Mission to Reduce Clinical Sharp Injury at Operating Theater

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ABSTRACT

Healthcare workers pose a significant risk to exposure to bloodborne pathogens resulting from clinical sharp injuries at workplace. At Gleneagles Hospital Penang, the Operating nursing staff was seen to be the most vulnerable group faced with occupational injuries in Year 2022. In this review, the team looked at reducing the incidence of clinical sharp injury from 4 cases in year 2022 to ZERO cases by the end of year 2023. The team performed a survey to understand the staff perception on sharp safety culture practice by the OT nurses. The feedback from the survey revealed, 70 % of the OT staff felt it is not acceptable to use hand to provide tissue retraction, 90% agree to have neutral zone to prevent injury, 70% do not agree with removal of surgical blade using hand and 50% agree with no recapping of needle practices. The incidences of injuries in the Operating Theatre were associated with lack of communication and awareness of safe practices by the surgical team during surgery and underutilization of protective safety devices. Hence, the team introduced several interventions to address the issues by introducing awareness campaigns to educate patient and staff and stimulation based training to staff on the safe handling of sharp during surgery with more emphasize was given on the use of needle protective devices.

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INTRODUCTION

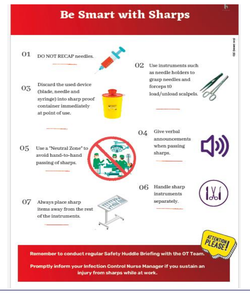
Clinical sharp injuries lead to serious health and psychological risks due to the potential transmission of bloodborne infectious diseases such as HIV, hepatitis B, or hepatitis C, resulting in significant physical and emotional consequences for the affected employees. An increased fear and anxiety were expressed by the staff involved in the incident.

The hospital management acknowledged the possibility of potential lapses in safety protocols and insufficient measures were in place to prevent the sharp injuries at this areas. Additionally involving patients in prevention strategies is essential. Patients can be educated on the importance of safe handling practices for sharps, like needles and syringes, to reduce the risk of injuries. They should also be encouraged to speak up if they notice unsafe practices by healthcare providers.

METHODS AND MATERIALS

1. Develop effective communication between the surgical team.
   a) Shout Out “Sharp" when handover sharp instrument
   b) Create "Neutral Zone or Safe Area” a dedicate surgical field for placing sharp
1. Stimulation based learning, having screen savers message to alert the surgical team on sharp use "Keep It Sound & Safe"(KISS)
2. Junior staff partnering with mentors when assisting operations to learn on the safe culture of sharp handling during surgery.
3. Constant use of protective devices e.g. magnetic pads, suture counter station to organize sharp /needle/suture in a dedicate area to prevent accidentally injuries to the surgical team.
4. Patient engagement is a critical component of this approach to raise awareness and educate patients in promoting a safe practices. Posters are used to communicate the risks and prevention



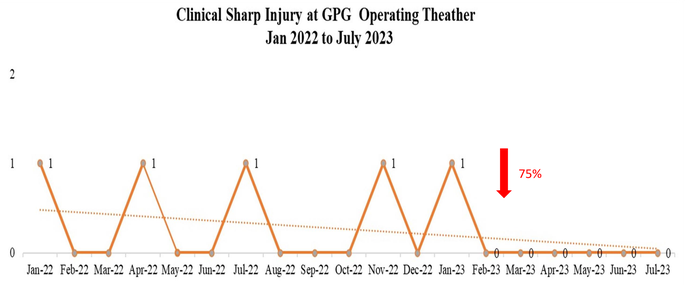



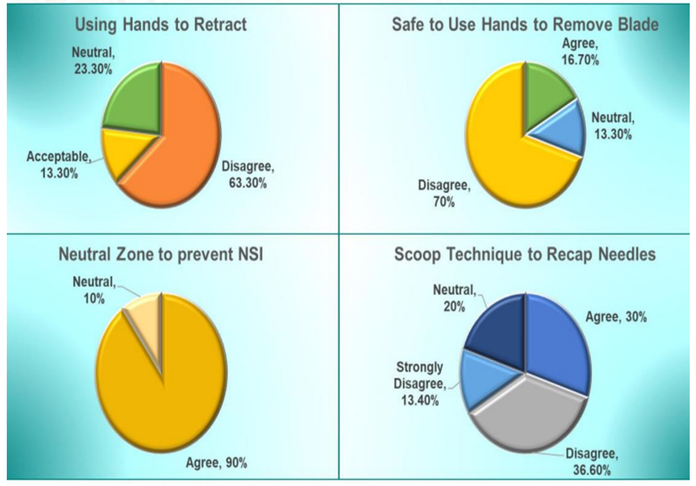


RESULTS

There was one(1) documented case of clinical sharp injury since January 2023 till July 2023 in the Operating theatre of Gleneagles Hospital Penang. Following this, a stimulation-based learning was further introduced whereby information displaying safe sharp uses were shared among all staff and this information was uploaded in the computer screen savers to serve as a constant reminder and alert for all staff on safe practices. The trendline rate of injury till July 2023 has shown a reductions by 75%.

GRAPHS AND TABLES





DISCUSSION

The result of multifactorial interventions have created a shift in the increased awareness among the operating theater nurses, on safety culture to be adopted in reducing the incidences of sharp injuries. The fear and anxiety among the nurses were further eliminated by encouraging the nurse to use the safety protection devices. The incidence of sharp injuries among the theatre nurse was significantly lower than in 2022. Additionally, the survey results have sufficiently demonstrated that the current situation of occupational exposure and protection of the nursing staff in Gleneagles Hospital Penang had gradually improved. Moreover, patient empowerment helps to mitigate the risks of clinical sharp injuries, by educating them and involving in prevention strategies.




CONCLUSIONS

Maintaining an effective communication by the surgical team while enhancing the partnering of mentor mentee guidance and persistent use of safety protective devices have demonstrated a value in the effort to reduce clinical sharp injuries among the Operating nurses. Hence, these interventions couple with staff survey feedback on safety culture practices have associated with decrease in direct and indirect costs, psychological stress to the staff in general.

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