MP47-12 Correlating Simulator and Live Robotic Surgical Performance Using Biometrics, Simulator Metrics and Automated Performance Metrics

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Background / Materials and Methods

Expert and novice surgeons performed a vesicourethral anastomosis in two different training environments.

Objectives

• To determine which metrics in the dry lab and simulator environments can distinguish expert from novice performance.

• To determine which metrics correlate between dry lab and simulator environments.

Expert and novice surgeons performed a vesicourethral anastomosis in two different training environments.
Results and Conclusions

Which **Metrics** Determine Expert v. Novice?

**Simulation**
- 5/23 Metrics*
  - Cognitive Workload

**Dry Lab**
- 15/23 Metrics*
  - Cognitive Workload
  - Heart Rate Variability

*\( p < 0.05 \)

Which **Metrics** Correlate Across **Simulator** and **Dry Lab**?

**8/10 Directly Comparable Metrics**

\[ 0.554 \leq \rho \leq 0.927 \]