

Student Learning Outcomes Fall 2012 EMS 153 – Pharmacology Evidence

1. Briefly summarize the Student Learning Outcome assessed, and the method used to assess it.
The paramedic student will apply knowledge to analysis of specific problems. This SLO was measured by a written final examination question #65. The question was scenario driven giving the student a patient with multiple problems. The student was expected to use their understanding of pharmacology and physiology to assess and determine the most effective treatment for the patient. The patient presents to prehospital care advanced life support with an electrolyte disturbance as hypo-magnesium combined with other life threatening conditions. The student was expected to treat both the electrolyte imbalance and give primary antiarrhythmia medications following the American Heart Association emergency cardiac care guidelines for pulseless arrest algorithm.
2. Describe the kind of evidence that you collected to evaluate student learning as stated by the outcome. Is the data adequate for making observations and/or conclusions?
A total of twenty-two (22) students completed the test instrument, and eleven (11) successfully completed the measure as expected. Eleven (11) students did not correctly select the therapy as suggested by the emergency care guidelines. The pass rate for this tool was just fifty percent (50%). In past analysis the medical director was in agreement that the item was a consistent, valid and reliable measure of the emergency cardiac care standards. Further, the medical director agreed that the combination of medical issues in the outcome instrument was a realistic and common occurrence in the prehospital setting. Given the summative input the data and measure are effective for conclusions and other explorations.
3. Has all evidence been collected and documented? Are there any data missing or incomplete? Are there samples of evidence available?
All evidence has been collected and analyzed. There is no missing or incomplete data. Samples of the instrument can be located in the course file in OE 125. A copy of this narrative has also been provided to the paramedic program director and college research process.
4. Looking at the results, how many students met or exceeded the stated outcome, based on the evidence present? What observations or explanations can you attribute this result to?
The data is included in the response to question 2. The outcomes not as expected and do not reflect the standards expected in the industry. These data show an inconsistent process over past evaluation cycles. This creates a new [problem that needs further discussion for this specific tool.
5. How many students performed below the stated outcome, based on the evidence present? What observations or explanations can you attribute this result to?

Eleven students (n=11) did not correctly answer the question. No change or modification is this instrument. However, these students who were incorrect in the response treated the patients with deterministic methods rather than fully understanding the underlying pathology or the basic principles of pharmacology. The students treated the patient with inappropriate therapy not consistent with the standards of care. Time should be devoted to discussion in pharmacology and with the skills component of the classes.

6. Were there students who were not assessed? What was the reason(s) for students who were not assessed? Are the numbers of non-assessed students a significant factor in the overall success of the course or program being assessed?

One hundred (100%) percent of the students were assessed.

7. What overall observations do you have about the results? Are there significant patterns or trends in the data?

An inconsistent trend was documented and there is now a need to continue with this learning outcome. A new cycle of assessment, revise, and reassess is appropriate. This measure had multiple sources of input and medical director assessment. The additional time added to the instructional lesson on patients with multiple disease processes and the treatment heuristic and options within the emergency cardiac care guidelines did not demonstrate a consistent outcome across all data sets. Additionally, increased lesson time dedicated to the stochastic patient in pharmacology and skills appears to be necessary for the students.

8. Based on your findings, what worked well in your course or program, as reflected by the data?

The students who demonstrated success on this measure showed that multiple physiologies can logically be treated according to the descriptive rather than prescriptive guidelines.

9. Based on your findings, what changes do you believe are necessary to improve student learning?

Continued instructional time on patients with multiple disease processes and the treatment heuristic and options within the emergency cardiac care guidelines is a standard process. Repeat the test (SLO). Evaluate with a cross communication with skills is important and assess in paramedic program #81.

10. What kinds of learning evidence would help you make better, more precise observations? What would you change or modify in your assessment approach?

Continue to strengthen the discussion of multiple influences on the patient and treatment heuristics and implement a new student learning outcome.