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Medical laboratories — Reduction of error through risk management and continual improvement

Laboratoires médicaux — Réduction d'erreurs par gestion du risque et amélioration continue

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

— an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;

— an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 22367 was prepared by Technical Committee ISO/TC 212, *Clinical laboratory testing and in vitro diagnostic test systems*.

Introduction

It is a requirement of ISO 15189 that laboratories have an investigative process to identify aspects that do not conform with their own procedures or with predetermined requirements in the quality management system. ISO 15189 specifies that this be linked both to corrective actions and to preventive actions. In addition, it specifies that management review the suitability and effectiveness of the system and its activities in support of patient care, and that they introduce necessary changes. This can best be done by considering potential risks introduced at each step of each process.

Preventive actions are planned and appropriate anticipatory processes, based upon verifiable information, are undertaken to prevent a potential action from occurring. Corrective actions are similarly planned together with appropriate reactive processes; however, these are undertaken to amend identified problems and to avoid their recurrence. Risk management is a planned process that is part of preventive actions and corrective actions.

Preventive actions and corrective actions can be more effectively directed when they are based upon information that is well-organized; classification systems and risk management analysis are two processes that provide well-organized information.

In the context of organizational management, risk has been described as a multidimensional concern about stability and predictability of outcome. Organizational risk involves components that affect the operational, technical, liability and business aspects of the laboratory. In the context of continual improvement, the risk elements of potential for loss are considered with higher priority than the elements of gain. Consideration of risk necessarily includes the linked but different elements of likelihood of occurrence and severity of impact. Factors that impact upon risk can act either directly or indirectly.

The framework of risk management can be described as consisting of the following steps:

a) planning for risk,

b) identifying risk and its impacts,

c) developing risk-handling strategies, and

d) monitoring for risk control.

These steps are consistent with the management requirements described in ISO 15189, including:

— identifying and controlling non-conformities,

— establishing preventive actions and corrective actions,

— carrying out internal audits and management reviews, and

— implementing continual improvement.

This Technical Specification is intended to provide the first steps to introduce risk management into the structure, organization, operation and quality management system of the medical laboratory.

Classification of laboratory non-conformities, errors and incidents is useful for monitoring purposes and allows the laboratory to determine their criticality, to set priorities in addressing them and to identify underlying causative factors that contribute to errors.

Considerations contained within local, regional and national regulations normally apply.