Statistical Quality Control in Health Training Course

Professional Development Training Course Outline

Category	Public Health	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s data-driven healthcare environment, Statistical Quality Control (SQC) has become a critical pillar for achieving patient safety, healthcare excellence, operational efficiency, clinical governance, healthcare compliance, and evidence-based decision-making. Hospitals, laboratories, pharmaceutical institutions, public health organizations, and healthcare regulators are increasingly adopting quality improvement systems, healthcare analytics, Six Sigma methodologies, Lean healthcare strategies, risk management frameworks, and performance monitoring tools to minimize medical errors and improve patient outcomes. Statistical Quality Control in Health Training Course equips healthcare professionals with practical knowledge and modern statistical techniques to strengthen healthcare quality assurance systems and support continuous improvement initiatives across healthcare facilities.

The course focuses on modern trends including healthcare data analytics, AI-driven quality monitoring, healthcare accreditation standards, patient-centered care, KPI dashboards, predictive analytics, infection control monitoring, healthcare performance management, ISO standards in healthcare, and digital health transformation. Participants will gain practical skills in applying statistical tools for quality control, analyzing healthcare performance indicators, conducting root cause analysis, monitoring healthcare processes, and implementing corrective actions using internationally recognized quality frameworks. Real-world healthcare case studies and hands-on exercises ensure participants can immediately apply learned techniques in clinical and healthcare management settings.

Programme Curriculum

Statistical Quality Control in Health Training Course

Introduction

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Course Duration

5 days

Course Objectives

By the end of this training course, participants will be able to:

1. Understand the principles of Statistical Quality Control (SQC) in healthcare systems.
2. Apply healthcare data analytics techniques for performance improvement.
3. Use control charts and statistical process control (SPC) for monitoring healthcare quality.
4. Implement Lean Healthcare and Six Sigma methodologies to reduce clinical errors.
5. Analyze Key Performance Indicators (KPIs) for healthcare quality management.
6. Conduct root cause analysis and risk assessment in healthcare operations.
7. Utilize predictive analytics and AI-driven healthcare monitoring tools.
8. Improve patient safety and healthcare compliance through quality assurance frameworks.
9. Measure and evaluate healthcare service delivery performance effectively.
10. Apply evidence-based quality improvement strategies in hospitals and clinics.
11. Develop continuous quality improvement (CQI) programs for healthcare organizations.
12. Strengthen infection prevention and healthcare risk management systems using statistical methods.
13. Design actionable healthcare quality dashboards and reporting systems for decision-making.

Target Audience

1. Healthcare Quality Assurance Managers
2. Hospital Administrators and Healthcare Executives
3. Medical Laboratory Professionals
4. Public Health Officers and Epidemiologists
5. Nurses and Clinical Supervisors
6. Healthcare Data Analysts and Health Information Officers
7. Pharmaceutical and Biomedical Professionals
8. Healthcare Accreditation and Compliance Officers

Course Modules

Module 1: Fundamentals of Statistical Quality Control in Healthcare

- Introduction to healthcare quality management
- Principles of Statistical Quality Control (SQC)
- Healthcare quality indicators and standards
- Basics of healthcare performance measurement
- Continuous Quality Improvement (CQI) concepts
- **Case Study:** Implementation of quality control systems in a tertiary hospital to reduce patient waiting times.

Module 2: Statistical Tools for Healthcare Quality Improvement

- Descriptive and inferential statistics
- Sampling techniques in healthcare
- Pareto analysis and histograms
- Cause-and-effect (Fishbone) diagrams
- Scatter plots and correlation analysis
- **Case Study:** Using Pareto analysis to identify causes of medication administration errors.

Module 3: Statistical Process Control (SPC) in Healthcare

- Introduction to SPC methodologies
- Control charts for healthcare monitoring
- Process capability analysis
- Variation analysis in healthcare services
- Monitoring clinical performance indicators
- **Case Study:** Application of control charts to monitor infection rates in intensive care units.

Module 4: Lean Healthcare and Six Sigma Applications

- Lean healthcare principles
- Six Sigma DMAIC methodology
- Waste reduction strategies in healthcare
- Process mapping and workflow optimization
- Error reduction in clinical operations
- **Case Study:** Reducing laboratory turnaround time using Lean Six Sigma techniques.

Module 5: Healthcare Risk Management and Patient Safety

- Patient safety frameworks
- Risk assessment methodologies
- Root Cause Analysis (RCA)
- Failure Mode and Effects Analysis (FMEA)
- Healthcare incident reporting systems
- **Case Study:** Root cause investigation of surgical safety incidents in a hospital setting.

Module 6: Healthcare Data Analytics and Digital Quality Systems

- Healthcare data management systems
- Predictive analytics in healthcare
- AI-driven quality monitoring tools
- Healthcare dashboards and KPI reporting

- Digital transformation in healthcare quality
- **Case Study:** Use of predictive analytics to reduce hospital readmission rates.

Module 7: Quality Assurance Standards and Healthcare Accreditation

- ISO standards in healthcare
- Healthcare accreditation requirements
- Clinical audit methodologies
- Compliance monitoring systems
- Regulatory quality frameworks
- **Case Study:** Preparing a healthcare facility for international accreditation compliance.

Module 8: Developing Sustainable Quality Improvement Programs

- Strategic healthcare quality planning
- Performance benchmarking techniques
- Developing quality improvement action plans
- Change management in healthcare
- Building a culture of continuous improvement
- **Case Study:** Designing a sustainable hospital-wide quality improvement program.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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