



CLINICAL AND
LABORATORY
STANDARDS
INSTITUTE®

1st Edition

QMS25

Handbook for Developing a Laboratory Quality Manual

SAMPLE

This handbook assists laboratories in developing a quality manual—a vital component of implementing and maintaining a complete laboratory quality management system.

A CLSI product for global application.

Clinical and Laboratory Standards Institute

Setting the standard for quality in medical laboratory testing around the world.

The Clinical and Laboratory Standards Institute (CLSI) is a not-for-profit membership organization that brings together the varied perspectives and expertise of the worldwide laboratory community for the advancement of a common cause: to foster excellence in laboratory medicine by developing and implementing medical laboratory standards and guidelines that help laboratories fulfill their responsibilities with efficiency, effectiveness, and global applicability.

Consensus Process

Consensus—the substantial agreement by materially affected, competent, and interested parties—is core to the development of all CLSI documents. It does not always connote unanimous agreement, but does mean that the participants in the development of a consensus document have considered and resolved all relevant objections and accept the resulting agreement.

Commenting on Documents

CLSI documents undergo periodic evaluation and modification to keep pace with advancements in technologies, procedures, methods, and protocols affecting the laboratory or health care.

CLSI's consensus process depends on experts who volunteer to serve as contributing authors and/or as participants in the reviewing and commenting process. At the end of each comment period, the committee that developed the document is obligated to review all comments, respond in writing to all substantive comments, and revise the draft document as appropriate.

Comments on published CLSI documents are equally essential, and may be submitted by anyone, at any time, on any document. All comments are managed according to the consensus process by a committee of experts.

Appeals Process

When it is believed that an objection has not been adequately considered and responded to, the process for appeals, documented in the CLSI Standards Development Policies and Processes, is followed.

All comments and responses submitted on draft and published documents are retained on file at CLSI and are available upon request.

Get Involved—Volunteer!

Do you use CLSI documents in your workplace? Do you see room for improvement? Would you like to get involved in the revision process? Or maybe you see a need to develop a new document for an emerging technology? CLSI wants to hear from you. We are always looking for volunteers. By donating your time and talents to improve the standards that affect your own work, you will play an active role in improving public health across the globe.

For additional information on committee participation or to submit comments, contact CLSI.

Clinical and Laboratory Standards Institute
950 West Valley Road, Suite 2500
Wayne, PA 19087 USA
P: +1.610.688.0100
F: +1.610.688.0700
www.clsi.org
standard@clsi.org

Handbook for Developing a Laboratory Quality Manual

Lucia M. Berte, MA, MT(ASCP)SBB, DLM,
CQA(ASQ)CMQ/OE

Tania Motschman, MS, MT(ASCP)SBB, CQA(ASQ)

Michelle Jenkins, MS, MT(AMT), CQE(ASQ)CMQ/OE

Abstract

Clinical and Laboratory Standards Institute product QMS25—*Handbook for Developing a Laboratory Quality Manual* is a useful tool for laboratories just beginning to implement a QMS or those looking for a new perspective on laboratory quality management. This handbook contains answers to commonly asked questions about quality manuals, suggestions for elements to include, useful appendixes, and templates for preparing quality management policies. Information in this handbook aligns with the QMS approach previously published in CLSI document QMS01¹ and CLSI product *The Key to Quality*^{™,2}

Clinical and Laboratory Standards Institute (CLSI). *Handbook for Developing a Laboratory Quality Manual*. 1st ed. CLSI product QMS25 (ISBN 1-56238-942-4 [Print]; ISBN 1-56238-943-2 [Electronic]). Clinical and Laboratory Standards Institute, 950 West Valley Road, Suite 2500, Wayne, Pennsylvania 19087 USA, 2017.

The Clinical and Laboratory Standards Institute consensus process, which is the mechanism for moving a document through two or more levels of review by the health care community, is an ongoing process. Users should expect revised editions of any given document. Because rapid changes in technology may affect the procedures, methods, and protocols in a standard or guideline, users should replace outdated editions with the current editions of CLSI documents. Current editions are listed in the CLSI catalog and posted on our website at www.clsi.org.

If you or your organization is not a member and would like to become one, and to request a copy of the catalog, contact us at:

P: +1.610.688.0100 **F:** +1.610.688.0700 **E:** customerservice@clsi.org **W:** www.clsi.org

Copyright ©2017 Clinical and Laboratory Standards Institute. Except as stated below, any reproduction of content from a CLSI copyrighted standard, guideline, companion product, or other material requires express written consent from CLSI. All rights reserved. Interested parties may send permission requests to permissions@clsi.org.

CLSI hereby grants permission to each individual member or purchaser to make a single reproduction of this publication for use in its laboratory procedures manual at a single site. To request permission to use this publication in any other manner, e-mail permissions@clsi.org.

Suggested Citation

CLSI. *Handbook for Developing a Laboratory Quality Manual*. 1st ed. CLSI product QMS25. Wayne, PA: Clinical and Laboratory Standards Institute; 2017.

SAMPLE

ISBN 1-56238-942-4 (Print)

ISBN 1-56238-943-2 (Electronic)

ISSN 1558-6502 (Print)

ISSN 2162-2914 (Electronic)

Volume 37, Number 2

Contents

.....

Abstract i

Committee Membership iii

Foreword vii

Chapter 1: Introduction 1

 1.1 Scope 2

 1.2 Background 2

 1.3 Terminology 3

Chapter 2: Answers to Questions About a Quality Manual 7

 2.1 What Is a Quality Manual? 8

 2.2 Why Is a Quality Manual Needed? 11

 2.3 What Is the Quality Manual Used for? 12

 2.4 Who Should Write the Quality Manual? 13

 2.5 When Should the Quality Manual Be Written? 13

Chapter 3: Guidance for Contents of a Quality Manual 15

 3.1 Introduction and Purpose 16

 3.2 Vision and Mission Statements 16

 3.3 Scope 17

 3.4 Quality Policy 17

 3.5 Quality Goals and Objectives 18

 3.6 Examples of Quality Manual Policies, Goals, and Objectives 19

 3.7 Elements of the Quality Management System 22

 3.8 Supporting Documents 22

 3.9 Appendixes (Optional) 23

Chapter 4: Getting Started 25

 4.1 Using the Provided Templates to Develop Quality System Essential Policies 26

 4.2 Use and/or Modify the Laboratory’s Current Documents 28

 4.3 Documenting Quality System Essential Processes 29

 4.4 Writing Quality System Essential Procedures 30

 4.5 Table of Contents for a Quality Manual 31

Chapter 5: Conclusion 33

Chapter 6: Supplemental Information 35

References 36

Additional Resources 38

.....



Contents (Continued)

Appendix A. Structure and Contents of a Template for a Quality System Essential–Based Policy	39
Appendix B1. Organization and Leadership	40
Appendix B2. Customer Focus	44
Appendix B3. Facilities and Safety Management	47
Appendix B4. Personnel Management	50
Appendix B5. Supplier and Inventory Management	53
Appendix B6. Equipment Management	56
Appendix B7. Process Management	59
Appendix B8. Documents and Records Management	62
Appendix B9. Information Management	65
Appendix B10. Nonconforming Event Management	68
Appendix B11. External and Internal Assessments	70
Appendix B12. Continual Improvement	72
Appendix C. Crosswalk of Quality System Essentials to Related Clauses of ISO 15189:2012 and ISO 17025	74
Appendix D1. Example Quality Process Flow Chart: “Document Management Process”	79
Appendix D2. Example Quality Process Flow Chart: “Training and Competence Assessment Process”	80
Appendix D3. Example Quality Process Flow Chart: “Nonconforming Event Response Process”	81
Appendix D4. Example Quality Process Flow Chart: “The Audit Process”	82
Appendix D5. Example Quality Process Flow Chart: “Process Management Process”	83
Appendix E1. Example Quality Procedure: “Correcting a Laboratory Paper Record Procedure”	84
Appendix E2. Example Quality Procedure: “Electronic Reporting of a Laboratory Nonconforming Event Procedure”	85
Appendix F1. Example of a Quality Manual Table of Contents With Process and Other Supporting Documents Included in the Supporting Documents Section	86
Appendix F2. Example of a Quality Manual Table of Contents With Process and Other Supporting Documents Included in the Applicable QSE Section	87
The Quality Management System Approach	88
Related CLSI Reference Materials	90

Foreword

A quality manual provides laboratory leadership, personnel, and accreditors with a description of the laboratory’s QMS, ie, the intent for how the laboratory will:

- ▶ Ensure quality.
- ▶ Practice good quality management.
- ▶ Meet regulatory, accreditation, and customer requirements.

Included in this handbook are:

- ▶ Answers to the most commonly asked questions about a quality manual
- ▶ Guidance on how to develop a quality manual
- ▶ Templates for organizing laboratory management information into easily understood policies, processes, and procedures for each quality system essential (QSE)
- ▶ Examples of flow charts for QSE processes
- ▶ Example of a procedure for a QSE process

NOTE: The guidance provided in this handbook represents suggestions and recommendations by the authors for good practice and does not necessarily reflect the views of the organizations they represent.

 **NOTE:**

A quality manual provides laboratory leadership, personnel, and accreditors with a description of the laboratory’s QMS.

KEY WORDS

Quality manual

Quality objectives

Quality policy



.....

Chapter 1

Introduction

This chapter includes:

- ▶ Handbook's scope and applicable exclusions
- ▶ Background information pertinent to the handbook's content
- ▶ Abbreviations and acronyms used in the handbook

SAMPLE
QUALITY



Handbook for Developing a Laboratory Quality Manual

NOTE:

This handbook can be used to:

- ▶ Develop a quality manual for the first time.
- ▶ Restructure and revise laboratory administrative and quality documents.

1 Introduction

1.1 Scope

This handbook provides a structured means for laboratory management and personnel to develop a quality manual for the first time or to restructure and revise a quality manual from a laboratory's existing administrative and quality documents.

This handbook can be used by:

- ▶ New and current laboratory management personnel to learn about the QMS policies, processes, and procedures in their laboratory
- ▶ Laboratory quality managers for developing needed quality processes, procedures, and forms and for ensuring effective implementation of the QMS
- ▶ Medical and public health laboratories
- ▶ Blood gas laboratories
- ▶ Research laboratories
- ▶ Veterinary laboratories

Applicable portions of this handbook can also assist public health and environmental laboratories meet international requirements for quality manuals.³

NOTE:

The laboratory's quality manual organizes information in a useful way to:

- ▶ Train new management and supervisory personnel.
- ▶ Orient personnel to the QMS.
- ▶ Meet regulatory and accreditation requirements.

1.2 Background

Laboratories dutifully write and maintain "procedures manuals" to provide instructions to personnel on how to do their work and how to comply with regulatory and accreditation requirements. These manuals contain documents that describe the laboratory's **technical** work activities, which range from collecting specimens from patients to reporting laboratory examination results. Although there is no requirement for a procedures manual for management personnel, the laboratory usually maintains a large "administrative manual" that contains various policies, memoranda, and other documents describing nontechnical work and organizational information. These manuals are often not arranged in a useful fashion and are not typically used for training new laboratory supervisory and management personnel about laboratory quality.

Creating a quality manual provides a means for describing and documenting the laboratory's QMS. In addition, the manual organizes laboratory administrative and management information in a useful way for training new management and supervisory personnel, for orienting personnel to the QMS, and for meeting regulatory and accreditation

The Quality Management System Approach

Clinical and Laboratory Standards Institute (CLSI) subscribes to a quality management system (QMS) approach in the development of standards and guidelines, which facilitates project management; defines a document structure using a template; and provides a process to identify needed documents. The QMS approach applies a core set of “quality system essentials” (QSEs), basic to any organization, to all operations in any health care service’s path of workflow (ie, operational aspects that define how a particular product or service is provided). The QSEs provide the framework for delivery of any type of product or service, serving as a manager’s guide. The QSEs are as follows:

Organization	Personnel	Process Management	Nonconforming Event Management
Customer Focus	Purchasing and Inventory	Documents and Records	Assessments
Facilities and Safety	Equipment	Information Management	Continual Improvement

QMS25 covers the QSEs indicated by an “X.” For a description of the other documents listed in the grid, please refer to the Related CLSI Reference Materials section.

Organization	Customer Focus	Facilities and Safety	Personnel	Purchasing and Inventory	Equipment	Process Management	Documents and Records	Information Management	Nonconforming Event Management	Assessments	Continual Improvement
X	X	X	X	X	X	X	X	X	X	X	X
K2Q	K2Q	K2Q	K2Q	K2Q	K2Q	K2Q	K2Q	K2Q	K2Q	K2Q	K2Q
QMS01	QMS01	QMS01	QMS01	QMS01	QMS01	QMS01	QMS01	QMS01	QMS01	QMS01	QMS01
							QMS02				
			QMS03								
		QMS04									
			QMS05								
											QMS06
									QMS11		
										QMS12	
					QMS13						
QMS14											
										QMS15	
			QMS16								
						QMS18					
QMS20											

Related CLSI Reference Materials*

- K2Q** **The Key to Quality™. 2nd ed., 2013.** This product provides fundamental information for implementing and sustaining a quality management system (QMS). It also includes information on the 12 quality system essentials (QSEs) for building a QMS; the policies, processes, and procedure requirements for each QSE; and, how to apply the QSEs in the laboratory environment.
- QMS01** **Quality Management System: A Model for Laboratory Services. 4th ed., 2011.** This document provides a model for medical laboratories that will assist with implementation and maintenance of an effective quality management system.
- QMS02** **Quality Management System: Development and Management of Laboratory Documents. 6th ed., 2013.** This document provides guidance on the processes needed for document management, including creating, controlling, changing, and retiring a laboratory's policy, process, procedure, and form documents in both paper and electronic environments.
- QMS03** **Training and Competence Assessment. 4th ed., 2016.** This guideline provides a structured approach for developing effective laboratory personnel training and competence assessment programs.
- QMS04** **Laboratory Design. 3rd ed., 2016.** This guideline provides a foundation of information about laboratory design elements and guidance to help define issues to consider when designing a medical laboratory.
- QMS05** **Quality Management System: Qualifying, Selecting, and Evaluating a Referral Laboratory. 2nd ed., 2012.** This guideline provides recommended criteria and easily implemented processes for qualifying, selecting, and evaluating a referral laboratory.
- QMS06** **Quality Management System: Continual Improvement. 3rd ed., 2011.** This guideline considers continual improvement as an ongoing, systematic effort that is an essential component of a quality management system. A continual improvement program may consist of fundamental processes and common supporting elements described in this guideline.
- QMS11** **Nonconforming Event Management. 2nd ed., 2015.** Grounded in the principles of quality management, risk management, and patient safety, this guideline provides an outline and content for developing a program to manage a laboratory's nonconforming events.
- QMS12** **Development and Use of Quality Indicators for Process Improvement and Monitoring of Laboratory Quality. 1st ed., 2010.** This document provides guidance on development of quality indicators and their use in the medical laboratory.

* CLSI documents are continually reviewed and revised through the CLSI consensus process; therefore, readers should refer to the most current editions.

Related CLSI Reference Materials (Continued)

- QMS13** **Quality Management System: Equipment. 1st ed., 2011.** This guideline provides recommendations for establishing equipment management processes from selection through decommission of equipment used in the provision of laboratory services.
- QMS14** **Quality Management System: Leadership and Management Roles and Responsibilities. 1st ed., 2012.** This guideline presents concepts and information intended to assist a laboratory in meeting leadership requirements for its quality management system. Guidance is provided for leaders to effectively design, implement, and maintain the cultural, structural, and functional aspects of their laboratory's organization that are critical to managing and sustaining quality.
- QMS15** **Assessments: Laboratory Internal Audit Program. 1st ed., 2013.** This document provides guidance for how a laboratory can establish an internal audit program to enhance the quality of its services through continual improvement. Whereas an audit program defines the "who," "what," "when," "where," and "how" of meeting requirements for internal auditing, the audit process describes the details of how to conduct individual laboratory internal audits.
- QMS16** **Laboratory Personnel Management. 1st ed., 2015.** This guideline describes the process for meeting the regulatory and accreditation requirements of personnel management in the laboratory environment. This guideline offers suggestions and examples on managing the processes required for laboratory personnel to fully achieve laboratory management's operational and quality goals.
- QMS18** **Process Management. 1st ed., 2015.** This guideline describes four requirements for managing laboratory processes and provides suggestions for effectively meeting regulatory and accreditation requirements, optimizing efficient use of resources, and contributing to patient safety and positive outcomes.
- QMS20** **Understanding the Cost of Quality in the Laboratory. 1st ed., 2014.** This report provides guidance to a laboratory in understanding and managing the different types of quality costs that affect processes, services, and financial well-being.

Explore the Latest Offerings From CLSI!

As we continue to set the global standard for quality in laboratory testing, we are adding products and programs to bring even more value to our members and customers.



By becoming a CLSI member, your laboratory will join 1,600+ other influential organizations all working together to further CLSI's efforts to improve health care outcomes. You can play an active role in raising global laboratory testing standards—in your laboratory, and around the world.

Find out which membership option is best for you at www.clsi.org/membership.



Find what your laboratory needs to succeed! CLSI U provides convenient, cost-effective continuing education and training resources to help you advance your professional development. We have a variety of easy-to-use, online educational resources that make eLearning stress-free and convenient for you and your staff.

See our current educational offerings at www.clsi.org/education.



When laboratory testing quality is critical, standards are needed and there is no time to waste. eCLIPSE™ Ultimate Access, our cloud-based online portal of the complete library of CLSI standards, makes it easy to quickly find the CLSI resources you need.

Learn more and purchase eCLIPSE at cls.org/eCLIPSE.

For more information, visit www.clsi.org today.

SAMPLE



CLINICAL AND
LABORATORY
STANDARDS
INSTITUTE®

950 West Valley Road, Suite 2500, Wayne, PA 19087 USA

P: +1.610.688.0100 Toll Free (US): 877.447.1888 F: +1.610.688.0700

E: customerservice@clsi.org www.clsi.org

PRINT ISBN 1-56238-942-4

ELECTRONIC ISBN 1-56238-943-2