# Aligning Training With Operational Demand: A Study of Call-Type Frequency & Training Coverage in GEMRU

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## Abstract

The Gator Emergency Medical Response Unit (GEMRU), the University of Florida's collegiate EMS organization, is responsible for delivering rapid prehospital care to diverse medical emergencies across campus. Responder preparedness is essential for ensuring the delivery of high-quality care and is closely linked to the curriculum within GEMRU's training division. Within GEMRU, the extent to which training reflects the frequency of call-types encountered by responders has not been evaluated previously. To assess alignment between training emphasis and call-type frequency, this study systematically compared the frequency of call-types received to their emphasis in unit training within the same time period.

Run logs of calls that occurred from 9/1/2023-12/6/2025 were analyzed and categorized as one of the following: Traumatic Injuries, Overdose/Intoxication, Respiratory, Abdominal Pain, Altered Mental Status, Psychiatric, Cardiac, Diabetic Emergency, Sick Person, Allergic Reaction, Other. Each training session within that time period was evaluated on its representation of each call category using a three-point scale: 0 (not covered), 1 (didactic-only content), 2 (didactic and hands-on skills training). Didactic-only content includes lecture or reading-based content, and full-coverage (2) requires integration of didactic instruction and hands-on skills. A total of 506 distinct training-call-type pairings were evaluated, and percentages of call-type frequency and training coverage were cross-compared to evaluate alignment.

Traumatic Injuries accounted for the highest proportion of calls (36.34%), followed by Overdose/Intoxication (24.26%), then Altered Mental Status (13.20%). Training emphasis was concentrated in Respiratory (30.43%), followed by Traumatic Injuries (28.26%) and Altered Mental Status (28.26%). Of the 506 training-call intersections, only 6 received a score of 2, highlighting the need for integrated didactic and hands-on training within GEMRU's curriculum. These results indicate a significant discrepancy between call burden and training curriculum, emphasizing high-acuity calls over high-frequency calls.

## Methods

### Phase 1: GEMRU Call Log Categorization

- **Sample:** GEMRU run-logs from September 2023-December 2025 (n=976 calls)
- **Method:** Categorized each call into one of eleven standardized clinical call-type groups.
- **Output:** Standardized dataset of call-type frequency.

### Phase 2: Training Curriculum Analysis

- **Sample:** All GEMRU training sessions conducted within the same period (n=46).
- **Method:** Each training session was scored on coverage of each call-type category using a three-point scale:
  - 0=not covered, 1=didactic-only content, 2=didactic plus hands-on skills training
- **Output:** Standardized training coverage matrix across call-type categories

### Phase 3: Data Alignment Analysis

- **Method:** Call-type frequency percentages were cross-compared with training coverage percentages to assess curriculum alignment.
- **Output:** Identification of over- and under-represented call-types within GEMRU training curriculum.

## Results

***Training emphasis was compared directly to call-type frequency across all GEMRU clinical categories.***

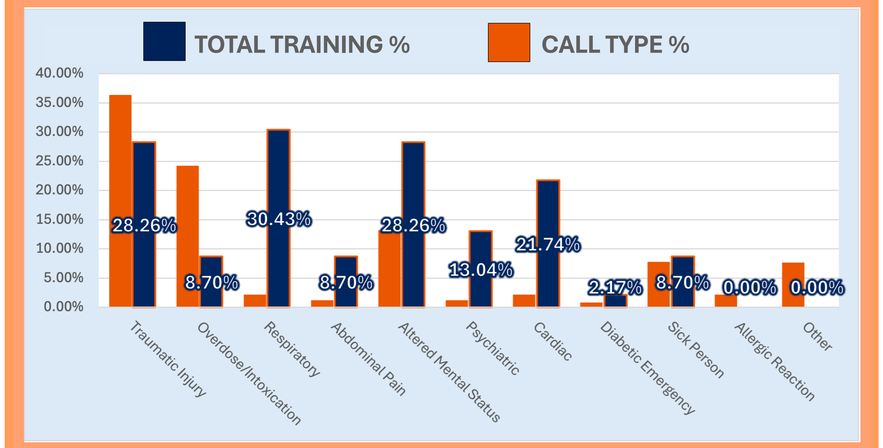


**Figure 1:** Alignment Between Call Type Frequency and Call Type Emphasis in Total Training Frequency ***(Sep 2023-Dec 2025)***

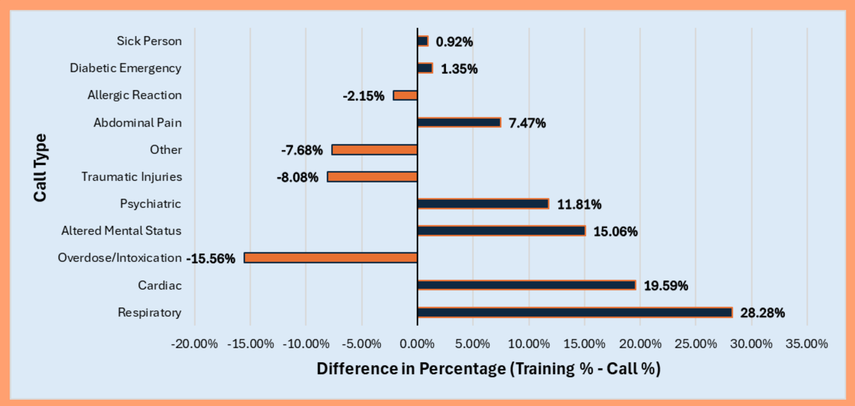


**Figure 2:** Mismatch Between Training Emphasis and Call Frequency by Call Type

***Positive values indicate overtraining; Negative values indicate undertraining***

## References

Gator Emergency Medical Response Unit (GEMRU). (2023–2025). *Training records and operational call-log database.* University of Florida.

## Discussion/Conclusion

Four call-type categories were identified as being insufficiently emphasized in GEMRU training sessions, and seven call-type categories received disproportionately high training emphasis. Traumatic Injuries and Overdose/Intoxication were the most frequent call-type occurrences, yet GEMRU trainings underrepresented these call types by 8.08% and 15.56%, respectively. Allergic Reaction call types were also underrepresented. The underrepresentation of high-frequency call types alongside an overrepresentation of low-frequency call types demonstrates the disproportionate focus on select high-acuity topics in training sessions.

Additionally, a gap in practical responder preparedness was observed due to limited incorporation of hands-on skills in training sessions. Of the 506 training-call intersections, only six training sessions achieved full coverage (score of 2) for any call-type category, meaning they consisted of didactic and hands-on skills training for that specific category.

The analysis demonstrates a clear misalignment between the distribution of call-types encountered by GEMRU and the emphasis placed on those call-types within the training curriculum. A data-driven restructuring of training priorities through integration of didactic and skills-based training would better reflect the environment-specific call types to ease call burden and increase responder preparedness.

## Future Aims

1. **Data-Driven Training Curriculum:** Develop a standardized training curriculum that:
   - Re-analyzes run-log data annually
   - Emphasizes high-frequency call-types with hands-on skill integration
   - Identifies emerging trends in call-type patterns
2. **Evaluate Training Effectiveness Post-Intervention:**
   Following the implementation of a data-driven training curriculum:
   - Re-analyze call-type coverage
   - Evaluate responder preparedness and confidence during:
     - GEMRU call performance
     - Skills proficiency assessments
     - Scenario-based evaluations

## Contact

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