

ANJEON SMART CLIP: AN INNOVATION FOR IDENTIFYING COLOURLESS SOLUTIONS USED DURING SURGERY IN KPJ SEREMBAN SPECIALIST HOSPITAL

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INTRODUCTION

KPJ Seremban Specialist Hospital is a tertiary private specialist hospital located in the City of Seremban, State of Negeri Sembilan, Malaysia, with 195 operational beds. It is one of the 29 private hospitals under KPJ Healthcare Berhad group of hospitals, the largest hospital group in Malaysia. Surgery carries a high level of risks, it must be carefully planned and carried out in every aspect of patient care. There are several colorless solutions used during surgery in a operation theater and this might lead to identification error amongst the colorless solution. The Operation Theatre team has innovated a device named “**Anjeon Smart Clip**” (AJSC) to address this issue.

AIM

The aim of this innovation is to appropriately label the colourless solutions used during surgery to prevent use of wrong solutions due to difficulties in identifying same coloured solutions (colourless) during surgery procedure.

METHOD

A new safety device concept has been invented to resolve the difficulties in identifying same coloured solutions (colourless) during surgery procedure. A SWOT analysis was conducted to help the team to assess the internal factors that might affect the process / procedure (strengths and weaknesses) and external factors (opportunities and threats) as per below table.

Strength	Weaknesses
Strength of this project is able to strengthen the work process and safe use of solutions during surgery procedure which is patient safety is our high priority.	Same colored solution used during surgery such as normal saline, water for irrigation, heparinized saline and etc had a highly potential for wrong solutions used during the surgery
Opportunity	Threats
This project able to reducing the dissatisfaction of customers, reduce the cost for any medico legal actions, able to increase the quality of works and uphold the good image of hospital branding	If there are any incidents that occur relate to use the wrong solutions , hospital has potential faced with medico legal issue, loss of customers, and tarnish the hospital image.

Besides SWOT analysis, the Fish Bone Diagram has been applied in identifying the root cause of the problem. Human, method, surrounding and materials are the main factor that makes the team to innovate this Anjeon Smart Clip in prevention wrong solutions used during surgery.

CONCLUSIONS

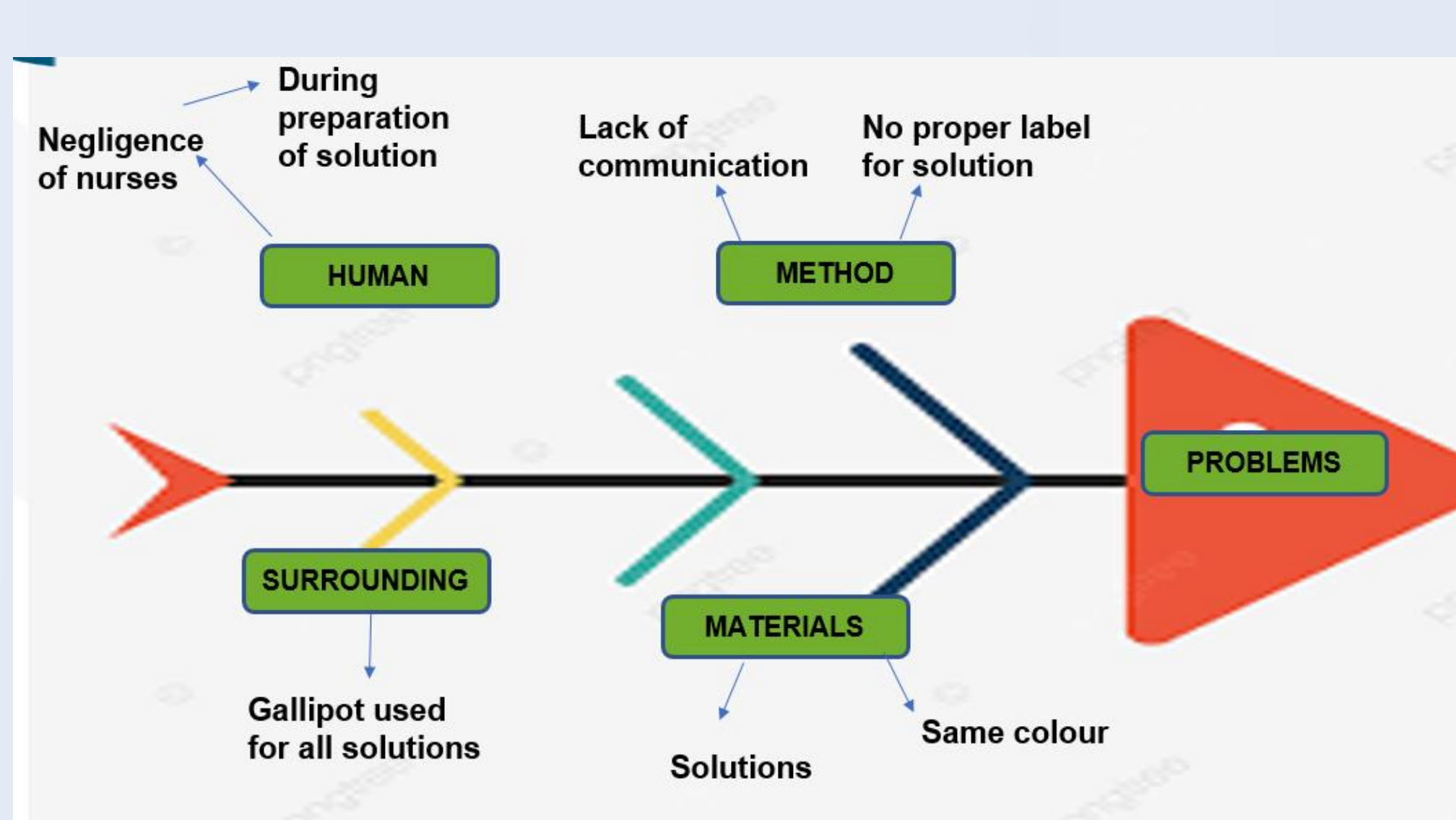
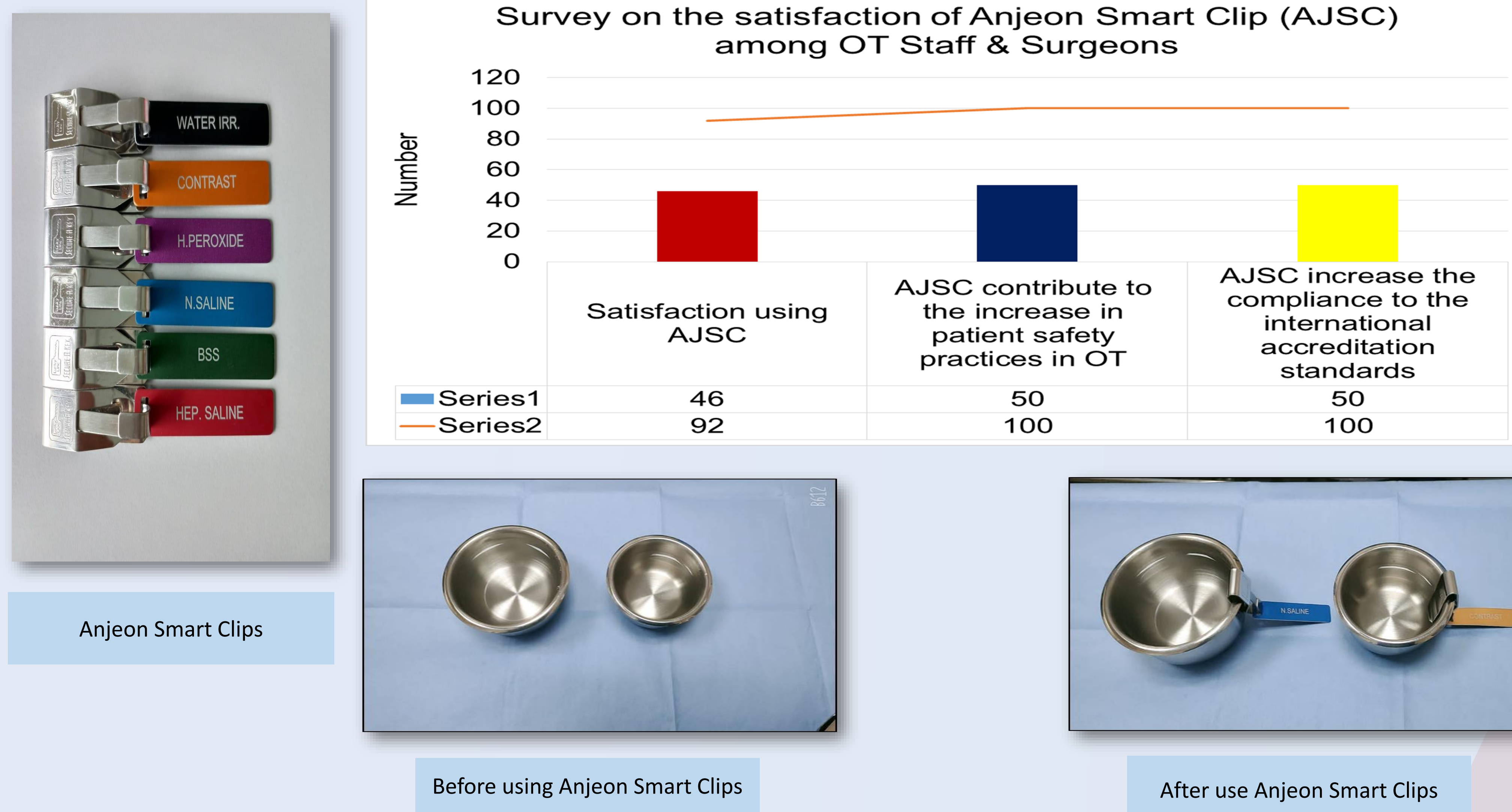
This study demonstrated that an innovative Anjeon Smart Clip device could reduce the wrongly used solutions during surgery. Furthermore, a satisfaction survey showed that this smart device has proven that this innovation has increased patient safety in the Operation Theatre room.

RESULTS

The project has a good impact on our organization. The impact has been analyzed based on the 7 indicators productivity, quality, delivery, cost, safety, morale and innovation. The survey on 50 staff and surgeon satisfaction, has resulted that 92 % (n=46) respondent are satisfied in using this new innovation in their daily work process, 100 % (n=50) also agreed that the devices contribute to the increase in patient safety practices in the Operation Theatre room, and 100% (n=50) respondent are agreed that this device are increase the compliance to international accreditation standards. By implementing “**Anjeon Smart Clip**”, the work process has been redeveloped.

Productivity	This innovation device may have potential market value if the team decide to pattern it and sell to other hospital
Quality	Increase the professional in work process and prevent the incidence of wrong solutions used
Delivery	Increase self confidence among staff and delivery a safe care during surgery
Cost	Reduce cost to patient in preventing any complication due to wrong solutions used
Safety	Toward zero incidents in Operation Theatre
Morale	Increase patient and staff satisfaction by deliver a good and systematic nursing care during procedure
Innovation	A simple innovation designed to resolve potential errors during surgery that may have a major impact on patients.

Table 1: Analysis of the project based on the 7 indicators



The device was introduced for use in Operation Theatre effective from October 2022. After 2 months in use, a structured questionnaire was used to investigate the 50 staff satisfaction with this new invented device.

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