

AB009. An implementation proposal of virtual reality for reducing barriers to surgical procedures in Mexico: a systematic review

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Background: Current research identifies several barriers to surgical care in low-income and middle-income countries, including a lack of local resources and direct and indirect costs. Studies implement virtual reality as a solution but, the research hotspots are mostly in high-income countries. This study aims to propose the implementation of virtual reality in procedures as a resource for reducing costs, anesthesia, and fear related in the city of Monterrey, Mexico, through a systematic review.

Methods: We performed a systematic review of literature from 2010 to June 2023 through PubMed using keywords (“virtual reality” and “surgery”, “anesthetics” “surgery” and “virtual reality” “anesthetics” and “costs”), MeSH headings (“virtual reality” “developing countries” “surgical procedures”). Articles were included if they were applied to illnesses where the treatment is surgical and utilized virtual reality in any way.

Results: According to the investigations carried out in relation to the use of virtual reality during surgical procedures, especially in soft tissue injuries, hand surgeries, hernias of various types, and the removal of lipomas, it has been shown that implementing this resource in patients helps to reduce preoperative anxiety, decrease the use of anesthetics during the operation, and, as a consequence, reduce postoperative risks and complications in the same

way that it shortens hospital stays. It has been proven that using virtual reality avoids potential damage from oversedation, even more so in simple operations where not much anesthesia is necessary to perform the surgical procedure.

Conclusions: The use of virtual reality as an anesthetic adjunct during certain surgical procedures can be positioned as a relatively cheap and easy-to-use resource that can reach remote places and situations to provide surgeries to those who have less access to them.

Keywords: Global surgery; anesthesia; virtual reality; surgery

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at <https://jphe.amegroups.com/article/view/10.21037/jphe-2023-apru-ab009/coif>). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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doi: 10.21037/jphe-2023-apru-ab009

Cite this abstract as: Leos-Alvidrez FV, Ayala-Garza HG. AB009. An implementation proposal of virtual reality for reducing barriers to surgical procedures in Mexico: a systematic review. J Public Health Emerg 2024;8:AB009.