Accredited Paramedic Program Graduates Have Higher Student Ability Estimates
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Background: While institutional and program accreditation has long been required for
physician and nursing education, paramedic education program accreditation was largely
voluntary until recently. In 2013, the National Registry of EMTs (NREMT) began
requiring paramedic program accreditation through the Commission on Accreditation of
Allied Health Education Programs (CAAHEP) for eligibility to take the National
Paramedic Certification examination. A minimal amount of research exists regarding the
impact of paramedic program accreditation. Our objective was to assess the relationship
between paramedic program accreditation and student cognitive ability performance
measured through the National Paramedic Certification examination. We hypothesized
that students graduating from accredited paramedic programs would exhibit higher mean
ability estimate scores than graduates of non-accredited programs.

Methods: National Paramedic Certification cognitive examination results for 2012
graduates of paramedic programs were analyzed. Students’ first-attempt cognitive mean
ability estimates (MAE) were calculated using Rasch logit ability measures. Content area
MAE were assessed for: 1) Airway/respiration/ventilation, 2) Cardiology/resuscitation, 3)
Trauma, 4) Medical/obstetrics/ gynecology, and 5) EMS operations. MAE of graduates
from accredited versus non-accredited paramedic programs were analyzed. Descriptive
and comparative statistics were calculated. Significance was evaluated using two-sample
t tests.

Results: In 2012, 8,404 paramedic program graduates attempted the National Paramedic
Certification cognitive examination. Most graduated from accredited programs (87%, n =
7,317) while 13% (n = 1,087) attended non-accredited programs. First-attempt MAE for
all paramedic students was 511. The first-attempt MAE of paramedic students graduating
from accredited programs was significantly higher than that of students from non-
accredited programs (514 vs.488, p < 0.001). Paramedic students from accredited
programs demonstrated significantly higher cognitive ability in
medical/obstetrics/gynecology (526 vs. 488, p < 0.001), trauma (535 vs. 502, p < 0.001),
airway/respiration/ventilation (525 vs. 495, p < 0.001), cardiology/resuscitation (512 vs.
487, p < 0.001). No differences were observed in MAE between accredited and non-
accredited program graduates for the content area of EMS operations (514 vs. 514, p = 0.94).

**Conclusion:** Students graduating from accredited paramedic programs exhibited significantly higher first-attempt MAE scores overall, and across all content areas with the exception of EMS operations compared to nonaccredited graduates. Program accreditation is associated with paramedics who perform above the entry-level competency standard to perform safe and effective prehospital care.