LOGFILE Feature 18/2020 – Nothing ventured, nothing gained

8-10 Minuten

Why is QRM so important for the pharmaceutical industry?

Every patient taking medicines expects them to have the desired effect and be otherwise harmless. Efficacy and patient safety are therefore declared goals in the production of pharmaceuticals. Marketing authorisation holders (MAH) must manufacture medicinal products in such a way that they are suitable for their intended use, comply with the marketing authorisation dossiers, and that the patients, are not exposed to risks. Such risks mayresult from *lack of safety, purity, quality or efficacy* of the medicinal product.

Each step in the manufacturing process of medicinal products involves potential *risks* to the product quality and, as a result, to the patient. However, the risks associated with the manufacture of medicinal products are only one part of the overall risk to the medicinal product during its life cycle (see Figure 1).

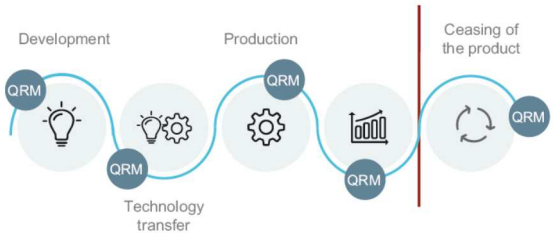

Figure 1 Life cycle of a medicinal product

The product life cycle of a medicinal product is often very complex because the individual stages frequently take place at different times, in different locations and under different management. Effective management, control and, as a consequence, minimisation of the potential risk to patients is only possible when risk manage-ment is used effectively.

How did QRM get into the GMP regulations?

In 2001, with the publication of Annex 15, the term "risk assessment" was introduced for the first time in the EU GMP Guide as a basis for the planning and scope of validation activities. However, no additional explanations were provided.

This changed in 2005 with the adoption of the ICH Q9 guideline, which describes quality risk management (QRM) in pharmaceutical manufac-turing. Together with the corresponding guidelines ICH Q8 "Phar-maceutical Development" and ICH Q10 "Pharmaceutical

Quality Sys-tem", there was now an overview of how to deal with quality-related risks in drug manufacturing. The publication of this holistic approach over the entire life cycle represented a paradigm shift in the way risks are managed. Since then, it has also become a regulatory require-ment of the hour to use QRM comprehensively in all areas relevant to drug quality.

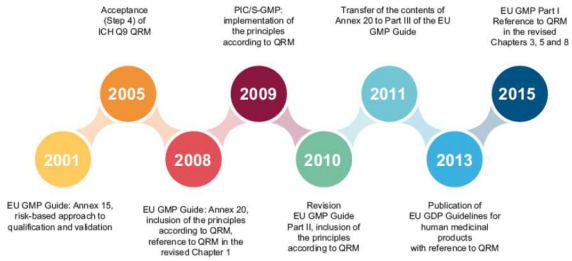

Figure 2 Chronology of the introduction of QRM into the GxP regulations

This was followed by an increasing consideration of QRM in the GxP regulations, be it in the creation of new documents or in the revision and updating of individual chapters in the EU GMP guide. Details are shown in Figure 2.

What is decisive for the success of QRM in a company?

QRM needs support by the management!

A fundamental prerequisite for dealing with risks in line with requirements is the documented will of the management to operate such a system, its active participation in it and the provision of resources in line with requirements. However, the active involvement of senior management is not limited to the issue of resources. Rather, the management must define general acceptance criteria based on the company-specific objectives, which serve as the basis for determining the criteria for the individual transactions, e.g. for risk acceptance.

QRM must be anchored in the quality management system!

The EU GMP guide considers QRM to be an indispensable part of the pharmaceutical quality system. Thus, the use of QRM also requires its consideration and description in the quality management system of each individual company.

An important requirement is the formal specifications in the quality management system. It is of utmost importance to define an overall concept for the company and not to get lost in department-specific isolated applications. Only a concept that applies equally to all areas of the company can ensure that knowledge from all specialist areas can be incorporated into the assessment of risks.

In the instructions documents, such as SOPs or processing or work instructions, the following topics must be regulated.

At a glance: important provisions for QRM	

Uniform definition of Terms • Processes and procedures, e.g. risk analysis methods used in the company • Classification and acceptance criteria • Document types, for example, plan, risk analysis, report	
Organizational details • Definition of the general QRM process • Structure of the decision-making process • QM documents required for this (SOP, work instruction) • Guidelines for dealing with deviations from the defined process	
Personnel • Organisational Structures • Responsibilities, contact persons, decision makers • Team building (members, required training status) • Establishment of effective information channels • Decision-making processes (including the involvement of functionaries, if necessary)	
Documentation • Type of preparation (timely, complete, transparent, traceable) • Determination of effective ways to authorize the documents with the participation of the (right) decision-makers required for this • Procedure for ensuring that documents are up to date • Determination of an interval for checking timeliness • Definition of the triggers for a revision, e.g. relevant findings from deviation or change management	

The effectiveness of QRM must be reviewed!

In addition, a regular review of the effectiveness and efficiency of QRM is expected. This can be done, for example, as part of the management review. Key figures, such as the proportion of pending or completed actions to the total number of actions, or the accumulation of actions completed on a certain date, could confirm the quality of QRM or be an indicator of deficiencies.

Conclusion:

The application of QRM in the life cycle of a medicinal product is manifold. The basic principle is that QRM should help the management, decision-makers and other parties involved to make conscious, qualified and risk-based decisions. Quality risk management should never be used to justify poor practices requiring improvement, or non-compliance with regulations. In addition, it should never be used as a replacement for a deep understanding of the product and process.

The responsibility for introducing and embedding QRM in the quality management system lies with company management; the principle that tasks can be delegated, but not responsibility, applies here.

At a glance: The most important facts about QRM
• QRM concerns the entire product life cycle of a medicinal product.
• QRM must be anchored in the QM system.
• QRM is a continuous process.
• The ultimate goal of QRM is patient protection.
• The effort, stringency and formality of QRM are variable: they should be appropriate to the situation.
• QRM provides scientifically sound bases for decision-making.
• The responsibility for QRM lies with the company management.

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Excerpt from the GMP Compliance Adviser

- Chapter 19.A Agency expectations of quality risk management

- Chapter 19.B Application and benefits of QRM in the pharmaceutical industry

  Would you like to learn more about the application of QRM in the product life cycle, the individual phases of a QRM process and the successful introduction of QRM in the company?

  Then we recommend you take a look at the completely revised chapter 19 Quality Risk Management of the GMP Compliance Adviser. Here you will now also find many practical application examples!

  >>> More Information: GMP Compliance Adviser