

Quantitative Echocardiography Improves Resident Assessment of LV Systolic Function

POCUS was introduced into the Anesthesiology Milestones Project by ACGME and will be tested on the ABA OSCE

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Where Do We Stand?

The clinical application of POCUS has increased in the perioperative period.

Implementation of an ultrasound curriculum however remains **unstandardized** across Anesthesiology residency programs.

The Goal of the Study

Evaluate the feasibility and impact of teaching senior residents **quantitative** methods for estimating LV ejection fraction

POCUS Views Assessed

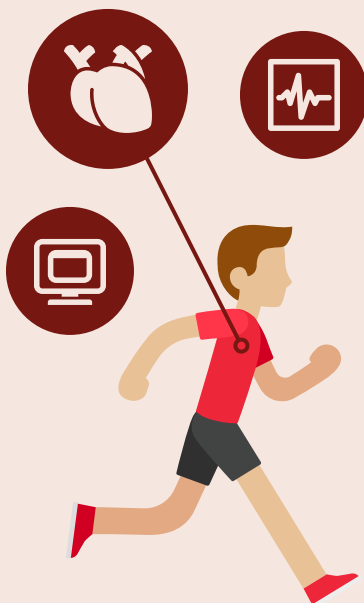
Parasternal Long-Axis

Apical Four-Chamber

Parasternal Short-Axis

Apical Two-Chamber

Quantifying the Outcomes



The Grand Design

- Control: visual estimation only
- Intervention: visual estimation + Simpson's biplane method of discs
- Both groups were given a pre-teaching exam and were taught 4 POCUS views
- Post-teaching exam administered in one month
- Retention exam then followed four weeks later

Results

- **Intervention group** was **more accurate** in evaluating ejection fraction
- No difference in longterm retention between groups

Conclusions

Quantitative measures help residents calibrate their eyes. Clinical utility of POCUS will only continue to expand.

Frequent practice is required for durable learning