMA INDUSTRY

Session Chair: ***Vilmos Berényi****, WIL-ZONE Consulting Office, Hungary*

11.40 Pharma Industry: Quality Assurance or Quality Management
Júlia Sipos, Institute of Isotopes Co. Ltd., Hungary

Sipos, Júlia (Hungary)

Chemical engineer (Budapest, 1977). She has 12 years of experience in the textile industry as organiser and software programmer; 19 years of experience as senior consultant in quality management, food safety, information safety management systems. Trainer of IRCA registered QMS Lead Auditor courses (1995-2008). Registered QMS lead auditor by IRCA since 1995. Participated in ISO/TC 176, as delegate of the Hungarian Standards Institution (1999-2008), worked in SC2 dealing with ISO 9001 and 9004 standards as well as in the Interpretation Working Group. Currently she is Quality Manager of Institute of Isotopes Co. Ltd (since October, 2008). Publications: co-author of Verlag Dashöfer publication about quality management (chapter on quality auditing), author of several articles in Hungarian quality periodicals.

Sipos, Julia
Institute of Isotopes Co. Ltd

Pharma industry: quality assurance or quality management?

The presenter

Quality Manager of Institute of Isotopes Co. Ltd. since 2008
Background:

- 20 years of experience in quality management consultancy (among them pharma company),
- 15 years of experience as quality management system lead auditor registered by IQA IRCA.

Introduction

New laws and regulations usually follow tragedies. This goes back to early 1900s in case of pharmaceuticals, when in USA at least 12 children died in diphtheria because the vaccine was contaminated with live tetanus bacilli. The law was signed by Theodore Roosevelt. After further issues in 1938 the Federal Food, Drug and Cosmetic Act came into force. This established FDA. It was revised in 1940s after another serious tragedy when contaminated pills killed lot of people. Since then we speak about GMP, but it was formalised as regulation in 1963. In 1978 it was greatly expanded due to further tragedies, and now it is what we know as GMP. Of course its improvement is a "never ending" process.
Due to this approach it was evident that the laws and regulations focus on the product itself, in order to provide safe pharmaceutical that meets its intended use. It states really very rigorous requirements, but does not relate to the totality of company environment that shall (and can) provide for all resources and circumstances required for continuous meeting all aspects of professional requirements. This is what we call quality management.
As defined in ISO 9000:2005 standard, quality management means coordinated activities to direct and control an organization with regard to quality. Direction and control with regard to quality generally includes establishment of the quality policy and quality objectives, quality planning, quality control, quality assurance and quality improvement.
Quality assurance as a part of quality management is focused on providing confidence that quality requirements will be fulfilled.

As ISO 9001 standard is applicable to all industries some pharma companies are certified but most of them did not use it as authorities focus on GMP only. In addition the authorities prefer see the GMP documentation separately from any other systems in order to have a "clear" picture of the company.

New approach in pharmaceutical legislation

After issue of ISO 9001:2000, pharma industry realised the advantages of quality management concept in addition to quality assurance requirements covered by GMP regarding routine production.

Main issues of ISO 9001:2000 (and 2008, where no new requirement appeared, it was updated for clarification of some issues only) that are additional those included in GMP are as follows:

- management commitment – more than "key personnel" mentioned in GMP
- quality objectives to be set
- quality manual as a frame document of the system
- management review – systematic top level evaluation
- design and development
- monitoring and measurements of processes
- evaluation of suppliers
- data analysis to establish basis for decision making

- continual improvement – covers whole operation

All these are answers to eight quality principles introduced by new ISO 9000:2000 family of standards:

- Customer focus
- Leadership
- Involvement of people
- process approach - based on PDCA cycle

Text in the boxes are given from APIC/CEFIC QMS – integrating GMP into ISO)

- System approach to management
- Continual improvement
- Factual approach to decision making
- Mutually beneficial supplier relationships

New documents have been issued:

- Quality Management System for APIs Manufacturers – integrating ICH Q7 into ISO 9001 (September, 2005) that states:
  „…ISO 9001:200series are an excellent complementary fit to the GMP requirements…"
  It is one of basic documents of ICH Q10.
- Pharmaceutical Quality System – ICH Q10 (June, 2008, latest issue: January, 2011) that states:
  „…an example of a pharmaceutical quality system designed for the entire product lifecycle and therefore goes beyond current GMP requirements"
  Main characteristics: it is a life cycle long guidance for pharma industry based on knowledge management a quality principles.
- Changes of Chapter 4 an Annex 11 of GMP guide – that come into force on 30th June, 2011.
- Discussion opened about change of Chapter 8 – "Concept paper on Revising Chapter 8 of the EC guide to GMP to introduce risk-based concepts and to provide for more effective investigations and CAPA actions"
  Commenting period: up to 30th June. 2011.

QMS history of a radiopharma company

Institute of Isotopes Co., Ltd operates the following production/service departments: Radiopharmaceutical, Synthesis, Immunoassay and Radiation Technique business lines.
The lecture details history and main achievements in meeting requirements of GMP, ISO 9001 as well as ISO 13485.
Steps of system implementation:

1. ISO 9001 QMS for all activities of the company, certified first in 1998 and then on 3 yearly basis, including transfer to ISO 9001:2000 in 2003.
2. GMP system was upgraded to the EU requirements in 2002 in the Radiopharmaceutical Business line and related departments and activities. It was inspected by the national authority in each 3 year since 2002.

3. ISO 13485 QMS for one specific product produced in Radiopharmaceutical business line as contract manufacture of one component of an IVD kit. It was certified in 2008 as required by the customer. The system was expanded for all in vitro diagnostics in the Immunoassay Business line. The system was certified in 2009.

Improvement of QMS

Due to the approach applied, ISO 9001 and GMP systems were not really integrated and were too complicated (whilst ISO 13485 was implemented in integration with the latest issue of ISO 9001).
The need for more user friendly and easily manageable system in the everyday practice became more and more pressing. The main challenges in reorganisation of the systems are:

- to change the way of thinking about integration of different quality systems and about what authorities may require and
- even a small change can have a big impact on the remaining part of the system and its documentation.

ICHQ10 gives good support to MANAGMENT system improvement in terms of pharmaceutical business (instead of „assurance" only). And we hope that authorities accept this approach.

To manage the improvement project successfully we need the management commitment and high professionalism in quality management approach as well as time expertise in pharmaceutical requirements. Furthermore the improvement can be managed only in teamwork and in a well planned and controlled manner. Integrity of whole operation shall be maintained during the updating process.

We took into account that it is a small industry in a national company that produces special (radioactive) products. We follow PDCA thinking and apply risk assessment in more and more activities (e.g. in planning of training, audits, validations, etc.).
The main result of updating shall be a system which is more transparent, easier to use and update. Achievements so far are:

- risk assessment systematically used,
- procedures updated: handling of documentation, complaints and CAPA handling,
- centralised registry and database of deviation, change control and OoS handling,
- process of logistics (excluding production and sales) updated in unified manner, which unifies now documents dealing with the same issue for radiopharmaceuticals and other products (e.g. warehouse operations, purchasing, etc.),
- sampling SOPs updated and simplified in structure showing an example for further modification issues (instead of 81 separate documents 3 is now established that covers all requirements),

All these improve the internal communication as well.

Further plans are to update all procedures and SOPs that haven't been updated yet. it is also important to take part in implementation of new company level computerised management system in order to handle changes that impact QMSs, have an early understanding of requirements and opportunities and speed up improvement process of GMP compliance in a user friendly manner.

Conclusion

Recognition of improvement potential and willingness of the management to walk this way is a great power to move forward excellence. This is a long excursion, but finally this proves the movement of pharma industry from management of quality towards quality of management.