

# **National Implementation of a Prehospital Stroke Training Program in Mexico and its Impact on Healthcare Providers Knowledge and Self-Confidence**

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## **Introduction:**

Training is essential in preparing healthcare providers for stroke recognition and its timely management. In a collaborative effort, the University of Miami Gordon Center for Research in Medical Education (GCRME) and the Mexican Red Cross (MRC) adapted the Advanced Stroke Life Support (ASLS) curriculum and conducted instructor trainings for the purpose of national implementation by the MRC. The MRC is composed of personnel from diverse backgrounds, 70% of whom are volunteers, (25,714 are EMT-B (Basic), 145 EMT-I (Intermediate) and 36 EMT-P (Paramedic)).

## **Purpose**

Determine the impact of implementing a 1-day stroke course (ASLS) on learner knowledge acquisition and self-confidence.

## **Methods**

The GCRME and MRC translated and adapted ASLS course materials prior to its implementation in Mexico. ASLS classes covered topics on stroke recognition, stroke syndromes and mimics, stroke scales (Cincinnati Prehospital Stroke Scale (CPSS), Miami Emergency Neurological Deficit (MEND) Examination & NIH Stroke Scale), prehospital management and effective communication of findings. These topics were covered in 2.5 hours of didactic instruction and 5.5 hours of interactive case-based scenarios, videos and standardized patient sessions. 163 healthcare providers (112 EMT-B, 8 EMT-I, 7 EMT-P, 8 RN/other & 28 MD) participated in 6 classes from February 2010 to March 2011. We measured cognitive outcomes using previously validated precourse and postcourse assessments. Self-confidence was evaluated using precourse and postcourse surveys [Likert scale (1-Not Confident to 5-Very Confident)] in 8 categories including recognizing acute stroke/TIA, identifying major stroke syndromes & mimics, performing a neurological assessment, recalling indications /contraindications of t-PA, and providing care to patients with stroke. Course evaluations were obtained to assess learner satisfaction with each course component. We performed statistical analysis using paired t-test for the assessments and Wilcoxon Signed-Rank Test for self-confidence questionnaires.

## **Results**

Learners significantly increased their knowledge precourse (mean 51%) to postcourse (mean 72.6%) ( $p < .0001$ ). Learner self-confidence significantly improved in all categories [precourse mean 3.3 (SD= 0.86), postcourse 4.8 (SD= 0.24)] ( $p < .0001$ ). Learner satisfaction with the course was very high with every component receiving an average of 4.8 out of 5.

## **Conclusion**

This first phase of national implementation was successful. All MRC healthcare providers had a significant improvement in their knowledge and self-confidence after participating in the course and were highly satisfied with it.