

## INTRODUCTION

Simulation-based scenarios are designed based upon needs to accomplish learning and assessment objectives. Decisions that impact the scenario design often involve careful consideration of the intended audience, available equipment, environments as well as the fidelity available to recreate the situation.

There is little objective data to help with decision making regarding the environmental fidelity (physical surroundings) as well as selection of simulation equipment that should be included in simulation programs. We describe the perceptions of realism and value of practicing paramedics who participated in a simulation based program focusing on difficult airway management.

## METHODS

Post-course evaluation survey instrument

Advance Prehospital Airway Management (APAM)

University-based academic simulation center from July 2007 through December 2008.

### Program Design

Asynchronous web-based review prior to Sim Lab On-Site Day (about 4 hours of content)

Scheduled program in a simulation center with various components (Figure 1) (about 8 hours)

Faculty : Student Ratio 1:3; 12 students per class

Simulation scenarios were pre-programmed into the simulators

Facilitators had all completed a dedicated training program specific for the program.

## METHODS

The simulation scenarios were based on actual difficult airway cases that occurred in the field and were pre-programmed into the simulators

At the beginning of each scenario the team leader was handed a scenario card that indicated the scenario, setting and available resources as well as approximate distance from a hospital.

Simulations utilized the SimMan® high fidelity patient simulator which collects data on simulator physiologic status as well as automated checklist information, and pre-scripted comments entered by the facilitator into a time-stamped log file.

Participants completed a post-course web-based evaluation tool consisting of Likert style inquiry and the ability to enter free text responses

The simulation center rooms were generic, with basic equipment such as oxygen connections, suction and basic airway equipment and a high fidelity patient simulator monitor screen. There were no other props, pictures, videos or environmental stimulus to portray a prehospital environment.

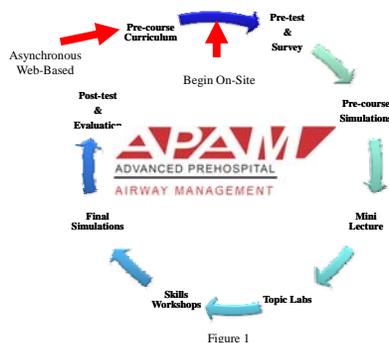


Figure 1

## RESULTS

356 participants, Median Experience was 10 years (range: 1-34)

334 (94%) completed the on-line post course evaluation

999 Free Text Comments

142 Coded to Regard Scenarios and Course Design

26 Generally positive

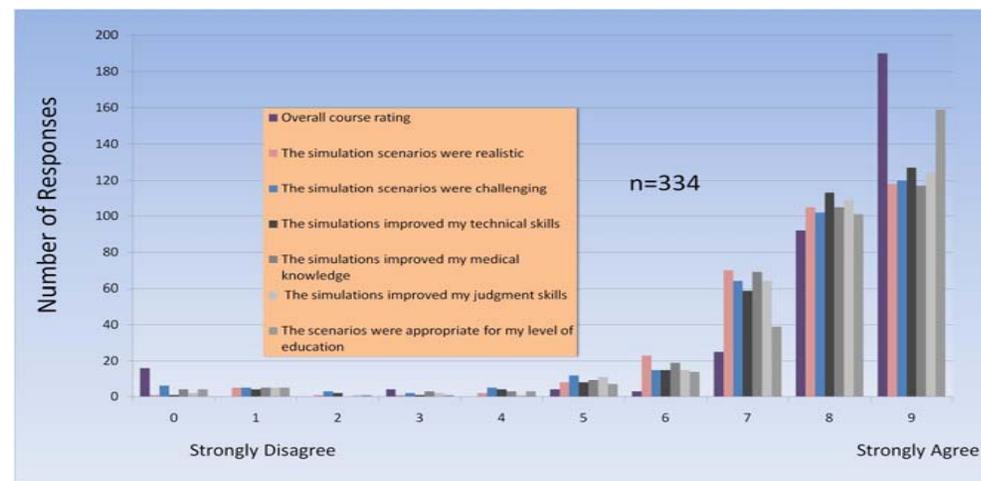
26 Requested Longer Scenarios

27 Reflected Positive on Simulator

Equipment

63 Reflected Positive on "hands-on" Design of Program

Applicable Likert Items	% (7-9)
Scenario Realism	88
Level of Challenge	86
Improving of technical skills	90
Improvement of medical knowledge	87
Improving Judgment	89
Appropriate for Level of Education	90



## CONCLUSIONS

Difficult airway management scenarios conducted as part of an organized program were extremely well received by a significant majority of practicing paramedic participants with a wide range of experience

The overwhelming majority of their participants indicate the scenarios were highly realistic, relevant and of value to their profession.

Well designed simulation programs that focus on learning and assessment objectives may be able to be conducted without extensive manipulations of the physical environment.