

The Feasibility of the Use of Video Capture, Feedback Process in the Obstetrics and Gynecology Residents

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The feasibility of the use of a VideoCapture, feedback process in the surgical training of obstetrics and gynecology residents

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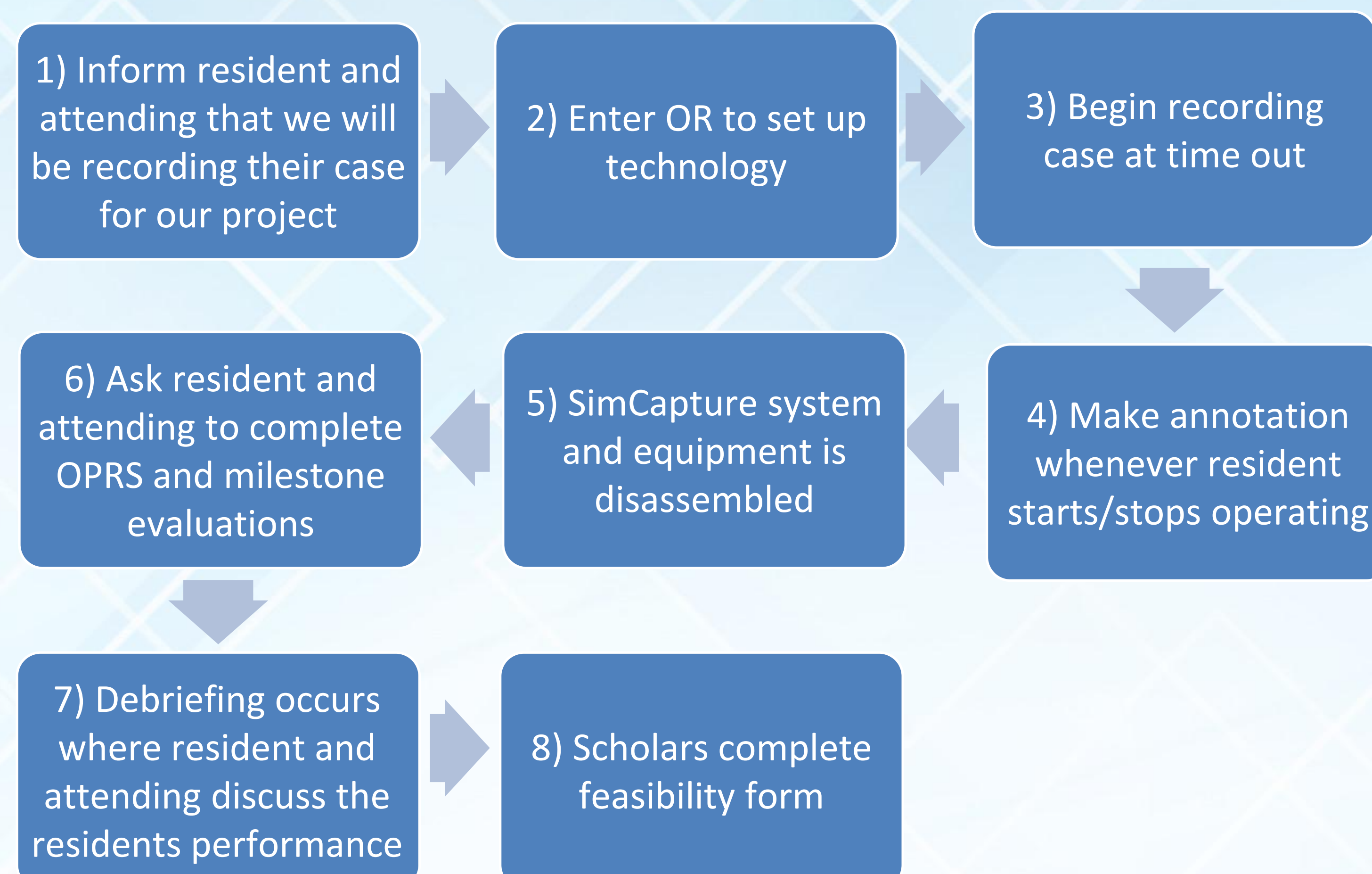
Background

- Operative training and technical skills are important in OBGYN residency training to assure residents can operate independently and to assure patient safety⁽³⁾
- Previous models to assure competency in the operating room have included simulation training, tallying case numbers, and peer evaluation none of which have been well validated.
- Video capture technology offers opportunity to better and more objectively monitor and assess surgical performance, and perhaps predict patient outcomes⁽²⁾
- Use of Videocapture footage may improve the technical skill of residents through external feedback channels and as a tool for self-assessment
- Our primary goal was to assess the feasibility of SimCapture® system as a method of recording and assessing surgical performance of residents

Methods

- Protocol reviewed by IRB and considered exempt as educational protocol
- Video captured resident surgical performance and as primary surgeons for various procedures in OBGYN over 6 week period.
- Oriented to the use of SimCapture.....
 - Industry review of the technology and capabilities
 - Piloted the technology and process in the Simulation Lab using high fidelity simulators (Symbionix, Mimic)
 - Proctored cases in OR with investigating attendings
 - Independently recorded cases in OR using video capture, feedback process (see figure 1)

Figure 1: Video capture feedback process



Results

Figure 2: Number of cases recorded for each procedure

Procedure	Number of cases recorded
Hysteroscopy	11
Robotic Hysterectomy	8
C section	17
BTL	3
Total	39

Figure 4: Reasons for not recording cases we planned on (25 cases)

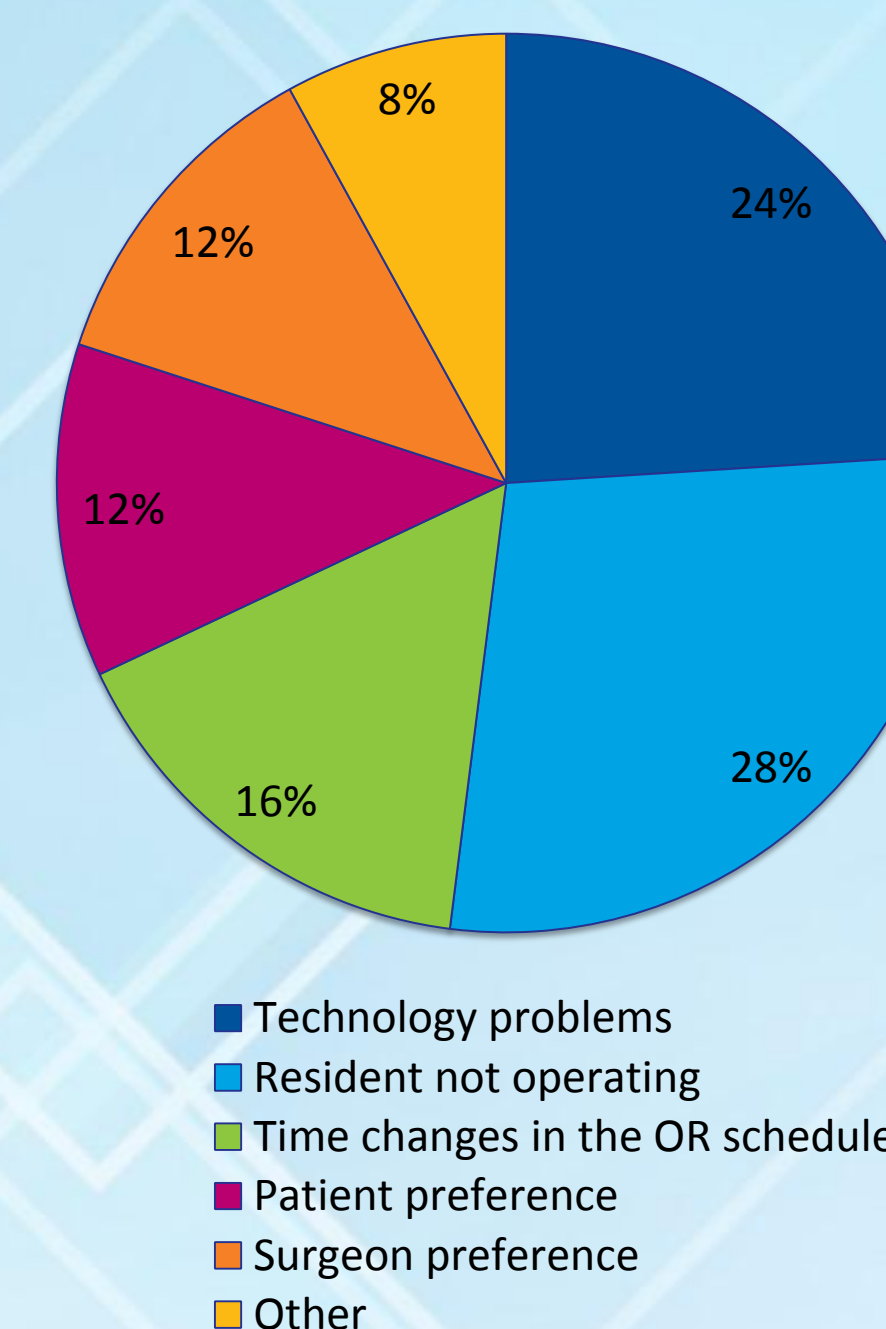


Figure 6: Summary of feasibility form results (see figure 4)

Average time to set up equipment	5.7 min
Average time to disassemble equipment	3.2 min
Average time to debrief	3.6 min
Percent of cases where debrief occurred	61%
Percent of cases where resident was receptive to process	97%
Percent of cases where attending was receptive to process	95%
Percent of cases where OR staff was receptive to process	97%

Figure 3: Percentage of cases we recorded

Recorded	Missed	Total	Percent Recorded
39	25	64	61%

Figure 5: Feasibility form

Student Feedback and Feasibility Survey
Case MR # _____

1. Time to set up for the case? _____ Minutes
2. Time to deconstruct after the case _____ Minutes
3. Time taken for debriefing process _____ Minutes

4. Did debriefing occur? Yes ☐ No ☐

5. ...If not why: _____

6. Was the resident surgeon receptive to the SimCapture process and protocol?
Yes ☐ No ☐ Unsure ☐
Comment: _____

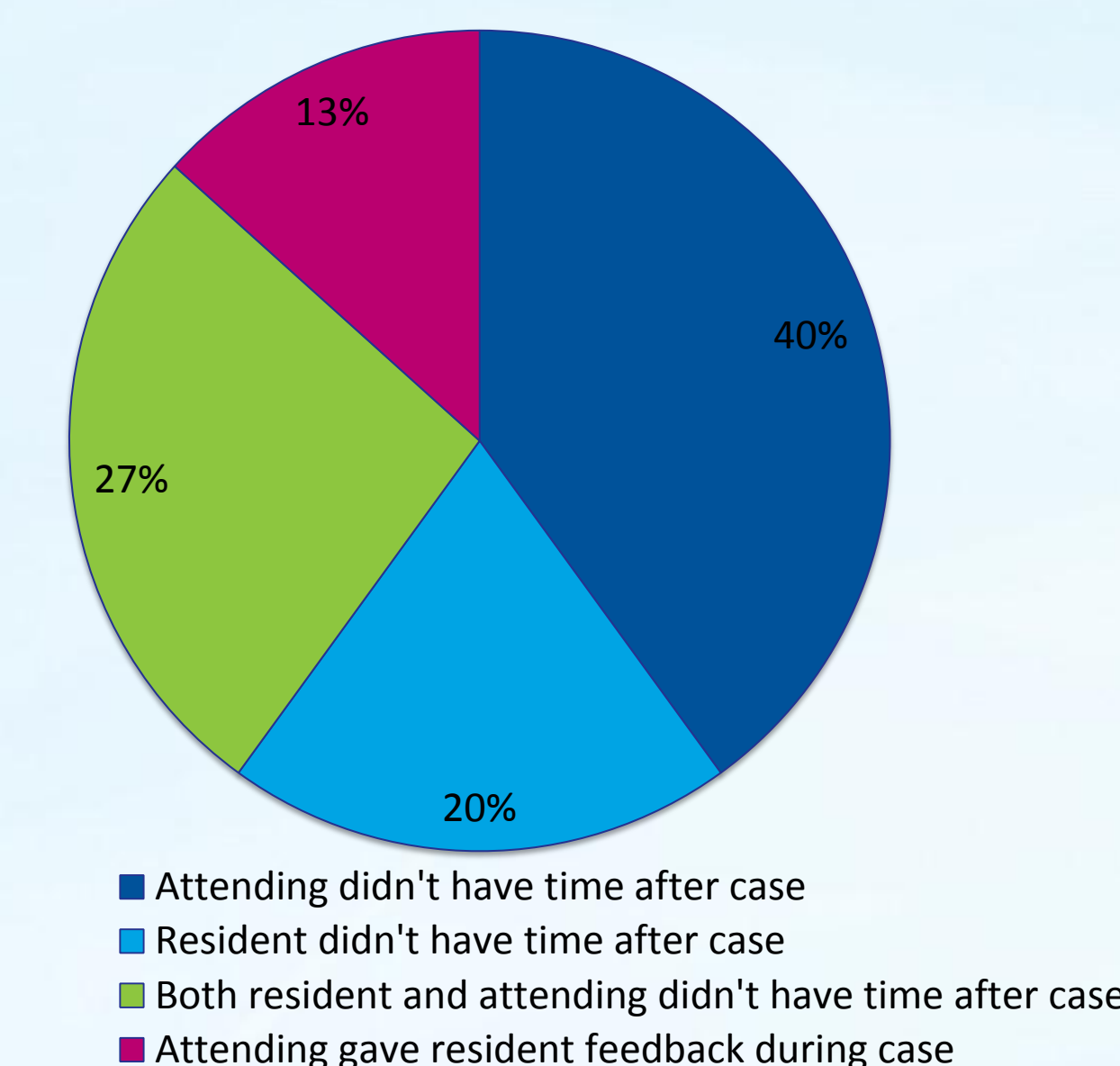
7. Was the Attending surgeon receptive to the SimCapture process and protocol?
Yes ☐ No ☐ Unsure ☐
Comment: _____

8. Was the operative and surgical staff receptive to the SimCapture process and protocol?
Yes ☐ No ☐ Unsure ☐
Comment: _____

9. Any unforeseen issues during the case or concerns? _____

10. Was all of the required documentation completed at the completion of the procedure?
☐ Milestone Evaluation (Resident)
☐ Milestone Evaluation (Attending)
☐ OPRS Evaluation (Resident)
☐ OPRS Evaluation (Attending)
☐ Debriefing regarding the case (Resident and Attending)

Figure 7: Reasons for debrief not occurring (15 cases)



Conclusion

- Process was feasible and well accepted**
 - Improved efficiency with experience and over time
 - Increased acceptance of surgeons and staff over time
 - Effective tool to record both endoscopic and open cases
 - Created video capture files able to be sent and evaluated by blinded experts
- Obstacles included**
 - Technology (missing components to system,
 - Last minute alterations in surgical schedules
 - Residents not operating as primary surgeon
 - Resident and attending not having time to debrief
- Positive responses from staff**
 - nurses welcoming (eg. adjusting camera for team...)
 - Resident asking to see video's of their performance and video being used to provide feedback at point of care and during debrief/feedback sessions
- Innovations necessary to make process more effective**
 - Attaching camera to IV pole
 - Need methods of better assessing vaginal surgical cases

Figure 8: SimCapture system set up for Robotic Hysterectomy

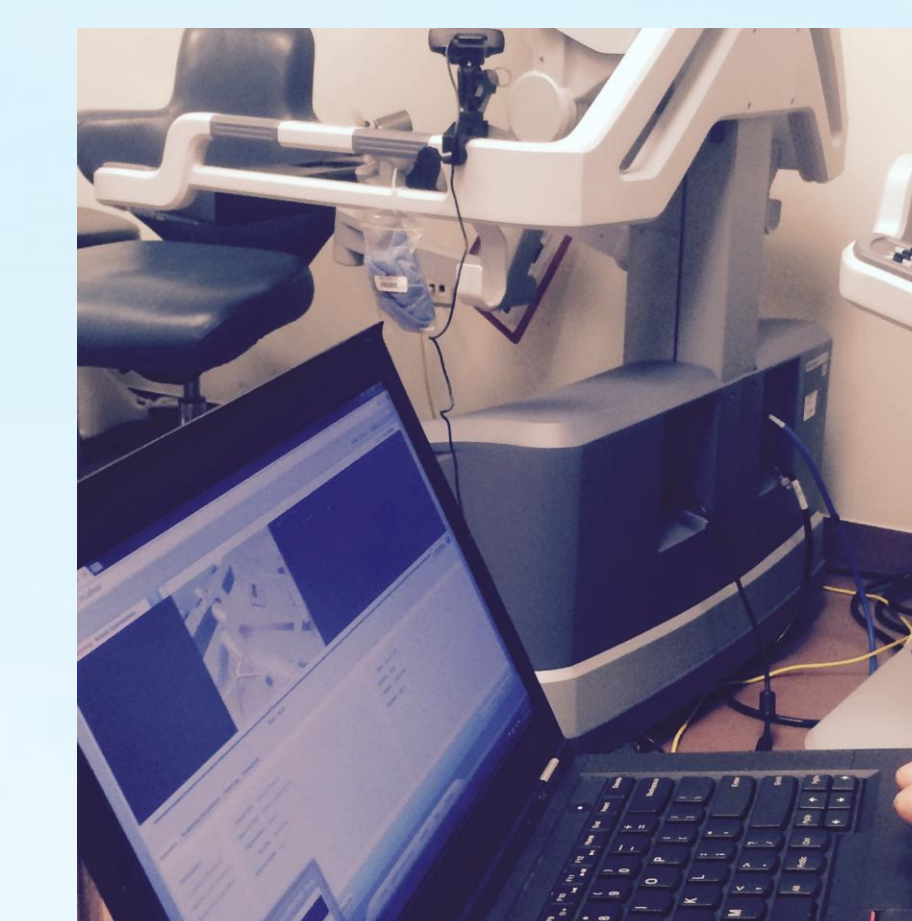


Figure 9: SimCapture system



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