



Project Award Number 2025814 - Planning for the future work of telerobotic healthcare

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Background

- Telerobotic operations have the potential to bring specialty surgical healthcare to rural and underserved regions
- Important questions remain regarding the safe implementation of telerobotic surgery in rural community hospital settings.

Objective

- Pilot study to explore remote surgery in a rural community hospital setting using a novel telerobotic catheter ablation platform.

Methods

- A portable pre-clinical telerobotic catheter ablation system was assembled from commercial-grade product vendors.
- We carried out eight simulations with a surgeon in Chicago, IL and an OR Team in Ocean Beach Hospital, a rural community hospital in Ilwaco, WA.
- Two ethnographers recorded each simulation and conducted semi-structured interviews

Results

- Interviews and audio/video recordings suggest that rural hospital OR teams can readily adapt to the telesurgery context.
- Communication and emergency management were significantly impacted during simulated network failure with loss of contact with the remote operator.
- The need for more formal education and training sessions were highlighted by participants

Chicago, IL



Remote Operator

Ilwaco, WA



Telerobotic System

Simulated Patient

Conclusion

- We demonstrate a system and methods for the study of specialty telerobotic surgery in a rural hospital OR setting
- Future studies should address issues of implementation, education, and training for remote operators and rural operating room staff