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Inspecting the Practice of Manual Counting in Surgeries through the Approach of Human Factors and Risk Management

C.K. Shen, D.Y. Shih, H.H. Liao, P.C. Wang
Joint Commission of Taiwan, New Taipei City, Taiwan

Objective

It is commonly to discover a mistake of retaining surgical items in patients during the surgical procedure among issues of patient safety. Sponges, sharps and instruments for example are generally retained foreign bodies. The main reason of this hazard is associated with incomplete procedure of manual counting during the surgeries. Therefore, this study examined the risk of retained foreign items during surgical count practices through ergonomic view, and recommended related approaches to prevent the errors.

Figure 1."On the same page electronic display" illustration with surgical count procedure.

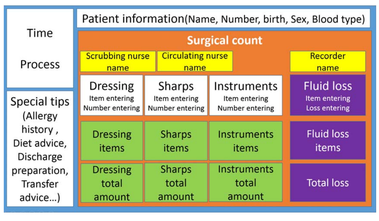
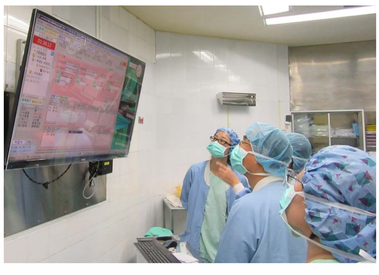


Figure 2.Site visit during stage of surgery. (electronic screen)



Results

The high risk of surgical count practice was from "working process factor" and "individual factor", especially the former one. For example, during the surgery, Staff should minimum times of unnecessary leaving the operation room. They should have a clear protocols or records to do handovers. It's worthy to promote that the surgical count was recorded on the board (a white board or an electronic screen) in order to make sure that everyone could read and update late information.

Methods

Four hospitals (2 medical centers and 2 regional hospitals) were involved in this project and several professionals in nursing, ergonomics and medical backgrounds were invited to visit and examine surgical procedures in the operation room. The expert group conducted qualitative records according to the assessment form of the five major factors (individuals, working process, external environment, equipment, organizational culture and society). To identify risk factors and to suggest better approaches were through inspecting operative procedures of surgical count practice. The whole inspecting includes stage of operation room preparation, stage of surgical count before operation and stage of surgical count after operation.

Conclusion

The preparation of surgical instruments is highly depending on high quality of standardizations. Many hospitals have already followed their SOP to decrease surgical errors. Although there are assistant technology like radio frequency detection equipment and surgical sponge tracking system released on market, it is hard to popularize in hospitals due to high prices. Thus, the surgical count practice highly relies on manual counting. We found some hospitals used equipment to help count practices such as radiopaque soft goods, sponge counts box, and co-record board, but this may need more evidence based research to evaluate the effectiveness.

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Joint Commission of Taiwan
www.jct.org.tw / rd@jct.org.tw