

# Disaster Medicine Curriculum: Determining a Need

Kaylee de Tranaltes MS4, LB Burnett MD,  
 University of Arizona College of Medicine - Phoenix

## Introduction

Recent terrorist attacks, natural disasters, and mass casualty incidents have made clear the need for properly trained healthcare personnel. Hospitals nationwide have protocols that they follow in the event of a disaster, and all doctors, nurses, and other staff are called to help. Whether or not medical schools require their students to participate in any disaster medicine curriculum, and whether it is beneficial, is currently under review in the medical curriculum.

## Research Question

Do fourth year medical students in the state of Arizona feel adequately prepared to respond to a mass casualty disaster?

## Materials and Methods

We created a digital questionnaire that first assessed the background of the medical student answering the questions. The second part of the survey aimed to assess the comfort level of the medical student with disaster medicine, using a 5-point Likert response scale. The questionnaire was designed through Qualtrics and a link to the questionnaire was distributed to 4th year medical students using the school's listservs. The survey was distributed to 4th year medical students in March 2018 and March 2019.

## Results

The survey was given to a total of 160 students with 51 students responding, making the response rate 32%. Prior to medical school starting, only 17% (9) of respondents had exposure to disaster medicine. During medical school, 78% (40) of respondents answered that they had training in disaster medicine, with 51% (26) of respondents answering that this was part of a required curriculum.

Outcomes	No (n=42)	Yes (n=9)	P-value
Do you feel prepared to triage patients during a mass casualty disaster? (n, %)	3.28 (1.13)	3.77 (0.97)	0.25
Do you feel prepared to treat patients during a mass casualty disaster? (n, %)	3.24 (1.03)	3.22 (1.20)	0.82
Do you feel that medical school has adequately prepared you in disaster medicine? (n,%)	4.00 (1.68)	3.22 (1.20)	0.16
The degree to which medical school has adequately prepared me for disaster medicine is:	3.91 (1.74)	3.00 (1.32)	0.18
Do you wish there was more mandatory training in disaster medicine in the medical school curriculum?	2.85 (1.00)	2.78 (0.83)	0.64

Table 1: Pre-medical exposure vs. no pre-medical exposure to disaster medicine (Wilcoxon rank-sum to compare Likert scales, presented as mean and standard deviation (within parentheses))

Outcomes	No (n=11)	Yes (n=40)	P-value
Do you feel prepared to triage patients during a mass casualty disaster? (n, %)	2.54 (1.03)	3.60 (1.03)	0.006
Do you feel prepared to treat patients during a mass casualty disaster? (n, %)	2.45 (1.13)	3.45 (0.93)	0.009
Do you feel that medical school has adequately prepared you in disaster medicine? (n,%)	2.72 (1.34)	4.17 (1.56)	0.01
The degree to which medical school has adequately prepared me for disaster medicine is:	2.72 (1.34)	4.03 (1.68)	0.04
Do you wish there was more mandatory training in disaster medicine in the medical school curriculum?	2.36 (1.03)	2.97 (0.92)	0.06

Table 2: Medical school exposure vs medical school non-exposure to disaster medicine (Wilcoxon rank-sum to compare Likert scales, presented as mean and standard deviation (within parentheses))

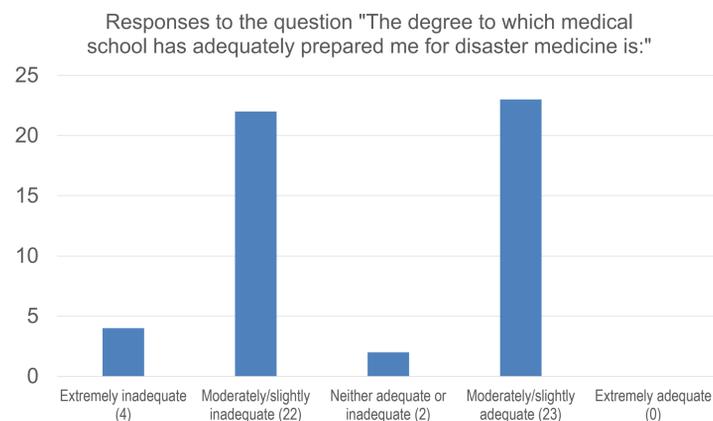


Figure 1

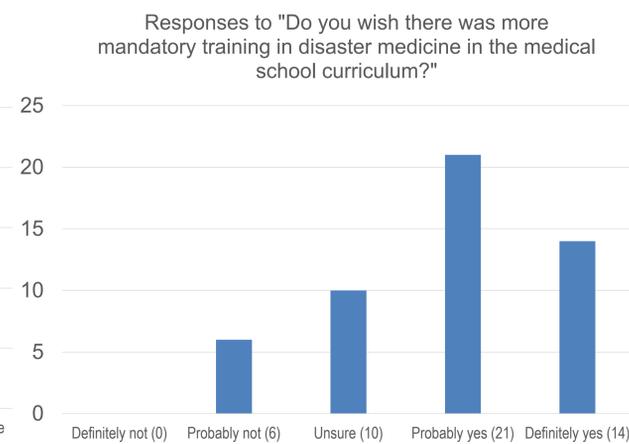


Figure 2

## Conclusion

We found that 51% of students who took the survey felt inadequate to some degree with their disaster medicine training so far (figure 1) and that 69% of respondents think there should be more training within the medical school curriculum (figure 2).

There was no significant difference in confidence to triage and treat disaster medicine patients between students who had received training as pre-medical students versus those who had not (table 1). There was a significant difference in confidence to triage and treat disaster medicine patients between students who had received training in medical school and those who had not (table 2).

## Summary

- The majority of medical students surveyed felt that they were not adequately prepared for disaster medicine and that there should be more training in the medical school curriculum
- Pre-medical training did not provide as much self confidence in students' disaster medicine triage and treatment skills as medical school training did

## Acknowledgements

I wish to thank my mentor Dr. Burnett and our scholarly project director, Dr. McEchron.