

The Emergency Department Regional Anesthesia Workstation

A Resident-Designed Educational Innovation to Eliminate Logistical Barriers to Ultrasound-Guided Regional Anesthesia

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Introduction / Opportunity Statement

Ultrasound-guided regional anesthesia (PENG, FICB, ESPB) provides targeted pain relief for common ED injuries.

ED providers at Community Medical Center spend significant time gathering supplies rather than executing on the procedure itself. By creating a mobile, standardized cart, clinicians can act on clinical need rather than logistical limitations and promote non-opioid pain management without procedure rooms or dedicated staff.

Our vision is to create a zero-cost mobile system adaptable to any emergency department to enable regional blocks as a first-line, opioid-sparing option for acute pain to promote non-opioid pain management without requiring procedure rooms or dedicated staff.

Team

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Plan

The workstation was piloted in July 2026 with EM residents.

Post-procedural feedback was solicited to assess usability and perceived barriers.

Time spent gathering supplies (1-2 hours), not technical skill.



Specific: Create and implement a Regional Anesthesia Workstation that centralizes all Ultrasound-Guided Regional Anesthesia (UGRA) supplies into a single cart.

Measurable: Survey participating residents to evaluate the reduction of logistical barriers.

Achievable: Build the workstation from an unused cart using only existing hospital inventory.

Relevant: Address the primary cited barrier to UGRA adoption (time and supply dispersion) to support opioid stewardship and pain management.

Time-bound: Complete implementation during regularly scheduled educational ultrasound shifts.

Do



Design: Resident-designed, mobile Cart using only existing resources.

Intervention: Centralized all supplies for common ED blocks into a single, labeled cart.

Training: Short, scenario-based training provided.

Maintenance: Restocking checklist completed after each use.

Outcome measured: Time from decision to perform block to start of procedure (setup time).

DRAWER 1	DRAWER 2	DRAWER 3	DRAWER 4
Bupivacaine	IV catheters	Gloves	Echogenic needles
Lidocaine	IV start kit	Syringes (3-50 mL)	Tuohy needles
Ropivacaine	Tegaderm	Needles (18G-30G)	Probe covers
Intralipid	Saline flushes	Lubricant	Chloraprep
Medication labels	Stopcocks / Saline	Filter straw	Drape/towels

Check

Metric	Result
Reduced logistical barriers	☑ 100%
Competency checklist	☑ 100%
Setup time	>60 min → <5 min
Sustained clinical use	☑ Active

Act

The ED Regional Anesthesia Cart is a **practical, immediately implementable** solution

Inexpensive & scalable

Adapt workstation model for other ED procedures