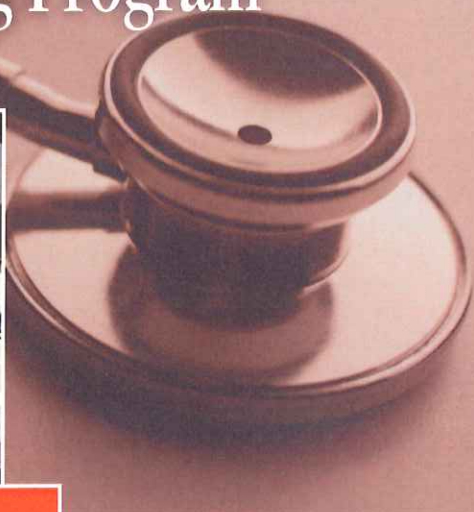


# Invasive Bedside Procedural Training Program



UNIVERSITY OF MIAMI MILLER SCHOOL OF MEDICINE  
JACKSON MEMORIAL HOSPITAL

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**CENTER FOR PATIENT SAFETY**



In July of 2007, the internal medicine training program developed and implemented a novel paradigm of invasive bedside procedural education at Jackson Memorial Hospital in Miami, Florida. Procedures include those more commonly performed by our house staff, namely, paracentesis, lumbar puncture, thoracentesis, central venous catheter insertion, and temporary hemodialysis catheter placement.

This initiative sought to address the shortcomings in the historical apprenticeship method of learning, better known as “see one, do one, teach one.” Incorporating feedback from graduating house staff, a formal simulation-based “Twelve-Step” curriculum was developed.

## TWELVE-STEP CURRICULUM

- 1** Introduction of program and of participant roles, responsibilities, and expectations
- 2** Written pre-instruction test; no feedback or coaching
- 3** Video instruction of procedure
- 4** Informed consent overview
- 5** Aseptic technique review
- 6** “Time-out” process briefing
- 7** Faculty demonstration of procedure using checklist; interactive with feedback
- 8** Individual practice; interactive with feedback
- 9** Procedural documentation summary
- 10** Written post-instruction test; answers reviewed at completion
- 11** Simulation-based skills-check; assessment via procedural checklist; feedback at completion
- 12** Written procedural module evaluation

Once the training is complete, the participants become the procedure team. Contacted through a hospital-issued beeper, they can be called by any other service to perform any of the procedures for which they were trained. They are assigned a dedicated mobile ultrasound machine, use the identical checklists at the bedside, and are supervised 100% of the time by a hospital medicine attending. The supervisor uses the critical item checklist to perform a bedside assessment of the operator, as well as record a subjective evaluation of the operator’s technical capability and confidence on a 5-point scale. The operator then completes a similar self-assessment using the same scale and can compare his/her own “grade” with that of the supervisor. We have identified a method of determining procedural competency, using these multiple assessments.

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Since its implementation, the rotation has consistently ranked among the highest points of the residency program, garnering universally positive feedback. The demand for the team-based experience has transcended internal medicine and we now field requests from medical students at other universities and house staff from a variety of internal and external departments. Indeed, our training component can be separated from the experiential rotation. As of June 2012, we have trained more than 1100 people, within and outside of our home institution, in a range of fields.

The training is now a mandatory component of our own internal medicine residency as well as other training programs. The team has been consulted more than 5500 times by some 30+ services. Our high record of success and low complication rates best most national data reported.

Further, aside from training residents in emergency medicine, general surgery, and internal medicine at Mount Sinai Medical Center in Miami Beach, we have already exported our program, or served as consultant, to a number of outside institutions:

- Christiana Care Health System (DE)
- Exempla St. Joseph (CO)
- Hospital of St. Raphael (CT)
- Medical College of Wisconsin (WI)
- North Florida Veterans Administration Medical Center (FL)
- University of Louisville (KY)
- University of Minnesota (MN)
- University of Texas Health Science Center at San Antonio (TX)

In light of our success, we received a \$600,000 grant from the Florida Medical Malpractice Joint Underwriting Association to demonstrate how our central venous catheter training can reduce bloodstream infections.





Our medical director, Dr. Joshua Lenchus, has presented the program and findings at institutions across the country. Our work has been showcased at numerous conferences, and published in peer-reviewed journals. We welcome the opportunity to highlight our program. This can be accomplished via email, conference call, site visit, and/or live presentation at a grand rounds-type venue. Further, we conduct train-the-trainer, and general training sessions at a fraction of the cost of other procedurally-oriented offerings, and can tailor such to your request. We thank you for your interest and welcome your inquiries.

## FOR FURTHER INFORMATION PLEASE CONTACT:

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