



Ain Shams University
Faculty of Engineering
Department of Design & Production Engineering

Design of an integrated Quality Assurance System through one of the Egyptian Service Industries

A Thesis
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Statement

This dissertation is submitted to Ain Shams University for the degree of Doctor of Philosophy in Mechanical Engineering (Production Engineering). The work included in this thesis was carried out by the author in the department of Design & production engineering, Ain Shams University, from 2006 to 2011. No Part of this thesis has been submitted for a degree or qualification at any other university or institution.

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Abstract

The Quality of Service (QoS) is described in terms of a set of features and characteristics that are observable and subject to customer evaluation.

Healthcare industry is one of the fastest growing service industries of most countries including Egypt. Governments invest in it increasingly large amount of money, either directly or indirectly, and expect in return high quality services. The reality, however, is often different: long waiting times, inefficiency, low productivity, stressed medical staff and less than satisfied patients.

Hence, the objective of this thesis is to design a model for implementing total quality management system that uses a straight forward approach for managing and controlling work processes in healthcare services. The model is based on the following seven basic pillars:

1. Dissemination of a comprehensive definition of healthcare quality and its related attributes.
2. Customer focus.
3. Enhancing management and leadership roles.
4. Creating an appropriate culture.
5. Focus on human component.
6. Promoting Measuring practices.
7. Emphasizing the role of quality improvement.

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Nomenclature

ADR	Adverse Drug Reactions
ASQ	American Society for Quality
BSI	British Standard Institution
CAHPS	Consumer Assessment of Health plan Survey
CEO	Chief Executive Officer
CI	Continuous Improvement
COPD	Chronic Obstructive Pulmonary Disease
CQI	Continuous Quality Improvement
CSFS	Critical Success Factors
DMAIC	Define, Measure, Analyze, Improve and Control
EBM	Evidence Based Medicine
EFQM	European Foundation for Quality Management
EMS	Emergency Medical Service
EQA	European Quality Award
FADE	Focus, Analyze, Develop, Execute
FOCUS	Find, Organize, Clarify, Understand, Select.
GP	General Practitioner
HCA	Hospital Corporation of America
HEDIS	Health plan Employer Data and Information Set
HIS	Healthcare Information Systems
HMO	Health Maintenance Organization
IOM	Institute of Medicine
IS	Information System
ISO	International Standard Organization
JCAHO	Joint Commission on Accreditation of Healthcare Organization
JCI	Joint Commission International
KBEM	Kanji's Business Excellence Model
KBEMS	Kanji Business Excellence Measurement System
KBS	Kanji's Business Scorecard
MBNQA	Malcolm Baldrige National Quality Award
MBWA	Management By Walking Around
NHS	National Health Service

NIST	National Institute of Standard and Technology
ODI	Organizational dynamics Inc
OJT	On-the-Job Training
PATH	Performance Assessment Tool for Quality in Hospitals
PEI	Performance Excellence Index
PEP	Performance Evaluation Procedure
QA	Quality Assurance
QC	Quality Control
QFD	Quality Function Deployment
QI	Quality Improvement
QOS	Quality of Service
SES	Socio-Economic Status
SPC	Statistical Quality Control
TQ	Total Quality
TQM	Total Quality Management
WHO	World Health Organization

List of Figures

Fig 3.1 Quality management system	47
Fig 3.2 Baldrige healthcare criteria for performance excellence framework	48
Fig 3.3 European quality award: the scoring process	51
Fig 3.4 A quality assurance cycle	57
Fig 6.1 Supplier customer relationship	95
Fig 9.1 Focus for teams	172
Fig 10.1 Kanji business excellence measurement system	225
Fig 11.1 Steps in managing and improving daily work	251
Fig 11.2 Steps in problem solving	252
Fig 11.3 The inverted organizational pyramid of a lean organization	267

List of Tables

Table 3.1 Functional areas used for the accreditation program	61
Table 5.1 Five leading dimensions of quality care	83
Table 6.1 Stakeholder goals through healthcare systems	99
Table 6.2 Suggestions related to establishing customer requirements	100
Table 7.1 Contrast of the two management systems	108
Table 7.2 Paradigm shift from management to leading	129
Table 8.1 Differences between creative and reactive thinkers	150
Table 9.1 Areas of conflict between the professional and TQM model	163
Table 9.2 Steps in information systems development	199
Table 11.1 Typical forms of waste in hospital setting	263

Contents

Abstract	v
Acknowledgment	vi
Nomenclature	vii
List of Figures	ix
List of Tables	x
Contents.	xi

Part I

General

Chapter One : Introduction	2 – 8
Chapter Two : Literature Review	9 – 44
Chapter Three : Current Models in Healthcare Quality Management	45 – 61
3.1 Three Core Process Model.	47
3.2 The Baldrige National Quality Award Healthcare Criteria for Performance Excellence	47
3.3 The European Quality Award	51
3.4 International Organization for Standardization Model (ISO 9000)	52
3.5 Quality Assurance Models	55
3.6 Accreditation of Health Care Organizations.	60

Part II

The Proposed Model

Chapter Four : Model Description	62 – 72
Chapter Five : Dissemination of a Comprehensive Definition of Healthcare Quality and its Related Attributes	73 – 89
5.1 Various Perspectives on the Quality of Health Care	78

5.2 Components of Quality Care	.81
5.3 Dimensions of Healthcare Quality.	.82
5.4 Quality Problems.	.86
5.5 Quality and Some Other Related Attributes.	.87
Chapter Six : Customer Focus	90 – 106
6.1 Identifying Customers.	94
6.2 Customer Requirements.	.98
6.3 Patient Satisfaction.	.102
6.4 Patient Rights and Organization Ethics	.104
Chapter Seven : Enhancing Management and Leadership Roles.	107 – 130
7.1 Management Role	.110
7.2 Leadership Role	121
7.3 Leadership versus Management.	.128
Chapter Eight : Creating an Appropriate Culture	131 - 153
8.1 Culture and TQM.	135
8.2 Organizational Culture.	.136
8.3 Positive and Negative Cultures	140
8.4 Changing the Organizational Culture.	141
8.5 The Influence of National Culture on TQM Implementation.	145
8.6 Promoting Culture	.146
8.7 Dealing With Cultural Resistance.	151
Chapter Nine : Focus on Human Component.	154 - 216
9.1 Total Involvement and Empowerment.	158
9.2 Fostering Teamwork.	170
9.3 Education and Training.	177
9.4 Information Management	193
9.5 Communication.	204
9.6 Motivating Employees.	.213

Chapter Ten : Promoting Measuring Practices.	217 – 240
10.1 Performance Measurement.	221
10.2 Quality of Medical Care Measures	227
10.3 Patients’ Assessments of their Care	236
10.4 Measuring the Quality of Healthcare Service.	239
Chapter Eleven : Emphasizing the role of Quality Improvement.	241 - 274
11.1 Principles for Improvement	247
11.2 Building an Improvement Plan	250
11.3 Implementation Models	254
11.4 Improvement Tools.	256
11.5 Quality Improvement Programs	258
Chapter Twelve: Conclusions and Recommendations	275 – 278
References	279 – 307
Summary	308 – 311

