# New virtual reality technology prepares first responders to **respond to mass casualty disasters** Trainees are immersed in a realistic scenario where they can interact with and treat victims

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# The Ohio State University Wexner Medical Center

## NEWS PACKAGE

SUGGESTED TEASE	WHEN TRAGEDY STRIKES, QUICK ACTION AND MEDICAL CARE CAN BE THE DIFFERENCE BETWEEN LIFE AND DEATH. COMING UP, HOW NEW TECHNOLOGY REPLICATES THE CHAOS AND CHALLENGES OF A MASS CASUALTY EVENT TO PREPARE FIRST RESPONDERS TO SAVE AS MANY LIVES AS POSSIBLE.
	IN A MASS CASUALTY DISASTER, EVERY SECOND COUNTS. UNFORTUNATELY, THESE TRAGEDIES ARE HAPPENING WITH GREATER FREQUENCY, WITH THE F-B-I REPORTING A NEARLY ONE HUNDRED PERCENT INCREASE IN ACTIVE SHOOTER INCIDENTS SINCE 2017 <sup>1</sup> . UNTIL NOW, TRAINING FIRST RESPONDERS ON HOW TO HANDLE THESE DISASTERS REQUIRED A MASSIVE AMOUNT OF SPACE, TIME AND RESOURCES. BUT A NEW PROGRAM <sup>2</sup> GIVES TRAINEES A REALISTIC LOOK AT THE CHALLENGES THEY MAY FACE DURING THESE EVENTS BY SIMPLY PUTTING ON A HEADSET. BARB CONSIGLIO HAS THE DETAILS.
(PACKAGE START) CG: Courtesy: The Ohio State University College of Medicine	(Nats - Sound) <i>Paramedic in training.</i>
:00 - :03 Shots of paramedic in VR training session	THIS MAY LOOK LIKE THE LATEST VIRTUAL REALITY GAME, BUT PARAMEDIC JOSHUA COOPER IS ACTUALLY UNDERGOING MASS CASUALTY DISASTER TRAINING. :07
CG: Joshua Cooper Paramedic	<i>"It's just not something we see every single day, but when you get into that situation, you want to be prepared for that, to be able to treat as many people as we possibly can." :08</i>
Shots of paramedic in subway scenario training	TRADITIONALLY, THIS TRAINING HAS COME WITH MANY LOGISTICAL CHALLENGES, AND OFTEN INVOLVED ACTORS, UNRESPONSIVE MANNEQUINS

VR footage of subway bombing Shots paramedic using VR equipment in training (split screen)	AND UNREALISTIC SETTINGS, SO EMERGENCY PHYSICIANS AT THE OHIO STATE UNIVERSITY COLLEGE OF MEDICINE WORKED WITH DESIGNERS TO DEVELOP A PROGRAM THAT PUTS FIRST RESPONDERS INTO REALISTIC SCENARIOS THROUGH ADVANCEMENTS IN VIRTUAL REALITY. :16
	<i>"Can anybody hear me? Can you walk? Walk right over here, please." :05</i>
Shots of settings within training program	SCENES CAN BE CUSTOMIZED, VARYING THE NUMBER OF VICTIMS, THEIR INJURIES AND REAL-WORLD DISTRACTIONS. AND ARTIFICIAL INTELLIGENCE ALLOWS THE TRAINEE TO INTERACT WITH PATIENTS WHO RESPOND ACCORDING TO THEIR CONDITION. :11
	"What's your name? Lily? Where are you injured?" :05
CG: Dr. Nicholas Kman Ohio State College of Medicine	<i>"When I go to take somebody's pulse, that controller is vibrating consistent with the heart rate that we can put in the system." :07</i>
Shots of Dr. Kman going through assessment with paramedic	WHEN THE TRAINING IS COMPLETE, THE SYSTEM PROVIDES AN IMMEDIATE ASSESSMENT. :03
	(assessment) "You got her triage category correct, you fully treated her, you checked her pulse, and you did an excellent job with that one." :09
Dr. Kman (CG'd earlier)	<i>"After we go through that assessment, what we've found is, almost universally, people want to go back in the scenario and do better."</i> :08
Shots of paramedics responding	AND IF TRAGEDY STRIKES CLOSE TO HOME :02
	Nats getting in ambulance :01
(PACKAGE END)	FIRST RESPONDERS ARE PREPARED TO ACT FAST TO SAVE AS MANY LIVES AS POSSIBLE. AT THE OHIO STATE COLLEGE OF MEDICINE, THIS IS BARB CONSIGLIO REPORTING. :07
ANCHOR TAG	THE VIRTUAL REALITY TRAINING PROGRAM IS NOW IN USE IN SEVERAL COMMUNITY FIRE AND E-M-S DEPARTMENTS AND CONTINUES TO EXPAND ACROSS THE COUNTRY.
	IN THE FUTURE, DEVELOPERS AND MEDICAL EXPERTS HOPE TO ADAPT THE PROGRAM TO ENHANCE ACTIVE SHOOTER AND STOP-THE-BLEED DRILLS IN PLACES LIKE SCHOOLS AND CHURCHES.

#### SOCIAL MEDIA

Share it! Suggested tweet:	First responders have just a few moments to take action to save lives when disaster strikes. Now, a virtual reality program developed at <u>@OhioStateMed</u> allows them to prepare for the chaos and challenges they may face in mass casualty events by simply putting on a headset. <u>https://bit.ly/3QGOOr9</u>
Suggested post:	When tragedy strikes, every second counts. But training first responders for a mass casualty disaster can be difficult. Now, a virtual reality program developed at <u>The Ohio State University College of Medicine</u> immerses trainees in a realistic scenario, replicating the chaos and challenges of a mass casualty event and building the skills needed to save as many lives as possible. <u>https://bit.ly/3QGOOr9</u>

## EXTRA BITES

	Dr. Kman says the platform can be customized for different scenarios and patients: "What our virtual reality platform does is it allows us to make an unlimited number of scenarios with an unlimited number of victims. And we can run learners through as many as times as it takes for them to get good at this process." :15
CG: Dr. Nicholas Kman Ohio State College of Medicine	Dr. Kman explains how the patients can be programmed and respond appropriately: "There's a universal avatar that you can just program what injuries I want you to have. And then there's artificial intelligence that once that person has that injury, they respond appropriately." :12
	Dr. Kman says traditional training methods are less effective: "A PowerPoint five minutes before you do a disaster drill and then you don't think about something again for a year. That's not going to be good teaching. I mean it would be similar to cramming for a Spanish test and then not using Spanish. It just, it's going to get lost." :18
	Dr. Kman says acting fast to stop the bleeding saves lives: "How do I focus my attention to do the greatest good for the greatest number of patients and to stop the bleeding within three to five minutes, which we know we don't have a lot of time if somebody has severe uncontrolled hemorrhage." :14

	Cooper explains how interacting with a patient in VR training is more effective than traditional training methods: "Training normally is involved with a mannequin that doesn't respond back to you, so this is much different in the fact that you're getting a response back from the patients, and when you ask questions they're answering those and giving you, 'Hey, these are what my symptoms are. This is my injury." :15
CG: Joshua Cooper Paramedic	Cooper explains how training on protocols help them prepare for disaster: "We have standing protocols for how we treat our patients so we try to follow those and treat them to make sure that we don't miss anything along the way and get them the best care possible." :11
	Cooper says it's important to train for scenarios they don't encounter often: <i>"It's just not something we see every single day, but when</i> <i>you get into that situation, you want to be prepared for</i> <i>that, to be able to treat as many people as we possibly</i> <i>can." :08</i>

References

<sup>1</sup>*FBI Designates 61 Active Shooter Incidents in 2021,* **Federal Bureau of Investigation, May 23, 2022.** Online:

https://www.fbi.gov/news/press-releases/press-releases/fbi-designates-61-active-shooter-incidents-in-2 021

<sup>2</sup>Virtual Reality in Medical Education, **The Ohio State University College of Medicine, 2022.** Online: <u>https://u.osu.edu/vrime/virtual-reality-in-medical-education/</u>

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