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Original Research Article

Assess the Attitude and Practice of Surgical Team Members Regarding Time Out Protocols in Operation Theatre at Services Hospital Lahore

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Abstract: Time out protocol for surgery is very important for the declination of mortality rate because two hundred and thirty four millions surgeries have been performed every day worldwide in which 7 million had adverse complications. To assess the attitude and practice of surgical team members regarding time out protocol before surgery in Operation Theater. A descriptive, quantitative cross-sectional study design was done. An adopted questionnaire have been distributed among 154 participants to collect data from Services Hospital Lahore. SPSS version 21 was used to analyze the data. Descriptive statistics and chi-square were applied. In this study out of (N= 154) respondents 50 %(n=77) of the participants were male and 50%(n=154) were females and 58..4% of the respondents were between the age of 26-30 years.45% of the surgeons and 27% of anesthetists and only 26% of the nurses were participate in the study.50% of the participants were 6-10 year of job experience. Respondents towards the attitude of time out protocol were positive.87% of the respondents think that check the patient identity, procedure side is a joint responsibility.92% of respondent said that time out protocol can avoid incorrect surgery.76% of the respondent confirm the patient identity before every operation.81% of the respondents confirm that surgical procedure before each operation. The Time out protocol is one of the important strategies to minimize the hazardous situation in Operation Theater. It is important in Operation Theater and surgical ward as well as in overall hospital to identify the patient properly, his diagnosis, his treatment planning, his medication and the site or part of surgery to be carried out. Keywords: Attitude, practice, surgical team, Time out, Operation

INTRODUCTION

Approximately two hundred and thirty four million surgeries performed every year all over the world in which seven million unpleasant incidents happened [1].

Patient wellbeing is an important component of health care environment. Patient protection throughout the invasive actions is of great significance in the hospital. This consist of pre-procedure practices to confirm that every person of a technical team, as well as the client is valid and experienced, are in arrangement that comes arise. This is known as a "Time-Out" and must be accomplished before to the start of any invasive or consent-necessary practice. It is very essential and last security stop before a procedure is to begin [2].

Invasive Procedure is any practice that has need of placing of an instrument or tool into the body from the skin or a body cavity for finding or healing [22]. All of the measures also need a written permission from the client or other related person. Every person of the team should be near throughout the process and must involve you and orally accept every element [23]

Client individuality must be recognized at least two identifiers, system with a chance to be performed confirmed, tolerant position confirmed, technique location, including right side, relevant pre-procedure medications, equipment, imaging situated Furthermore confirmed, time-out ought to be archived. Whether tolerant necessities will make repositioned, system altered, or whatever available component that heads confirm alongside. At whatever approach with a hole in the arranged procedure, another time-out ought to further support make performed. Protocol might make abbreviated or by-passed on developing particular circumstances giving work to proper documentation [3].

Incidence rate of incorrect surgeries in the United States varying as of one in five thousands to one in eleven thousands surgical procedures [4].

Study conducted by Clarke et al. in [11] over thirty months reported there were four hundred cases of near misses (253) or surgical involvement ongoing (174) concerning the wrong patient (34), mistaken procedure (39), wrong surface (298), and/or false part (60); 83 patients had incorrect procedures to be completed. Events occur of the inferior part were the large amount ordinary 30 percent. General support to inaccuracy ensuing at the start of wrong-site surgery concerned patient location (20) and anesthesia involvement (29) prior to every planned time-out process, not confirm permission (22) or place markings (16), and not doing a correct time-out practice (17). Actions involving operating surgeons contributed to 92. Common sources of successful recovery to prevent wrong-site surgery were patients (57), circulating nurses (30), and verifying consents (43), and 31 formal timeout processes were unsuccessful in preventing "wrong" surgery [12].

Death took place in 6.6% of patients, constant injury in thirty two percent, and temporary injury in fifty two percent. Negligence expenditure due to these procedures was \$1.3 billion [5].

In Switzerland one million operations are carried out annually and major complication are occur in 3 to 20 percent of patients and mortality rate increased 0.8 to 1.5 percent [6].

Unfavorable procedures resulting from surgical interference are in fact and further commonly associated to mistake happening prior to or later of the practice that by technical surgical error throughout the process. This is due to stop communication in work place and among the surgical group, care giver, patients, and their families, holdup in judgment or not a success to diagnose; and delay in cure or breakdown to treat [24].

Effective preoperative team communication reduces intra operative unpleasant events, including wrong-site surgeries; decreases following postoperative problems and mortality; and improve operating room (OR) personnel awareness of teamwork and safety.

Patient care should be conveying safe and sound by use of security rule based in technical confirmation. Continue assessment of throughout the procedure and strategies are arranged for patient wellbeing. Patient wellbeing must center on to make a tradition of security that promotes message, confidence and integrity [23]. Safety of the patient during surgical procedure has a number of feature which single one is incorrect surgery that is divided into three groups; in the wrong site operation, incorrect patient surgery and false procedure carrying out [7]. Incorrect surgical procedure occurs whenever a planned surgical practice is carrying out at or in the wrong parts, position and site or else side. Immoral patient operation refers to a practice act upon on false client. In the wrong practice refers to different operation is being carrying out than planned for the client.

It is essential to identify that humans make errors [25]. Error can be reduce by proper education, right communication, and coordination between all the members of team to make sure that everything is right regarding patient concerns. Constant teaching about patient wellbeing not only assist the health care expert by reduce fault, although extend to patient welfare.

Establish a health organization to confirm and make sure that errors are further to be expected prior to occur and fault does not put upon a person.

Many surgical complications can be attributed to human error and communication error. A checklist, at least, allows for open communication between providers. Currently, it is standard practice for health care providers to perform time-outs prior to any procedure. "Checks" in the time-out include, but are not limited to: patient name and birth date, team members and their role, correct procedure, correct surgical site, allergy information, and prophylactic antibiotics. These checks help to prevent wrong-sided surgery and retained surgical instruments.

An early evaluation of the present patient security and strategies are required to cure problem inside the organization. Health related mistake are possible during the health care career, but through proper recognize the reason and make policy to reduce or remove them. It can also help out to create a successful organization that provide guarantee for the patient wellbeing. The aim of this study to assess the attitude and practice of surgical team members regarding time out protocol before surgery in operation room.

Variables

Attitude and Practice are the independent variables which will be determined among the surgical team in services hospital and time out protocols the dependent variable in this research study.

Problem statement

This is very important for the patient to be treated in a very respected and curative way and this is the basic right of the patient to be prevented from the health care hazards in the health care settings which is the responsibility of the hospital administration, The Time out protocol is one of the important strategy to minimize the hazardous situation in operation theater. It is important in Operation theater room and surgical ward as well as in overall hospital to identify the patient properly, his diagnosis, his treatment planning, his medication and the site or part of surgery to be carried out. It is seen in many health care settings and prevailed from many literature that hospital staff didn't give too much attention to identify the patient having same name and some time in Operation Theater progress the surgery of the wrong side or part, and due to this patient lead to very serious trauma which are fully mistakes of hospital staff.

This is a very serious problem and need to know about the practice, knowledge and attitude of staff nurses about time out protocols.

Significance of the study

The study will help the organization to implement proper time out protocols and will help the participants to know the importance of time out. It is also very important for me to improve my knowledge about time out and help me to focused and implement these protocol. It is very significant for the staff of surgical team and all staff nurses to bring the time out protocol in to their practice and developed a positive attitude towards time out protocol. By following these guidelines the morbidity and mortality rate can be reduced and the team will work more effectively. The study will helps to health care professionals to minimize surgical error, time safe stress minimize, conflict management.

By the implementation of time out protocol; the staff will utilized the time more significantly and minimize surgical error in Operation Theater by knowing the time out protocol the team will work in more competent way and staff have very good level of satisfaction. It can also minimize the duration of patient stay in hospital because of the preventing errors.

Research questions

- What is the attitude of surgical team regarding time out protocol before surgery?
- What are the practices among surgical team for time out protocol before surgery?

Objectives

- To assess the attitude of surgical team regarding time out protocol before surgery.
- To assess the practice of surgical team members regarding time out protocol before surgery.

Conceptual definition Attitude

A feeling or way of thinking that affects person's behavior. (Merriam Webster)

Practice

The actual application or use of thought, belief, or technique, as different to theories relating to it [8].

Surgical team

A surgical team is a group of people who perform surgery and task linked to surgery. Roles in the team consist of surgeon, surgeon assistant, nurse and anesthetist [9].

Time out procedure

Patient protection throughout invasive procedures is of extreme significance in the hospitals. This consist of pre-procedure practices to confirm that every person of a technical team, as well as the client is valid and experienced, are in arrangement that comes arise. This is known as a "Time-Out"" [2].

Operation room

An operation room (OR), also called surgery center, is the unit of a hospital where surgical procedures are performed.

Operational definition

Attitude

The thinking of the respondents about taking decision regarding use of time out protocol.

Practice

Application or practice about time out protocol before surgery.

Surgical team

Members of surgical team of services hospital who are working in operation theatre and directly involved in patient care.

Theory framework

Kreps highlighted the weiks theory of vital responsibility of announcement and information giving out within public group and organization. The theory based on communication among health care contributor inside organization as well as client provider communication. Weik's work is significant to regard as a health support theory based on ottarwa affirmation., which is confirmed that they must recognize group persuade on health. Better communication among team members improves the accuracy in order to convey the information.

LITERATURE REVIEW

Hospital environment should be safe for the patients. All humans are making error inherently. (kohn. LT2000)

"To error is Human" showed that errors cause 44000-98000 death and over one million injuries in America hospitals every year" (Kohn LT 2000). Patient safely became a main topic on the cure agenda (SeeLC.SeidenSC2011). It has been stated that at least more than 50% surgical problems are ignorable.

Patient protection covers the prevention of errors and adverse event connected with health care that affect patient (WHO 2013). Accidental injury caused by cure management rather than by the patient's due to disease that results in a prolonged hospital stay, temporary or everlasting disability or bereavement. (Zegers M 2009).

In Minnesota 26 incorrect surgeries while their first year of public reporting and 31 their second year [16].

In Virginia, a wrong-site surgery was claimed in one of every 30,000 surgeries, or about 1 incorrect surgery per month .In the State of New York in 2001, a wrong-site surgery was reported in 1 of every 15,500 surgeries [13].

Page quotes information from Washington University in St. Louis stating 4000 wrong-site surgeries annually in United States, or 1 in 17,000 surgeries, the third highly frequent life-threatening medical mistake [17].

The Nationwide Practitioner Data Bank (NPDB) documented 5940 WSPEs (2217 mistaken surgical procedures and 3723 wrong-treatment/wrong-process mistake) in 13 years [20].

In this study only 63 percent of the respondents says finding the correct patient, position, and procedure is a combine duty [14].

A study found that the check-lists might energetically reduce 14.9% of near miss and 83.3 percent of dangerous procedures [18].

A study conducted in a French hospital that the rate in the completion of the checklist go down from 88 percent to 76 percent use in the first year [19].

Study conducted by Haynes *et al.* showed that death rate was 1.5% earlier than the checklist was establish and turn down to 0.8% subsequently. Inpatient difficulty happens in 11 percent of patients at baseline and in 7.0 percent after practice of the time out protocol **[15]**.

Mean compliance with the time out protocol during complete study period was 71.3 percent. Descriptive analyses give you an idea about that time out protocol compliance did not get better throughout the study time. There was a huge spread among hospitals which one of the cure centre not at all carrying out the time out protocol rightly and two had mean compliance rates higher than 90%. A low mean time out protocol compliance (48%) was found all the participating hospitals. The academic hospitals had a mean compliance rate of 42.1%, teaching hospitals 76.2% and general hospitals 73.9% [21]. A broad variety in compliance rates for surgical check-lists. It can be found in previous notes, ranging from 12% to 99% with a mean of 75% [10]

METHODOLOGY

A, quantitative descriptive cross-sectional study design was used. Target people of this study were of surgical team of operation room. Sample size was calculated by using solving, s formula.

If N=Population, n=Sample size, E= Margin of error n=N/1+ (N) (E) ² n=250/1+ (250) (0.05) ² n=250/1+ (250) (0.0025) n=250/1+0.625n=250/1.62=154

In this research the tool was Questionnaire, pencil, pen, charts, reading material. A well-developed and adopted questionnaire from "A review of surgical team members' perception of near misses and attitude towards Time Out protocols" were utilized. Questionnaire was consisted on attitude and practice questionnaire regarding time out protocol.

Ethical considerations

Written permission get from HOD of Lahore School of Nursing and approval latter were taken and also take permission from nursing superintendent of services hospital to collect data to fitful our research project. An individual consent form was attached with every questionnaire for taking permission. Participants provided information of the research in order to gain full consent. During the participating, confidentiality as well as benefits

The collected data analyzed by putting data on SPSS version 21. Data was analyzed by frequency through descriptive statistics and represented in the form of figures, tables, frequencies and percentage.

Members of surgical team including (surgeons, scrub nurses anesthetists) were included in the study.

The members of the other then surgical team were excluded.

Time Frame work

This study conducted from March 2017 to May 2017.

RESULTS

The analysis of demographic data relates to gender, age, and professional designation and job experience of the participants.

Demographic Analysis of n=154 respondents reveals that 50%(n=154) of the participants were male and 50%(n=154) were female ,7.8%(n=154)have the age of 20-25yrs,58%(n=154) are 26-30yrs and 26%(n=154) participants belong to 31-35 year of age and 7.8% (n=154) are above 36years of age. 26% of the scrub nurse, 45. % (n=154) of surgeons and 27 % (n=154) of anesthetists were in participate in the study. 36.4% (n=154) respondent have experience between 1-5yrs, 50 % (n=154) of participants 6-10 year experience and 7.8% (n=154) respondent have 10-15years of job experience and only 5.8 % (n=154) people that job experience aboveS 15years.

In this descriptive study responses in which 78% of the respondents said yes 19% of respondents say no believe that about wrong surgical procedure is carrying out due to not make sure the patient identity, surface and procedure and only 1.9% said don't know. 87% of respondents says that there is a joint responsibility of staff, surgeon and anesthetist check the patient identify, operation side and operation procedure.11% say No and 1.9% say don't know.

92.8% respondent say yes time out procedure can avoid wrong surgery and 2.6% say No and 4.55% respondent say don't know.77% respondent says yes and 13.6% say don't know and only 9.09% respondent say NO regarding time out protocol is helpful.

The responses in which 50% of respondent says that they have observe wrong patient being came into operation room and 50% says No and minimum answer don't know.

The table # 3 which shows only 7.14% respondent don't know about the operation side prior surgery and 36.6% respondent say yes and 53.2 % negative answer from respondent. 66% of respondent say that they have observed the wrong positioning of patient before starting the surgery and 32% of respondents says that they have clear about the patient position. 35% of participants say that they have observed wrong procedure preparation and 63% have no observation about wrong procedure prepared in operation theatre. 76% of respondent verify the patient identity before each operation and only 24% participants don't check the patient identity to each operation.

63% of respondents said they have check the correct side and site of each operation and only 36% of participants said that they don't check the site of each operation.

81% of respondent say that they have check the correct surgery is being performed before each operation and 17.5% respondent say that they don't check the patient surgery is being performed. 72% respondent says that time out protocol not in used in our operation theatre and 20.13% participants have don't no about time out used in practice and 7.79% respondent say no about the use of time out before starting of procedure. 96% respondent wanted to use time out practice in your operation theatre and have a positive feedback regarding the use of time out protocol must be use in every invasive procedure. And only 2% respondent says that they don't want to use in operation room.

64.9 % respondent used correct antibiotic given to patients with in last 60 minutes and 23% of respondent not used antibiotic before start of surgical procedure.

55% respondent says they have no available of correct equipment before starting of operation and 44.1% respondent said they have correct equipments before starting of the surgery.

Chi square association between different health care professionals and Time out protocol practice related question.

Pearson square	chi-	Value	Asymp sig
		2.621	.623

The value of chi-square is 2.621 and p=.623 (p> .05) which shows insignificant. There is no association between different health care professionals regarding observation of an incorrect patient being carried into the operation theatre.

Pearson square	chi-	Value	Asymp sig
		5.605	.231

The value of chi –square is 5.605 and p = .231 (p>.05) which shows insignificant. There is no association among different health care professionals about uncertainty regarding patient identity in the operation theatre.

Pearson ch	i- Value	Asymp sig
square		
	3.479	.481

The value of chi-square is 3.479 and p= .481 (p>.05) which shows insignificant. There is no association between doctors, nurses and anesthetists wrong positioning of patient before operation.

Pearson c square	chi-	Value	Asymp sig
		4.538	.338

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The value of chi-square is 44.538 and p= .338 (p>.05) which shows insignificant. There is no association between doctors, nurses and anesthetists regarding preparation of wrong operation.

Pearson	chi-	Value	Asymp sig
square			
		6.360	.04

The value of chi-square is 6.360 and p=.04(p<.05) which shows significant value. There is association between doctors, nurses and anesthetists regarding confirm patient identity before every procedure.

Pearson chi-square	Value	Asymp sig
	32.571	.000

The value of chi-square is 32.571 and p=.000 (p< .05) which shows significant value. There is association among health care professionals regarding confirm the correct site and side before each operation.

Pearson chi-square	Value	Asymp sig
	6.132	.189

The value of chi-square is 6.132 and p=189 (p>.05) which shows insignificant. There is no association between health care professionals regarding verify the correct surgical procedure proceeding before every operation.

Pearson chi-square	Value	Asymp sig
	5.870	.209

The value of chi-square is 5.870 and p=.209 (p>.05) which shows insignificant. There is no association between health care professionals about application of time out protocol in your theatre.

Pearson chi-square	Value	Asymp sig
	2.248	.690

The value of chi-square is 2.248 and p=.690 (p>.05) which shows insignificant. This shows no association between participants use of time out practice in your theatre.

Pearson chi-square	Value	Asymp sig
	19.939	.001

The value of chi-square is 19.939 and p=.001 (p<.05) which shows significant. There is a association between participants regarding correct antibiotic given within last 60 minutes.

Pearson square	chi-	Value	Asymp sig
		4.215	.378

The value of chi-square is 4.215 and p=.378 (p>.05) which shows insignificant. There is no association between participants about correct equipment and supplies before starting of the operation.

DISCUSSIONS

The purpose of this study to assess the attitude and practice of surgical team members regarding time out protocols in Operation Theater. Respondents towards the attitude of time out protocol were positive.87% of the respondents think that check the patient identity, procedure side is a joint responsibility. A study conducted in Bergen Norway by Haugen (2013) only 63% of the respondents stated that verifies the correct patient site and procedure is joint responsibility.

In this study most of the participants 76% verify the correct patient, site, and side were practiced significant differently (p<.0001) among health care professionals (Table 4.5)Similar result found in another study was conducted in Bergen Norway by Haugen (2013) .They also practicing of verifies the patient identity, correct site and correct surgical procedure before every operation.

81% of the respondents in which 61 surgeons 31 nurses and 35 anesthetists confirm the correct surgical procedure before operation.

A study conducted in National University of Ireland by Connor [5] overall attitude towards the time out was positive but low level of compliance before surgery. There is a significant association between participants regarding correct antibiotic given within last 60 minutes.(p<.001) which shows in (Table 4.9) 66% of the respondent says that they have observed the wrong position of the patient before operation.

CONCLUSION

It is quite important for the patient to be treated in a very respected and curative way and this is the basic right of the patient to be prevented from the health care hazards in the health care settings which is the responsibility of the hospital administration, The Time out protocol is one of the important strategy to minimize the hazardous situation in operation theater. It is important in Operation theater room and surgical ward as well as in overall hospital to identify the patient properly, his diagnosis, his treatment planning, his medication and the site or part of surgery to be carried out. It is seen in many health care settings and prevailed from many literature that hospital staff didn't give too much attention to identify the patient having same name and some time in Operation Theater progress the surgery of the wrong side or part, and due to this patient lead to very serious trauma which are fully mistakes of hospital staff.

This is a very serious problem and need to know about the practice, knowledge and attitude of staff nurses about time out protocols. Every year plenty of patients died because of the improper following time out protocols, and by the serious trauma as a result of improper implementing time out a lot of economical expenses can cause the hospital and the family in trouble.

Recommendations

- The hospital management and health care organization should strictly implement proper time out protocols with a resultant change to decrease the mortality and morbidity rate.
- Not only specialized group should know about it but every health care provider have need to know it's important in a given organization.
- It is very significant for the staff of surgical team and all staff nurses to bring the time out protocol in to their practice and developed a positive attitude towards time out protocol. By following these guidelines the morbidity and mortality rate can be reduced and the team will work more effectively.

Limitations

This study is considered one of the times consuming, so due to shortage of time and less participants as expected have been limited and the shortage of time was the main limitation of this study.

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