

**ISO-9002:1994 QUALITY MANAGEMENT SYSTEM AND CONTINUOUS  
QUALITY IMPROVEMENT (CQI) IMPLEMENTATION AT MINISTRY OF  
LABOUR AND SOCIAL SECURITY, SOCIAL INSURANCE  
ORGANIZATION'S (SSK) HOSPITALS IN TURKEY**

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**Abstract**

Social Insurance Organization (SSK) in Turkey that provides health services for approximately 32 million people with 133 hospitals, 43.666 medical employees and approximately 1,6 billion USD budget is a public organization under the control of Ministry of Labour and Social Security.

To improve health services quality of SSK hospitals, the quality targets were declared and promised to public opinion by the minister of Labour and Social Security in January 2000. To realize these targets, a systematical project named "To Improve the Quality of SSK Health Services, ISO-9000 and Continuous Quality Improvement (CQI) Model" has been prepared in collobaration with Turkish Industrial Management Institution (TUSSIDE).

According to the project, only ISO-9002:1994 was applied at 17 hospitals (second group) and ISO-9002:1994 and CQI were applied together at 15 hospitals (first group). Also, ISO-9000 and TQM trainings were given at first group, only ISO-9000 trainings were given at second group. Besides that, consulting services are being given by TUSSIDE to only first group hospitals. Due to these differencies, we have compared these two groups of hospitals in terms of several points.

To share the results and experiments acquired from implementation of ISO-9002:1994 and CQI in SSK hospitals is the basic objective of this presentation.

**1. Introduction**

Public sector that consumes important part of national resources and effects the rest has been kept out from Total Quality Management based on customer-driven understanding in Turkey. (1) But, due to successfull TQM applications in private sector, citizens who use public services demand customer-driven understanding in public management increasingly day to day.

Soscial Insurance Organization (SSK) as a public organization provides health services for approximately 32 million people and has 16% of all hospital beds in Turkey.(2) ISO-9002:1994 Quality Management System and Continuous Quality Improvement approach have been started to apply at some SSK hospitals since at the beginning of 2000 because of neither patients nor SSK employees have been satisfied SSK health services.

## 2. Total Quality Management (TQM) Application at Social Insurance Organization's (SSK) Hospitals

To improve the quality of health services of SSK hospitals, to consume the resources efficiently and productively, to realize patient satisfaction by taking into account government policies like to establish customer/citizen driven working understanding in public management, at the beginning of 2000 the quality targets which are to get ISO-9002 Quality Assurance System Certificate at least for 5 SSK hospitals in two years and to improve SSK health services quality at least 50% in three years were declared and promised to public opinion by the Minister of Labour and Social Security and the Chairman of SSK.

SSK top managers decided to carry out a TQM focused quality project with model application and intensive training to realize these quality targets. It was also planned to prepare gathering TQM and ISO-9000 to establish a substructure of other modern management approaches like "business process re-engineering", "learning organization" and "lean organization" that will be probably applied at SSK in the near future.

15 volunteer hospitals as a first group were selected to apply "To Improve SSK Health Service Quality, ISO-9000 and Continuous Quality Improvement Model" project prepared by cooperation with Turkish Industrial Management Institution (TUSSIDE) and 17 volunteer hospitals as a second group were selected to apply only ISO-9002:1994 Quality Management System among 137 SSK hospitals. We thought that voluntary work is another key success factor of all quality applications. So, hospitals selection was based on demand from them. 17 hospitals which are being applied only ISO-9002:1994 Quality Management System was thought as a comparison group for ISO-9000 study.

"Continuous Quality Improvement Model" that was applied at 15 hospitals (first group) was shown below as a diagram according to "To Improve SSK Health Services Quality, ISO-9000 and Continuous Quality Improvement Model" project. (3)

"Hospital Quality Councils (HQC)" consist of 7 members were established to carry out quality works voluntarily at first and second group hospitals.

Trainings and other activities given to first group 15 hospitals were shown below;

<u>Name of trainings and other activities:</u>	<u>Participants:</u>
1-TQM in health services training	Members of HQC
2-ISO-9000 Quality Management System training	Members of HQC
3-ISO-9000 Documentation training	Members of HQC
4-ISO-9000 Internal Quality Auditor training	Members of HQC
5-Performance evaluation and leadership training	Members of HQC
6-Process management training	Members of HQC
7-ISO-9000 workshops participation	Members of HQC
8-CQI and Quality Improvement Circles training	1 member of HQC and 4 middle/ bottom level employees

Chart.1

“CONTINUOUS QUALITY IMPROVEMENT MODEL”

Main Principles:    1-Planning                      2-Asesment                      3-Improving



Trainings and other activities given to second group 17 hospitals were shown below;

<u>Name of trainings and other activities:</u>	<u>Participants:</u>
1-ISO-9000 Quality Management System training	Members of HQC
2-ISO-9000 Documentation training	Members of HQC
3-ISO-9000 Internal Quality Auditor training	Members of HQC

**3. Comparison of First Group and Second Group Hospitals**

TQM in health services, performance evaluation, process management and leadership trainings have been given to members of first group 15 hospitals' quality councils since June 2000. Besides that, consulting services have been given to them by TUSSIDE about TQM and by SSK Center Quality Council about ISO-9002:1994 Quality Management System.

TQM trainings and consulting services about TQM or ISO-9002:1994 QMS have not been given to members of second group 17 hospitals' quality councils.

ISO-9000:1994 Quality System Management trainings were given to members of both first and second group hospitals' quality councils in July 2000 and then ISO-9002:1994 Quality Management System (QMS) activities have started at both first and second group hospitals in July 2000 at the same time.

There is no differencies between first and second group hospitals except TQM trainings and consulting services. Also, there is no differencies between first and second group hospitals in terms of number of bed and employees or region. Besides that, members of hospital quality councils are the same in both groups as job title, managerial position and number of them.

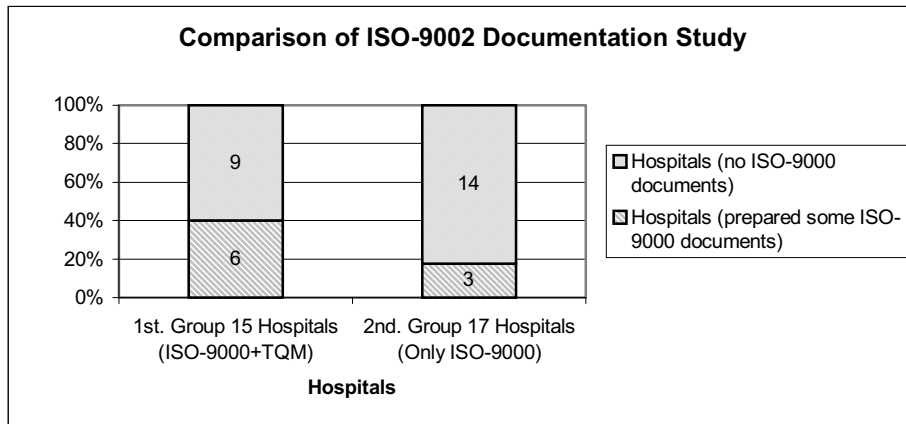
We have compared first and second group hospitals after starting ISO-9002:1994 Quality Management System and Continuous Quality Improvement activities in terms of several points like ISO-9002:1994 documentation study, quality improvement activities and motivation.

**3.1. Comparison of Two Group Hospitals In Terms of ISO-9002 Documentation Study**

We compared these two group hospitals according to documentation study in July-September 2000 period. (3)

Some ISO-9002:1994 QMS documents were prepared at 6 out of first group 15 hospitals

**Chart.2**

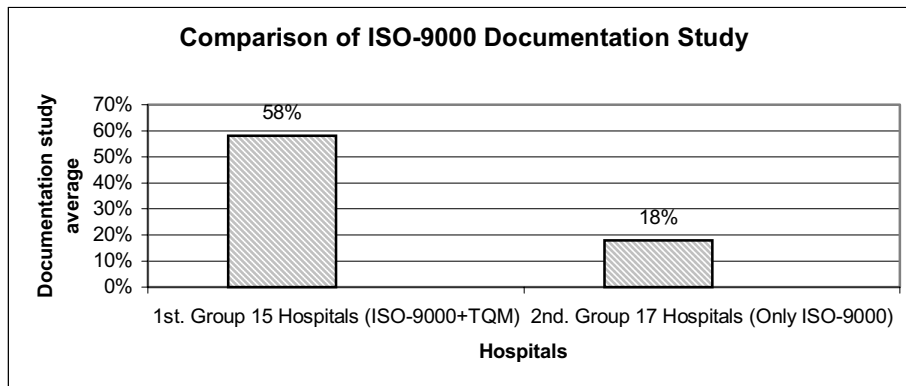


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in which TQM trainings and consultant services were given to but they were prepared at 3 out of second group 17 hospitals in which TQM trainings and consultant services were not given and no ISO-9002:1994 QMS document was prepared at the others. Besides this, some improvement activities were done at 7 hospitals in the first group after process management tarinings at the same time but no improvement activities were done in the second group.

We compared these two group hospitals according to documentation study in January 2001.

**Chart.3**



We compared first group and second group hospitals in terms of only whether they have made any ISO-9002:1994 QMS documentation or not in September 2000. We have not taken into account amount of ISO-9002:1994 QMS documentation.

We have collected data about first and second group hospitals' ISO-9002:1994 QMS documentatiton and calculated averages of their documentation. Then, we compared first group and second group hospitals in terms of avarage of ISO-9002:1994 QMS documentation in January 2001. According to this comparison, first group 15 hospitals' average of documantation is %58, second group 17 hospitals' average of documantation is %18. Two out of first group 15 hospitals have completed all ISO-9002:1994 QMS documentation in January 2001 and their certification audits will be made until April 15, 2001. Also, least 5 out of first group 15 hospitals will completed their documentation until at the end of April 2001 and their certification audits will be made until at the end of June 2001. But, none of second group 17 hospitals will reach ISO-9002:1994 QMS certification level until at the end of June 2001.

We consider that motivation differencies of hospital managers due to TQM trainings caused the performance gap at ISO-9002:1994 QMS documentation between these two groups. Because, high motivation that was planned usually occurred at the first group hospitals in which TQM approach and ISO-9002:1994 QMS study was carried out. But, high motivation, volunteer participation and internal spreading out were not occurred at the second group hospitals in which only ISO-9002:1994 QMS study was carried out.  
(3)

The performance gap between two group hospitals in January 2001 is much bigger than in September 2000. Besides motivation difference, we also consider that members of first group hospitals' quality councils have understood and adopted ISO-9002:1994 Quality Management System easily by TQM trainings (especially process management training), quality improvements, ISO-9002:1994 QMS workshops and Center Quality Council's consulting services and this situation caused the big performance gap between two group hospitals in January 2001.

**3.2. Comparison of Two Group Hospitals In Terms of Motivation and Understanding of How ISO-9002:1994 Quality Management System Can Apply in Health Services**

We have hold technical and knowledge sharing meetings of first and second group hospitals' top managers and ISO-9002:1994 Management Representatives. We have also been carrying out wide communication by phone, e-mail and face to face with them.

So, we have observed that all ISO-9002:1994 QMS management representatives and approximately 75% of all hospital quality councils' members have got high motivation on quality study and understood completely ISO-9002:1994 Quality Management System at first group 15 hospitals.

But, we have observed that approximately 20% of ISO-9002:1994 QMS management representatives and only 10% of all hospital quality councils' members have got high motivation on quality study and understood completely ISO-9002:1994 Quality Management System at second group 17 hospitals.

**4. Questionnaire of ISO-9002:1994 Quality Management System and TQM Application Differencies**

In order to compare ISO-9000:1994 QMS and TQM trainings, ISO-9002:1994 QMS study and quality improvements we took a questionnaire on first group 15 hospitals' top managers and ISO-9002:1994 QMS management representatives in January 2001. Also, we took a questionnaire about only ISO-9002:1994 QMS trainings and ISO-9002:1994 QMS study on second group 17 hospitals' top managers and ISO-9002:1994 QMS management representatives in February 2001.

There are 47 questions about ISO-9002:1994 QMS and TQM trainings and studies in questionnaire for first group 15 hospitals. There are 23 same questions with first group's questionnaire about ISO-9002:1994 QMS trainings and study in questionnaire for second group 17 hospitals.

**Table 1. Characteristics of Questionnaires**

	Number of Participants	Scale	Crombach Alpha ( $\alpha$ )	Number of questions
1st. group hospitals	27	5	0,92	47
2nd. Group hospitals	25	5	0,93	23

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### 4.1. Comparison of ISO-9002:1994 Quality Management System Study at First and Second Group Hospitals

First group 15 hospitals' top managers and ISO-9002:1994 QMS management representatives' points for 19 out of same 23 questions about ISO-9002:1994 QMS tarinings and study are much more than second group 17 hospitals' top managers and ISO-9002:1994 QMS management representatives'. Some of this 19 questions and their points are shown below;

1. I have understood ISO-9000 Quality Management System trainings.  
1st. group point: 2,89 over 4                      2nd. group point: 2,24 over 4
2. ISO-9000 Quality Management System tarinings were enough for me to undestand what is quality in health services.  
1st. group point: 2,33 over 4                      2nd. group point: 1,92 over 4
3. ISO-9000 Quality Management System trainings were enough to carry out and to be successfull in ISO-9002:1994 QMS study. So there is no need another trainings.  
1st. group point: 1,70 over 4                      2nd. group point: 0,64 over 4
4. ISO-9000 Quality Management System trainings occured enough motivation in members of Hospital Quality Councils to carry out ISO-9002:1994 Quality Management System study in our hospital.  
1st. group point: 2,30 over 4                      2nd. group point: 1,84 over 4
5. ISO-9002:1994 Quality Management System study caused positive results that increased patients' satisfaction in our hospital.  
1st. group point: 2,52 over 4                      2nd. group point: 2,04 over 4

But only second group 17 hospitals' top managers and ISO-9002:1994 QMS management representatives' points for 4 out of same 23 questions about ISO-9002:1994 QMS tarinings and study are much more then first group 15 hospitals' top managers and ISO-9002:1994 QMS management representatives'. Some of this 4 questions and their points are shown below;

1. ISO-9000 Quality Management System trainings and application at the hospital have increased communication between managers and employees.  
1st. group point: 2,48 over 4                      2nd. Group point: 2,56 over 4
2. ISO-9000 Quality Management System training and application in hospital have strengtened my loyalty to SSK  
1st. group point: 2,67 over 4                      2nd. Group point: 2,72 over 4

There is a special question about ISO-9002:1994 QMS in questionnaire for first group 15 hospitals. This question and its point are shown below;

Question:TQM trainings have helped us to understand ISO-9000:1994 Quality Management System  
Point: 2,37 over 4

We consider this questionnaire results that application of both ISO-9002:1994 QMS and

TQM approach together caused high motivation and hospitals' top managers and members of hospital quality councils to understand well and adopt easily ISO-9002:1994 QMS.

#### **4.2. Comparison of ISO-9002:1994 Quality Management System and Continuous Quality Improvement Study (TQM) at First Group Hospitals**

There are 38 out of 47 questions to compare to ISO-9002:1994 Quality Management System and Total Quality Management applications in questionnaire for first group 15 hospitals' top managers and ISO-9002:1994 QMS management representatives. We have prepared and evaluated this questionnaire as duo comparison questions groups. There are 19 duo comparison group in the questionnaire. TQM's points are higher than ISO-9002:1994 QMS's points in 14 out of 19 duo comparison groups. ISO-9002:1994 QMS's points are higher than TQM's points in 3 out of 19 twice comparison groups. TQM's points and ISO-9002:1994 QMS's points are the same in 2 out of 19 duo comparison groups.

Some questions and their points that TQM's are higher than ISO-9002:1994 QMS's are shown below;

##### Group 1:

Question: TQM trainings were sufficient for me to understand quality in health sevice

Point : 2,63 over 4

Question: ISO-9000:1994 QMS tarinings were sufficient for me to understand quality in health services

Point : 2,33 over 4

##### Group 2:

Question: I have learned sufficient tools and techniques to improve health services quality because of TQM trainings.

Point : 2,44 over 4

Question: I have learned sufficient tools and techniques to improve health services quality because of ISO-9000:1994 Quality Management System trainings.

Point : 2,22 over 4

##### Group 3:

Question: TQM trainings have caused high motivation on members of hospital quality council to carry out quality improvements.

Point : 2,67 over 4

Question: ISO-9000:1994 Quality Management System trainings have caused high motivation on members of hospital quality council to carry out ISO-9002:1994 Quality Management System study.

Point : 2,30 over 4

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### Group 4:

Question: TQM trainings and continuous quality improvement study have increased communication between managers and employees.

Point : 2,74 over 4

Question: ISO-9000:1994 Quality Management System trainings and it's study have increased communicaton between managers and employees.

Point : 2,48 over 4

### Group 5:

Question: TQM trainings and continuous quality improvement study have occured team working understanding at hospital.

Point : 2,96 over 4

Question: ISO-9000:1994 Quality Management Study and it's study have occured team working understanding at hospital.

Point : 2,59 over 4

### Group 6:

Question: Continuous quality improvement (TQM) study have increased my enthusiasm at work.

Point : 3,04 over 4

Question: ISO-9000:1994 Quality Management System study have increased my enthusiasm at work.

Point : 2,81 over 4

Some questions and their points that ISO-9002:1994 Quality Management System's are higher than TQM's are shown below;

### Group 1:

Question: ISO-9002:1994 Quality Management System study have changed patients' behaviour to hospital staff on positive direction.

Point : 2,37 over 4

Question: Continuous quality improvement (TQM) study have changed patients' behaviour to hospital staff on positive direction.

Point : 2,22 over 4

### Group 2:

Question: Like members of hospital quality council, other employees have participated in ISO-9002:1994 Quality Management System study enough as well.

Point : 2,07 over 4

Question: Like members of hospital quality council, other employees have participated in continuous quality improvement (TQM) study enough as well.

Point : 1,93 over 4

Some questions and their points that ISO-9002:1994 Quality Management System's are the same TQM's are shown below;

### Group 1:

Question: ISO-9002:1994 QMS study at our hospital have affected our hospital's image at society on positive direction.

Point : 2,93 over 4

Question: Continuous quality improvement (TQM) study at our hospital have affected our hospital's image at society on positive direction.

Point : 2,93 over 4

We consider that ISO-9002:1994 Quality Management System and Continuous Quality Improvement application together at first group 15 hospitals have occured much more positive effects than only ISO-9002:1994 Quality Management System application at second group 17 hospitals in terms of motivation, willingness, team working, communication, loyalty to the organization and individual devolpment.

For example; a hospital among second group 17 hospitals have gave up ISO-9002:1994 Quality Management System study shortly after a big local private firm that has been applying TQM approach successfully has started to give them TQM trainings. This hospital is carrying out TQM application now and members of hospital quality council have got high motivation because of TQM trainings and application.

We also consider that employees at first group 15 hospitals have learned what quality is in health services and sufficient tools and techniques for quality improvements in health services much more than second group 17 hospitals' employees because of TQM trainings and study.

Some questions' points that ISO-9002:1994 Quality Management System's are higher than TQM's are not against to our interpretation. Because, ISO-9002:1994 Quality Management System are generally known as quality study for patients. So, the question that ISO-9002:1994 Quality Management System study has changed patients' behaviour to hospital staff on positive direction had have more points than continuous quality improvement (TQM) study's.

### **5. Conclusion**

ISO-9002:1994 Quality Management System and Continuous Quality Improvement (TQM) studies have been carrying out since the beginning of 2000 and some important differencies have occured between first group 15 hospitals at which ISO-9002:1994 Quality Management System and Continuous Quality Improvement (TQM) have applied together and second group 17 hospitals at which only ISO-9002:1994 Quality Management System has applied in terms of motivation, performance of ISO-9002:1994 Quality Management System documentation etc.

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We consider these differencies as below;

-TQM trainings have made ISO-9002:1994 Quality Management System more understandable. Especially, process management training besides TQM trainings has made ISO-9002:1994 Quality Management System more understandable and made it's documentation fast.

-TQM trainings and continuous quality improvements have occured high motivation. But, ISO-9002:1994 Quality Management System trainings and study have not occured high motivation.

-It is so difficult to carry out ISO-9002:1994 Quality Management System application without consulting services.

-TQM trainings and continuous quality improvement study have made ISO-9002:1994 Quality Management System application easier and fast.

- ISO-9002:1994 Quality Management System and Continuous Quality Improvement application together have occured much more positive effects than only ISO-9002:1994 Quality Management System application in terms of motivation, willingness, team working, communication, loyalty to the organization and individual devolopment.

-It will be more successful if both ISO-9002:1994 Quality Management System and Continuous Quality Improvement apply together.

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