

Patient safety in remote control in diagnostic imaging



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INTRODUCTION

Among the multiple applications of telemedicine, one of the most advanced is teleradiology” according to Claudio Lotterberg in his book The Digital Revolution in Health. Telecommand in radiology consists of using digital and automated resources to perform exams remotely, and Brazil is pioneer in the technology of this operation. In Remote Control, the operator (technician or biomedical) is located in the remote command center, while the patient and nurse are in the imaging center or hospital unit. Through an audio, video and control system, communication is carried out between the Remote Control operator, nursing staff and the patient being examined. Patient safety in remote control in healthcare is essential to ensure the quality and effectiveness of remote care. The development and implementation of safe practices, along with the integration of advanced technologies, are critical to maximizing the benefits and minimizing the risks associated with the use of these innovations.

METHOD

Bibliographical survey and interviews with services that operate in the remote control modality, such as: large imaging diagnostic groups and companies operating with an exclusive focus on teleoperation. There were 9 essay questions, using the Google Forms tool shown in figure 1 and interviews to better understand the processes and their risks. We invited five companies to participate in the study, four responded to the survey, all in January 2024.

CONCLUSIONS

We found that most of the security goals are applicable and that it is possible to implement them in services with remote control. The sensitivity and risk associated with effective communication are highlighted, with different strategies being addressed to ensure stability, security and quality in data traffic. We see an opportunity for greater regulation for licensing with health surveillance, CNES and the development of specific standards for accreditation of this type of service. Despite observing implemented protocols that ensure the quality of care provided to patients, there is still room for improvement in processes when we talk about patient safety.

RESULTS

Patient identification: We realized that services with an implemented quality system can demonstrate an implemented patient identification protocol, carried out by both local and remote nursing teams. **Effective communication:** In the interviews we found that the communication goal is of greater risk. Different strategies are used to maintain stability, security and quality in data traffic between services, ranging from geographic feasibility analysis, energy and internet stability history and different providers of these services, thinking mainly about structural and climatic interference. They all have a robust contingency structure ensuring the continuity of services provided. Regarding communication between the local team and the command center, we observed the use of tools such as: integrated systems with the availability of documents related to pre- and intra-exam assistance, voice command, cameras and chat. **Safe medication administration:** The services understand that the medication chain and medical prescription, administration of medications and contrasts and patient discharge is the responsibility of the local care team. **Hand hygiene and fall prevention** also do not apply to remote control, but as it is a concern for everyone in healthcare, it is part of the training to integrate new services. **Safe Procedure:** Ensuring the correct laterality of the examination, the medical order, questionnaire and patient positioning are checked. Among the safety barriers implemented, attention was drawn to the use of a laterality button available inside the examination room so that the patient can indicate right or left while being involved in safe care. **Safety when using technology:** Between the client and supplier there is a need for adequate technology for remote control operation and monitoring of maintenance, quality control and equipment availability time.



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<https://www.gehealthcare.com.br/products/command-center-imaging-tile>

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