

# DEVELOPING VIDEO OF SURGICAL SAFETY CHECKLIST (SSC) IMPLEMENTATION IN CENTRAL SURGICAL UNIT OF HOSPITAL IN YOGYAKARTA

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## Abstract

The area of surgical services becomes a part which often causes unexpected events, both medical injuries and complications due to surgery. The objective of this study is to developing video of Surgical Safety Checklist implementation and perception of the implementer of SSC. Research methods with qualitative methods, in-depth interviews, and coding are applied. From the four subjects conducted by the depth interview which represents the population, it is known that Surgical Safety Checklist is not just a routine. SSC can minimize mortality and postoperative complications. An interesting and informative video facilitates understanding and reminders of SSC implementers. Video can also be a training medium for teams that will enter the operating room and carry out operations. Videos are useful in increasing understanding and reminders of SSC implementers.

Keyword: Surgical Safety Checklist, Video, Central Surgery Unit.

## INTRODUCTION

The area of surgical services becomes a part which often causes unexpected events, both medical injuries and complications due to surgery. It is expected that there are 234 million surgeries per year. This incidence leads the surgeries focusing on patient safety which in turn needs to be considered as a substance of global health (Weiser et al., 2008). For safety support, WHO then recommends surgical safety checklist worldwide to support patient safety environment in the hospital and the operation room in particular. This checklist aims to reduce morbidity and mortality incidences caused by surgeries without any basis on patient safety (WHO, 2009).

Surgical Safety Checklist (SSC) is a tool or an instrument used by clinical workers in operation room to increase the operation safety, reduce mortality and complication due to surgeries (WHO, 2009). Based on a study of Haynes (2009), it is revealed that the use of surgical safety checklist reduces complication rate from 11 percent to 7

percent ( $p < 0.001$ ) and mortality due to surgeries from 1.5 percent to 0.8 percent ( $p = 0.003$ ). This study is conducted in eight hospitals from October 2007 to September 2008. The finding implies that surgical safety checklist can reduce mortality and complication rate (Robertson & Vijayarajan 2010; Latosinsky, et al. 2010).

As the trend of surgeries increase, it is necessary to recommend surgical safety checklist to all executors in the surgery installation unit to create patient safety environment. In relation to this, one private hospital in Yogyakarta attempts to increase the quality by enhancing implementation of surgical safety checklist. Thus, this research aims to evaluate the effectiveness of video use in a way to improving implementation of SSC in one private hospital at Yogyakarta.

## RESEARCH DESIGN

This study uses qualitative approach based on action research (Figure-1).

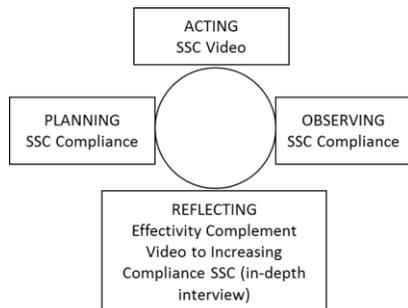


Figure-1 Action Research

The sample in this research consists of four people, including surgical nurse and anesthesia nurse in the operation room, surgeon and doctor specializing on anesthesia. This study is conducted in one private hospital at Yogyakarta for one-month period. The video of in-depth interview is then created with the executors of SSC in the aforementioned place and the coding is made on the basis of in-depth interview.

#### THE VIDEO OUTPUT, IN-DEPTH INTERVIEW AND CODING

The video output is produced by the researchers and team based on planned scenario. All of the actors in the video are the executors of surgical safety checklist in the aforementioned place.

#### THE VIDEO OUTPUT

The video output contains three segments, including:

Sign In:



Figure 1.1: Sign In Title



Figure 1.2: Sign In

Sign in is executed by anesthesia nurse covering these components:

1. Medical patient being confirmed
  - Identification from the bracelet of medical patient
  - Operating location
  - Procedures
  - Informed consent operation
  - Informed consent anesthesia
2. Operating location given by a sign
3. Machineries and medical anesthesia being fully checked
4. Oximeter pulse being attached and functioned
5. Whether medical patient has allergy
6. Difficulty of breathing/risk of surgery
7. Risk of blood lost > 500 ml (7 mg kg for children)
8. Two intervein access/central access and liquid therapy plan
9. If medical patient needs an implant, whether it is ready?

In this first segment, there are three actors: medical patient, anesthesia doctor and anesthesia nurse.

Time Out:



Figure 2.1: Time-Out Title



Figure 2.2: Time Out

Time out is executed by circular nurse with these components below:

1. Confirmation of all team members by introducing their names and roles
2. Surgeon, anesthesia doctor and nurse confirm verbally the name of medical patients, procedures, and the location for incision.
3. Whether prophylaxis antibiotics were given thirty minutes before? The name of antibiotics and their dosages
4. Anticipation for critical incidence: review from the surgeon, anesthesia team and nurses
5. Whether roentgen/CT Scan photo or MRI been already shown

In the time out segment, critical anticipation is being reviewed by surgeon, anesthesia doctor and the nurses including blood stocks, medical patient problems (physical status of ASA), completeness of the tools and others.

Sign Out:



Figure 3.1: Sign Out Title



Figure 3.2: Sign Out

Sign out is executed by circular nurse with these components:

1. The nurse confirms verbally with the team, including procedures of surgeries, instrument and others correctly calculated, specimen given by the label (containing name and networking source),

whether there is problem with a tool during surgeries.

2. Surgeon, anesthesia doctor and nurse review the main problem of what must be considered for the cure and management of upcoming medical patient.

From the transcript coding output, there are 34 questions of in-depth interview and being summarized in three axial coding: surgical safety checklist component, SSC objectives, and the use of SSC video. The output of selection coding/final theme is the SSC component sign in, time out, and sign out, which sign in is concluded at this stage for surgery preparation, identification of medical patient in which the anesthesia nurse plays role at this stage. Time out ensures the location and the preparedness of surgery team. Sign out aims to reevaluate before finishing surgery. And then the SSC aim to patient safety and team safety achieved as the basic surgical services that qualified and excellent. Video SSC helps to understanding, improvement, and reminders to SSC the implementers.

Based on the definition and components of SSC above, there is statement of purpose for SSC which includes incidence prevention, sentinel incidence, minimization of mortality and complication for the safety of medical patient and team in operation room, checklist for high quality service, and finally basic knowledge to enter operation room.

The use of SSC video is made according to provided scenario on the basis of WHO checklist standard and being modified by the hospital. The aim of SSC video is to gain the information, help understanding, and remind the SSC user to enhance the . The video can be played anywhere, in any electronic devices so that the users can watch the video easily by many times. By replaying the video, the SSC users can understand their own roles in SSC.

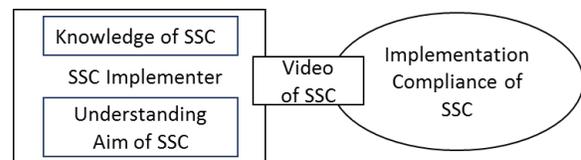


Diagram 1: Video to give knowledge and understanding of SSC purposes for SSC implementer.

Safety environment for medical patient in operation room refers to the operational procedures made by the related hospital. There is an alignment between the ways to enhance safety environment of medical patient with the of some aspects in surgery room. We raise the issue of surgical safety checklist as one of important factors to increase safety environment for medical patient in surgery room. There are three constraints of from the doctor and the nurse toward the guidance, including knowledge of the doctor and the nurse (lack of awareness and understanding), attitude (lack of agreement, self-effectiveness and expected outcomes) and conduct (external constraint) (Cabana et al, 1999). Meanwhile, the constraints during the implementation of SSC include lack of understanding toward SSC implementation, unmindful of the conduct and multitasking nurse which are considered as risk factor of in of SSC implementation.

Knowledge and skill about safety has strong association with (Neal et al, 2000). Needs of education to improve the knowledge and skills in limited condition and time for SSC executor can be solved by accessible video with any applications. As the video is made by the SSC executors themselves, the sense of belonging to implement SSC will occur to increase of SSC implementation.

Video is a means to make perception of implementation of the staff toward the medical patient's safety in operation room by keep playing it in the surgery room for three weeks. This effort is expected to influence all of the employees in surgery room to watch it visually without any enforcement during the break time so that they can implement what is shown by the video.

We conducted in-depth interview toward four executors of surgical safety checklist who have seen the video visually and been implementing it

individually. is a part of conduct in the form of demonstration of learning outcome resulted from educational process. Education through video is created and implemented by targeted subject that can be assessed and observed in this research. Our research method uses video as a means for education and reminder to have clearer and better understanding so that the executors can observe and implement as shown in the video.

The outcome of based on in-depth interview suggests that the aim of the video to gain the subjects' is met. The users of SSC understand and would like to do as shown in the video which in turn increases the (Diagram-1).

## **RESEARCH LIMITATION**

The researcher realize that this study has several limitations, including:

1. Sampling is based on representation of each population due to time limitation of the researcher.
2. The video which was created in the basis of scenario made by researchers and team has been modified without any prior experience of making the video.

## **CONCLUSION AND RECOMMENDATION**

### **CONCLUSION**

After in-depth interview and qualitative analysis from our four subjects, it can be inferred that the video provides information about SSC, while the users of SSC can understand more and be reminded to increase .

### **RECOMMENDATION**

We recommend regular evaluation of SSC implementation and further research to see the outcome of intervention on the environment medical patient's safety in longer period.

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