

Case Report

An Innovative Methodology for Improving Continuous "TQM, Patient Safety, IPC & Environmental Safety" Education and Training in Aster-Sanad

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Abstract

This QIP highlights the importance of commitment to the "continuous education and training" in hospitals and raised the knowledge and the scientific level of staff with different categories in the basics and principles of "TQM, Patient safety, IPC and Environmental safety" to "create one team for one goal speaks the same language and thinks the same thinking". Additionally, inevitability of involving staff in finding the solution and listening to their opinions to satisfy them. Selecting the best team to study and proposes appropriate solution and implement it through a clear action plan is vital.

The Problem is arisen and is discovered when internal auditing revealed a false sensation of security and appearance of informal groups. The spirit of quality and patient safety with implementation of policies and procedures become far away from daily workload of hospital categories.

Among six months with sharing of 789 out of 814 hospital staff and a team of 15 members chosen by "GRPI" model, the "SMART" goal was specifically "innovating Simple Move to Improve Continuous Education and Training of quality and Patient safety among hospital staff using a new method instead of lectures proved to be not suitable for time workload and work shifts as well as to create one team for one goal, the hospital overcome all obstacles and achieved success.

The team used "FOCUS-PDCA", practiced Team, Data collection and analysis quality tools, for decision making, through action plan formed of four phases, putting in mind results of preliminary and final staff questionnaires and exams.

Neutralization of informal groups, elimination lack of commitment and resolving the false sensation of security to prepare the hospital for reaccreditation occurred in conjunction with improving staff skill development and morale was achieved. Usage the new method in departmental education is recommended. It can help patient education and new employee orientation. Enhancing the internal marketing and celebrating the annual WHO awareness days and sharing in exhibitions to get benefits from it.

Keywords: Accreditation & QIP, Continuous Education & Training, Hospital Management & Team Work, T.Q.M, Informal group, IPC, Environmental Safety & Patient Safety.



Introduction and Background

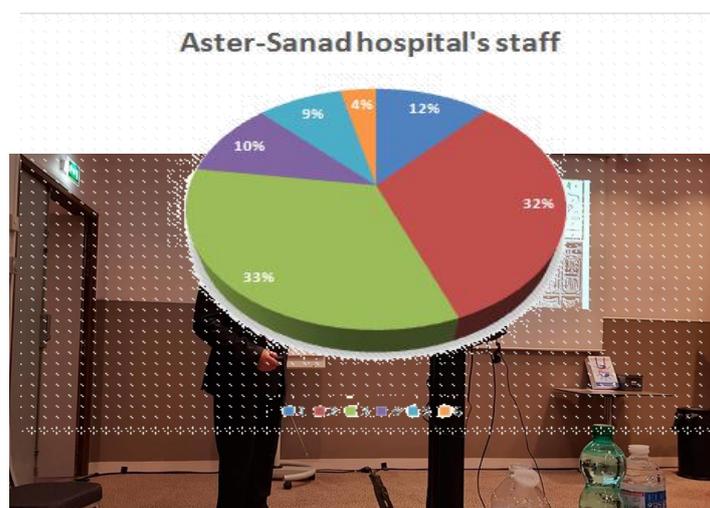
Aster-sanad Hospital has 96 Physicians, 263 Nurses, 270 Administrative staff, 84 technicians, 71 house keepings and 15 Security guards.

This large number of heterogeneous human resources should succeed in providing high qualified health care services characterised by safety and infection control to satisfy the wishes of patients and their families as well as exceed their expectations and help in the development of the surrounding community to be the first chosen hospital in Riyadh region.

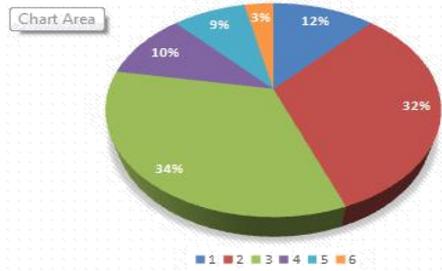
Although the hospital has been accredited from JCI & CBAHI since 2016 and now preparing for reaccreditation, the internal auditing reveals a false sensation of security

and appearance of informal groups among the staff. The spirit of quality and patient safety as well as implementation of policies and procedures become far away from daily workload of all hospital categories due to their lack of knowledge of the basics and principles of quality and patient safety properly and uniformly. A series of scientific 20 lectures (once/week for 45 minutes) that covers all aspect of "TQM, Patient Safety, IPC & Environmental Safety" failed to achieve the goal of speaking the same language and thinking the same thought to create one team for one goal due to failure of commitment on part of staff for attendance. A preliminary exam of 100 scores on quality, patient safety, IPC and environmental safety was conducted in which 789 out of 814 (the shared participated employees of different categories of the hospital) showed a decrease in grades and level required to achieve the desired goal.

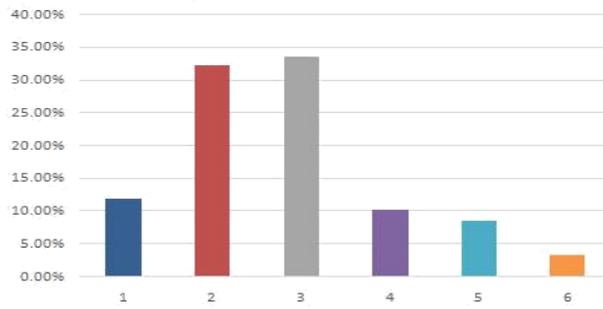
Aster-Sanad hospital's staff		
Category	Number	Percentage
Physicians	96	11.80%
Nurses	263	32.30%
Administrative	270	33.20%
Technicians	84	10.30%
House keeping	71	8.72%
Security	30	3.68%
Total	814	100%



Staff participated in questionnaire,pre-action taking and post Q.I.P implimentation exams



Staff participated in questionnaire,pre-action taking and post Q.I.P implimentation exams



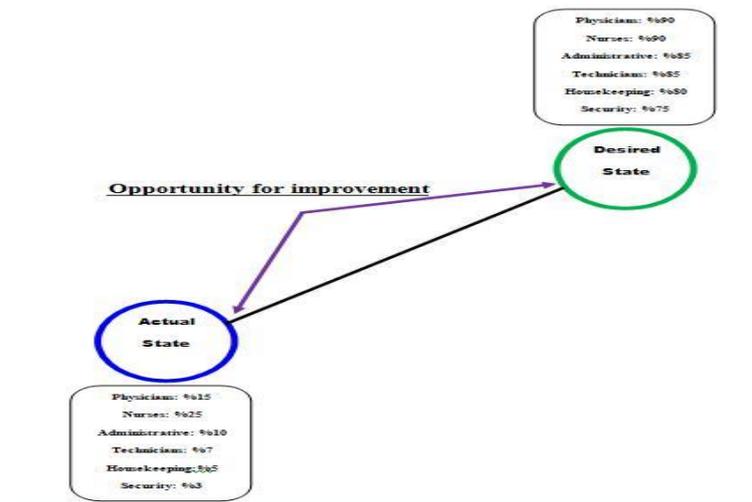
Staff participated scores in pre-action taking exam

Category	Scores out of 100	Percentage
Physicians	15	15%
Nurses	25	25%
Administrative	10	10%
Technicians	7	7%
House keeping	5	5%
Security	3	3%
Scores not attended	35	35%

Staff participated in preliminary taking exam, questionnaire, and post Q.I.P implementation exam

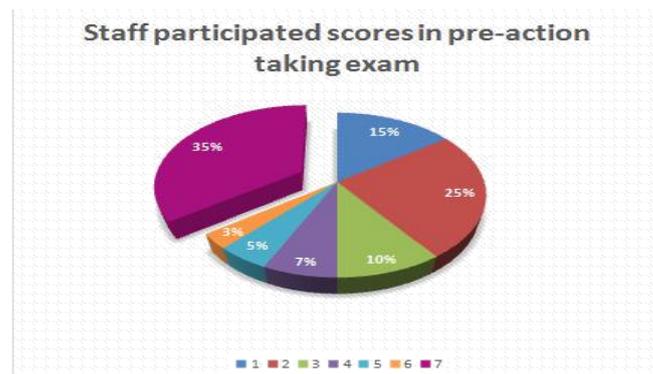
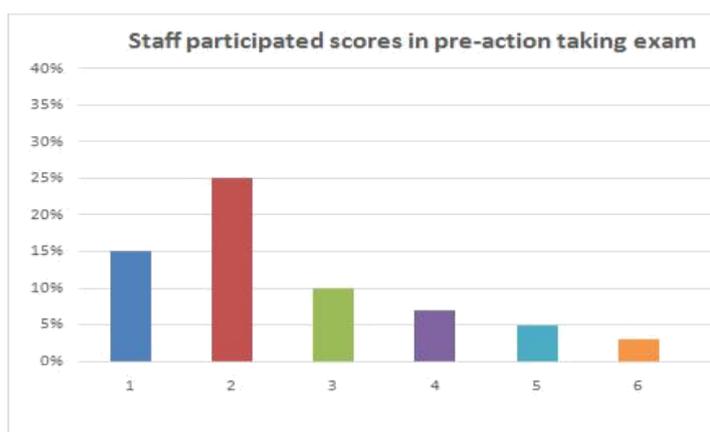
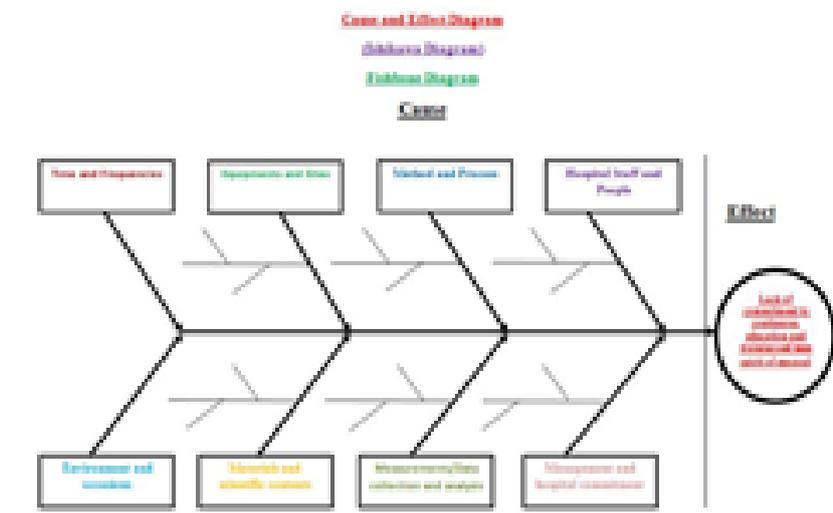
Category	Number	Percentage
Physicians	94	11.90%
Nurses	255	32.20%
Administrative	265	33.60%
Technicians	81	10.30%
House keeping	67	8.50%
Security	27	3.40%
Total	789	100%

Opportunity for improvement



Staff categories	Actual state (base line)	Desired state (The goal)
1-Physicians	15% of exam's score	90% of exam's score
2-Nurses	25% of exam's score	90% of exam's score
3-Adminstrative	10% of exam's score	85% of exam's score
4-Technicians	7% of exam's score	85% of exam's score
5-Securiyguards	3% of exam's score	75% of exam's score
6-House keepings	5% of exam's score	80% of exam's score

Root cause analysis using Ishikawa Diagram



Lack of commitment to continuous education and training and team spirit of one goal:

- Time and Frequencies
- Equipment and Sites
- Method and Process
- Hospital Staff and People
- Management and hospital commitment
- Measurements/Data collection and analysis
- Materials and scientific contents
- Environment and occasions

Preliminary questionnaire about the reasons for not attending Quality and patient safety lectures on part of the staff ,and another final questionnaire about the team proposed decision making of using an innovative new way for continuous education and training of Quality and patient safety at all times around the clock instead of the method of the traditional scientific lectures with fixed dates and time, that are not suitable for the majority of staff at various times during the shifts along weeks, months and the year.

The Purpose of this project: is to facilitate and encourage "the commitment of continuous education and training "to reduce the gap between the current situation and the desired one", raising the knowledge and the scientific level of hospital staff of different categories in the basics and principles of "TQM, IPC, Patient safety and Environmental safety" ,"to create one team for one goal that speaks the same language and thinks the same thinking", namely language and thinking of quality and patient safety.

Time Frame and Project Team:

A) Time frame:

- Start Date:1/1/2018
- End Date: 10/6/2018

B) Project team:

Chairman &Team Leader: Dr. Salah Ibrahim Awad, QPS Manager.

Facilitator: Mr. Ajmallqbal, IPC practitioner.

Members: Mr. Ibrahim Al Gahamy, Assistant services

Ms. Frances Daguman, Nurse Educator.

MS. Hoda Abdulkhleq Abdulhadi, Quality

Nurse.

Ms. AmaliaH. Lumba, Housekeeping supervisor.

Ms. Nesreen Abdulaziz AL-Ghorshy, Service excellent officer.

Dr. Humere Hussain, Service excellent officer.

Ms. Kathrine Jae Corales, IPC Nurse.

Ms. Wala Waleed Al Alwan, Patient educator.

Mr. Nashith Abdulnnasir, Asst. Safety Officer

Eng. Fouad Thabit, Biomedical engineer.

Ms. Kholoud Yasser Al Mansour, education and training supervisor

Mr. Abdullah Al Hassan, Security officer.

Mr. Majed Abdulrahman Al-Otaibi, H.R

Manager

The team is organized to represent all hospital categories according to (GRPI) model of Richard Beckhard: Goal, Roles, Process and Interpersonal Relations. The team members were carefully selected with interpersonal relationship full of trust, open communication and feedback which support a sound working environment with great activity.

Our goal is specific, measurable, attainable, relevant and time bounded (SMART).The goal as discussed in the first team's meeting is raising the knowledge and the scientific level of hospital staff of different categories in the basics and principles of "TQM, IPC, Patient safety and Environmental safety", to create one team with one goal that speaks the same language and thinks the same thinking, namely language and thought of quality and patient safety.

The goal is specifically innovating a Simple Move to Improve

Continuous education and training of quality and Patient safety among all hospital staff categories to create one team for one goal that speak the same language and think the same thought.

This achievable goal can be measured by periodic data collection and analysis through questionnaires, pre-action and post implementation exams, direct observation and internal auditing. It should be a realistic one that can be fulfilled maximum within a period of five months and ten days to solve the problem and cover the gap between the actual state and the desired one.

The goal, after team leader explanation has accepted by all team members.

The team leader described role and responsibility of each member and reassured understanding the team goal and the probable problem solving. He also explained processes and procedures operating in the group (such as problem-solving methods, communication procedures, decision-making processes, and all quality tools used by teams, and for Data collection and analysis as well as root cause analysis, and pareto rule and FOCUS - PDCA methodology).

Objectives / Goal

Raising the knowledge and the scientific level of hospital staff of different categories in the basics and principles of "TQM, IPC, Patient safety and Environmental safety". Using an Innovation of a Simple Move to Improve Continuous education and training of quality and Patient safety among all hospital staff categories to create one team for one goal -"Speak the same language and think the same thinking".

This will facilitate and encourage "the commitment of continuous education and training" among hospital staff in the future.

Who: Quality and Patient Safety department and the Project Team.

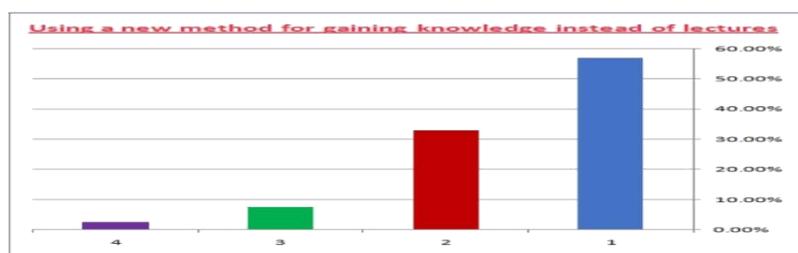
Where: Hospital Wide.

When: (1/January – 10/June) 2018

What: Simple Move to Improve creation of One Team for One Goal.

How: Improving continuous "TQM, Patient Safety, IPC and environmental Safety" education and training through Innovative scientific boards in hospital's vital areas Instead of the traditional scientific lectures.

Metrics used: Preliminary staff general exam, staff questionnaires preliminary and final, Quality tools used for team problem solving and decision making, Scientific boards, Action plan, Post implementation staff general exam, observations and internal auditing.



Base Line (Where we are now)	Goal (where we want to reach)
Staff categories	Staff categories
1-Physicians: 15% of score	1-Physicians:90% of score
2-Nurses: 25% of score	2-Nurses:90% of score
3-Administrative: 10% of score	3-Administrative:85% of score
4-Technicians:7% of score	4-Technicians:85% of score
5-Securityguards:3% of scores	5-Securityguards:75% of score
6-House keepings:5% of score	6-House keepings:80% of score

Preliminary Questionnaire:

Staff reasons for not attending lectures

Staff opinion	Number	Percentage
1. Time and frequency are not suitable to time shifts	160	20.27%
2. There is no Incentives	120	15.21%
3. The style of lectures do not suite me and I don't have time	200	25.34%
4. At the time of lecture I feel exhausted and can't absorb any information	110	13.94%
5. Lecturer's attitude and language	95	12.04%
6. I don't understand the lecturer	104	13.20%
Total	789	100%

Final Questionnaire:

Using a new method for gaining knowledge instead of lectures		
Category	Number	Percentage
1. Strongly approve	450	57.03%
2. Approve	260	32.95%
3. Not approve	59	7.47%
4. I don't know	20	2.55%
Total	789	100%

Methodology

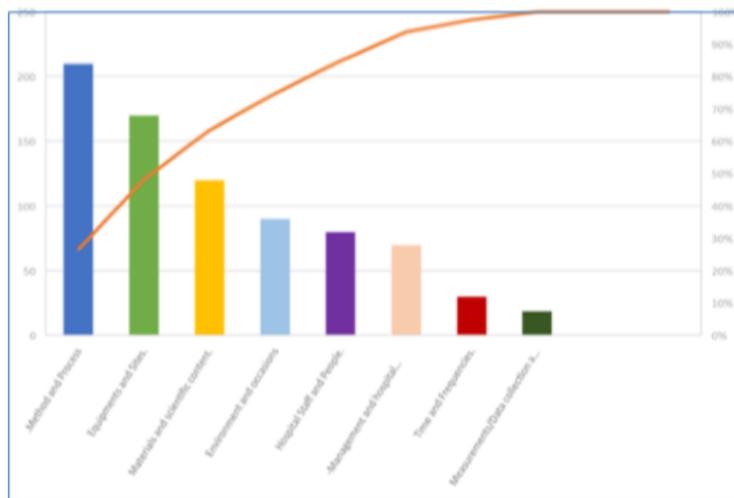
The team has used **(FOCUS-PDCA)**

FOCUS: (Steps to identify and define improvement opportunities)

Staff participated scores in pre-action taking exam		
Category	Scores out of 100	Percentage
Physicians	15	15%
Nurses	25	25%
Administrative	10	10%
Technicians	7	7%
House keeping	5	5%
Security	3	3%

Causes	Frequency	Cumulative frequency	percentage
Method and Process	210	210	26.60%
Equipment and Sites	170	380	48.20%
Materials and scientific content	120	500	63.40%
Environment and occasions	90	590	74.80%
Hospital Staff and People	80	670	84.90%
Management and hospital-commitment	70	740	93.70%
Time and Frequencies	30	770	97.60%
Measurements/Data collection and analysis	19	789	100%
	789		

Pareto analysis



Using a new method for gaining knowledge instead of lectures		
Category	Number	Percentage
1. Strongly approve	450	57.03%
2. Approve	260	32.95%
3. Not approve	59	7.47%
4. I don't know	20	2.55%
Total	789	100%

F: Find Improvement an opportunity for	Aster-Sanad hospital after discovering lack of staff commitment in attendance of regular scientific lectures in auditorium, has improved quality and patient safety continuous education and training method to minimize and abolish the gap between actual staff scores and the desired one concerning basics and principles of Q & P.S knowledge to create one team for one goal speaking the same language and thinking the same way. Our main objective is to innovate a comprehensive Simple Move to Improve Continuous education and training of quality and Patient safety among all hospital's staff categories by using a new method that is measurable, attainable, realistic and time framed instead of scientific lectures.
O: Organize the Team	Team members (15) are chosen according to GRPI representing and covering all staff categories in all work hours shifts.
C: Clarify the current process	Aiming to eliminate the false sensation of security on part of staff and to prepare the hospital for CBAHI/JCI reaccreditation, quality and patient safety Manager arranged a scientific course covering all knowledge of TQM, P.S, IPC, Environmental Safety 20 lectures, (45 minutes lecture/week in auditorium) targeting all hospital staff categories. The aim also was creating one team for one goal speaking the same language and thinking the same thought to eliminate informal groups that pose a threat to patient safety and the hospital as a whole. Unfortunately, we found lack of commitment to continuous education and training as well as lack of team spirit for one goal.
U: Understand the source of the problem and the process variation	According to questionnaire of staff reasons for not attending lectures, the gap in scores in pre-action exams and the desired one as well as root cause analysis, the problem became obvious and summarized by Chairman & Team Leader to team members as followings: <ol style="list-style-type: none"> 1. Time and frequencies of lectures are not suitable to staff time workload and work shifts.

	<ol style="list-style-type: none"> 2. There is no commitment of senior management and hospital staff for quality, patient safety, ipc and environmental safety lectures attendance as its time and place does not fit or agree the different three work shifts 3. The auditorium place is away from workplaces of majority of staff and lecture time during every week is not suitable to different three daily shift times. 4. The staff at time of lecture used to be exhausted and fatigue to the degree that affect their understanding the lecturer. 5. Usages of Auditorium projector, screen blackboard, paper sheets and power point slides seem to be difficult and distorting to audience to display knowledge and information during the lecture time. 6. Choosing another simple move to improve accessible method to deliver the scientific knowledge and information along different times of all staff in the different three shifts may be suited to them and achieve the purpose of creation of one team for one goal that speaks the same speaking and thinks the same thinking which is the speaking and thinking of quality and patient safety especially if it is accompanied with incentives for participants in the form of encouragement and moral appreciation as well as valuable gifts on part of senior management.
<p>S: Select the Improvement</p>	<p>The team practice Brain Storming, Affinity Diagram, Multi voting, Selection grids and Task lists/Action plan for decision making and project improvement as well as Problem solving. Based on Preliminary and final questionnaires as well as Root cause analysis and Pareto Diagram and rule as well as the desire of the majority of hospital staff, the Team has chosen innovative scientific Boards (10) distributed to important and vital places in the hospital to solve the problem. Each board contains the basics and principles of TQM, Patient Safety, IPC and Environmental Safety. The team members share in designing and filling the board with the required knowledge and information. We decided that every team member would carry on and share instructions, explanation and discuss the comprehensive knowledge gained from the boards with his same category of staff colleagues near their workplace during the three work shifts 24 hours, 7days/week along the month/year.</p>

Compliance Monitoring

Data collection and analysis using quality tools and Staff questionnaires and Pre – post Corrective action implementation tests as well as observation and internal auditing.

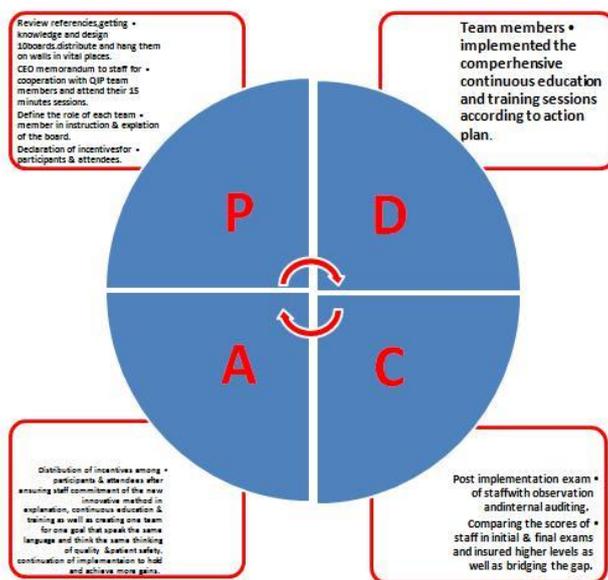


Doing the improvement: The team members will design and fill the boards with desired quality and patient safety scientific knowledge. The QIP team will chose the vital places to hang boards on the walls of the hospital.

The team will instruct, explain and discuss the knowledge of board with the staff according to action plan and after

understanding their roles and responsibilities from the chairman. A final staff exam with the same questions as the initial one will assess the differences in scores, and the results of exam will ensure that the desired goal is achieved or not, as well as the level of different categories for understanding and absorption of the required knowledge and information.

PDCA: (Steps for implementation of improvement opportunity)



PDCA: (Steps for implementation of improvement opportunity)

P: Plan the improvement	<ul style="list-style-type: none"> Review references, getting knowledge and design 10 boards. Distribute and hang them on walls in vital places. CEO memorandum to staff for cooperation with QIP team members and attend their 20 minutes sessions. Define the role of each team member in instruction & explanation of the board. Declaration of incentives for participants & attendees.
D: DO the improvement	<ul style="list-style-type: none"> Team members implemented the comprehensive continuous education and training sessions according to action plan.
C: Check the result	<ul style="list-style-type: none"> Post implementation exam of staff with observation and internal auditing. Comparing the scores of staff in initial & final exams and insuring increase grade and higher level as well as bridging the gap.
A: Act to hold the gain	<ul style="list-style-type: none"> Distribution of incentives among participants & attendees after ensuring staff commitment of the new innovative method in explanation, continuous education & training as well as creating one team for one goal that speak the same language and think the same thinking of quality & patient safety. Continuation of implementation to hold and achieve more gains.



Action Plan:

Phase:1: (The first start)

Task	Responsibility	Start date	End date	Condition
Initial staff general exam with data collection & analysis.	Dr. Salah Ibrahim Awad	1/1/2018	10/1/2018	Done
Preliminary staff questionnaires with data collection & analysis.	Dr. Salah Ibrahim Awad	11/1/2018	21/1/2018	Done
Assessment of actual and desired states.	Dr. Salah Ibrahim Awad	22/1/2018	25/1/2018	Done
Chose and formulation of QIP team members.	Dr. Salah Ibrahim Awad	26/1/2018	31/1/2018	Done

Phase:2 (The actual QI Project workload and activities)

Task	Responsibility	Start date	End date	Condition
Meetings, final staff questionnaire, problem solving and decision making.	All team members of QIP	1/2/2018	14/2/2018	Done
Review references, getting knowledge and design the ten boards.	All team members of QIP	15/2/2018	25/2/2018	Done
Distribute and hang boards on walls in vital places.	All team members of QIP	26/2/2018	28/2/2018	Done

Phase:3 (Instruction and explanation of knowledge to hospital staff)

Task	Board number	Staff Shift	Responsible team member for specific staff category	Start Date	End Date	Condition
Instruction & explanation of	1	Morning. Afternoon.	Dr. Salah Ibrahim Awad (For Physicians, Nurses,	1/3/2018	31/5/2018	Done

knowledge to hospital staff.		Evening.	Administrative, technicians, housekeeping, security guards)			
Instruction & explanation of Knowledge to Physician & Nurses	2	Morning. Evening.	Mr. Ajmal Iqbal (For Physician & Nurses)	1/3/2018	31/5/2018	Done
Instruction & explanation of Knowledge to Administrative staff.	3	Morning. Afternoon. Evening.	Mr. Ibrahim A Gahamdy (For Administrative)	1/3/2018	31/5/2018	Done
Instruction & explanation of Knowledge to Physician & Nurses.	4	Afternoon. Evening.	Ms. Frances Daguman (For Physician & Nurses)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to For Nurses	5	Morning. Afternoon.	Ms. Hoda Abdulkhaleq Abdulhadi (For Nurses)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to Patients & their families.	6	Morning. Afternoon.	Ms. Nesreen Abdulaziz AL-Ghorshy (For Patients & their families)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to Patients & Their families	7	Morning. Afternoon.	Ms. Humere Hussain (For Patients & their families)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to technicians	8	Morning. Afternoon. Evening.	Eng. Fouad Thabit (For technicians)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to Nurses	9	Afternoon. Evening.	Ms. Kathrine Jae Corales (For Nurses)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to Patients & their families	10	Morning. Afternoon.	Ms. Wala Waleed Al Alwan (For Patients & them families)	1/3/2018	31/5/2018	Done
Instruction & Explanation of knowledge to Administrative staff.	1	Morning. Afternoon. Evening.	Mr. Majed Abdulrahman Al Otaibi (For Administrative)	1/3/2018	31/5/2018	Done
Instruction & explanation of knowledge to technicians and security guards	2	Morning. Afternoon. Evening.	Mr. Nashith Abdulnnasir (For technicians and security guards)	1/3/2018	31/5/2018	Done
Instruction & explanation Of knowledge to Patients & Their families.	3	Morning. Afternoon.	Ms. Kholoud Yasser Al Mansour (For Patients & them families)	1/3/2018	31/5/2018	Done
Instruction & Explanation of knowledge to For house keepings.	4	Morning. Afternoon. Evening.	Ms. Amaliah. Lumba (For house keepings)	1/3/2018	31/5/2018	Done

Instruction & explanation of knowledge to security guards	5	Morning. Afternoon. Evening.	Mr. Abdullah Al Hassan (For security guards)	1/3/2018	31/5/2018	Done
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Phase:4:(The final decision and effort)

Task	Responsibility	Start date	End date	Condition
Post implementation staff general exam with data collection and analysis.	All team members of QIP	1/6/2018	5/6/2018	Done
Observation and internal auditing	All team members of QIP	6/6/2018	10/6/2018	Done

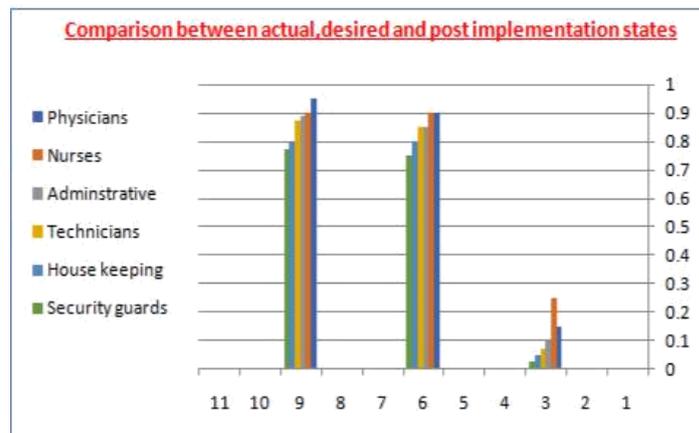
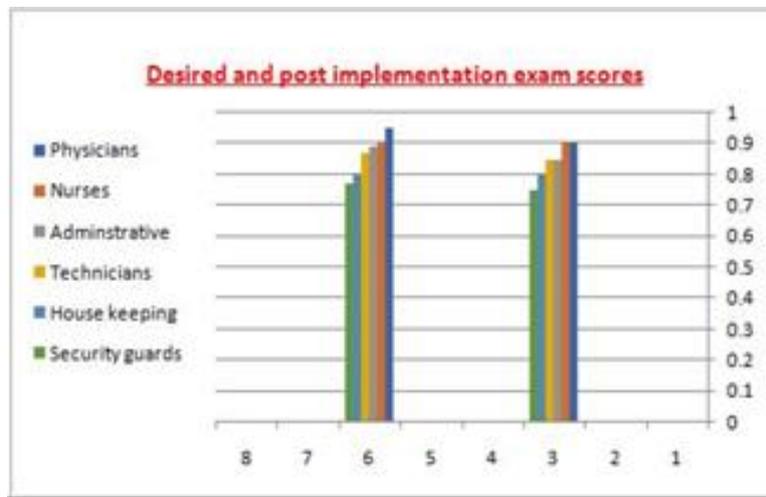
Pre-action taking and post Q.I.P exams		
Physicians	15%	95%
Nurses	25%	90%
Administrative	10%	89%
Technicians	7%	87%
House keeping	5%	80%
Security	3%	77%

Staff participated scores in post-Q.I.P exam		
Category	Scores out of 100	Percentage
Physicians	95	95%
Nurses	90	90%
Administrative	89	89%
Technicians	87	87%
House keeping	80	80%
Security	77	77%

Conclusion and Result

- The final exam scores for the majority of the staff categories of the hospital showed an increase from what was desired and planned.

<u>staff expected (desired exam) scores and the actual one in post implementation exam</u>		
Category	Desired post implementation scores	Actual post implementation scores
Physicians	90%	95%
Nurses	90%	90%
Administrative	85%	89%
Technicians	85%	87%
House keeping	80%	80%
Security guards	75%	77%



Comparison between actual base line, Desired (the goal) and post implementation states (scores)

Category	Actual state (base line)	Desired state (the goal)	Post implementation state
Physicians	15%	90%	95%
Nurses	25%	90%	90%
Administrative	10%	85%	89%
Technicians	7%	85%	87%
House keeping	5%	80%	80%
Security guards	3%	75%	77%

- observation and internal auditing has proven the best and most accurate implementation of all policies and procedures covering TQM, P.S, IPC and Environmental safety of (CBAHI/JCI) standards concerning patient care in the hospital that is in the interest of patients and their families and provides and select the hospital to be the first choice for their treatment and medical care in Riyadh region. The informal groups have been neutralized and eliminated through the return of the spirit of one team with one goal, which speaks the same language and thinks the same way of thinking.
- The hospital becomes ready for reaccreditation and there is a great hope to receive it with high grade and scores.
- All the categories of hospital staff regained their commitment to continuous education and training

- and their love for and adherence to it and their keenness on it.
- Patients and their families enjoyed their sessions done by our patient educator, and the information they obtained in the quality of services provided to them and the hospital's methods of controlling and preventing the transmission of infection to them and the hospital staff commitment to their safety in all care procedures as well as their knowledge of their rights and responsibilities during the period of treatment and their presence in the hospital, proved to add a great value to the success of the new innovative educational boards in teaching patients and their families as well as the advancement of the surrounding community.
- On conclusion we gain more than our expectation from the simple move to improve innovation.

Summary and Beneficial Effects

A series of scientific 20 lectures (once/week for 45 minutes) that covers all aspect of "TQM, Patient Safety, IPC & Environmental Safety" failed to achieve the goal of speaking the same language and thinking the same thought to create one team for one goal due to failure of commitment on part of staff for attendance.

A preliminary staff exam of 100 scores on quality, patient safety, IPC and environmental safety was conducted, in which 789 employees participated out of 814 ones of different categories, showed a decrease in grades and level required to achieve the desired goal. Opportunity for improvement was addressed and the gap between actual and desired situations was declared.

A Quality Improving Project Team was organized formed of 15 members representing all staff categories according to (GRPI) and the goal was (SMART), specifically innovating a Simple Move to Improve Continuous education and training of quality and Patient safety among all hospital staff categories to create one team for one goal that speaks the same language and thinks the same thought.

Attaining the goal will neutralize the appeared hospital informal groups that pose a threat to patient safety and represent a burden on hospital administration, eliminate lack of commitment to continuous education and training as well as lack team spirit of one goal and solve the false sensation of security on part of the staff as well as will prepare the hospital for CBAHI/JCI reaccreditation. This also will improve staff skill development and their morale as well as will improve quality, safety, and all health care activities of patients in the hospital. Patient and family education and awareness programs will also be improved. The benefit of all of this will be reflected on improving the surrounding society continuous increasing of hospital income. and the great image of the hospital will be raised with its effects on The team practiced Brain Storming, Affinity Diagram, Multi voting, Selection grids, Root cause analysis and Pareto Diagram and rule, plan for decision making, problem solving and project improvement through a comprehensive action plan and task list formed of four phases "the first start- the actual QI Project workload and activities- instruction and explanation of knowledge to hospital staff and the final decision and effort", putting in mind the data analyzed from preliminary and final staff questionnaires and exams.

The Methodology of FOCUS-PDCA was used to choose solution and to solve the problem.

Based on staff final questionnaire on Team's decision for improvement, the team members designed and filled 10 boards with desired quality and patient safety scientific knowledge and hanged them on the walls of vital places of the hospital.

The team members instructed, explained and discussed the knowledge of boards with their colleges during the

three works shifts /24 hours, 7days/week along the month/year.

The comparison between final exam and the preliminary one for the same staff numbers and categories after implementation of the innovative education and training scientific boards, proved a successful increase in grades and level required to covered the gap and achieve the desired goal.

Recommendations: We recommend

- Strengthening the continuous education and training program of the hospital by bulletins and pamphlets that contain medical and scientific knowledge and information to be distributed regularly for the target groups electronically and in the paper form as well as proper usage of scientific posters and wall hangers.
- Usage of the scientific boards in the different weekly departmental internal education and training activities in the hospital and for orientation sessions.
- Make usage of the boards in patient and families' educational and training activities in the hospital.
- Marketing department should use proper specific boards in the internal hospital marketing.
- Participation and celebration the annual World Health Organization events and awareness days by usage of proper specific and scientific boards.

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