

## TESTIMONY REGARDING OHIO HB 47

Statement for the Record

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Committee on Health

Ohio State Senate

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***“I wish there would have been an AED readily available at his practice to save his life.”***

No better bottom-line up-front statement could better summarize my support and those of my colleagues supporting the passage into law of HB47 in Ohio. Many of us have heard this emotional wish from too many parents.

My Name is Jon Divine, I am a family medicine physician and a professor of Orthopedics' & Sports Medicine at the University of Cincinnati where I am the head team physician for the UC Bearcats. I am also the medical director for the Flying Pig Marathon and Queen Bee Half Marathon. I am a Fellow, and Past-President in 2015-16 of the American Medical Society for Sports Medicine.

I want to reiterate some of the essential medical testimony of Representatives Brown & Bird and several others who have testified on behalf of HB47. I also hope to add additional evidence for your consideration about the importance of schools and athletic venues having an active emergency action plan (EAP), which includes the use of AEDs and effective CPR by athletic trainers, coaches, or educated bystanders.

### **To review a cruel medical reality**

For those who suffer an out-of-hospital, sudden cardiac arrest - the chance of survival diminishes by 7- 10% for every minute that passes without intervention.<sup>1</sup> And, we continue to hear about when a sudden cardiac arrest occurs in a young athlete: statistically, the estimated rate of occurrence continues to be approximately one event every 3-4 days in the US.

### **But there is hope:**

In 2017, in out-of-hospital sudden cardiac events, an AED used by non-EMS first responders was associated with a median survival rate of 53.0%.<sup>2</sup>

In 2019, Drezner et al. reported on 132 sudden cardiac events in student-athletes in the US. Of those events, 59% involved high school athletes, and 21% involved middle school athletes. *“If a certified athletic trainer was on-site and involved in the resuscitation, 83% of athletes survived. If an on-site automated external defibrillator was used in the resuscitation, 89% of athletes survived.”*<sup>3</sup>

In January 2023, Michelland et al. concluded that early use of an on-site AED in association with immediate CPR played a “pivotal role” in reducing mortality and permanent brain injury in adult, sport-induced victims of sudden cardiac arrest (SCA).

Survival odds were better:<sup>4</sup>

- when a bystander was present, survival was 2.5x greater than an unwitnessed event
- if the bystander administered CPR, survival was 3.4x greater than if CPR was not done
- when an AED was used, survival was 5.2x greater than if an AED was not available

In a written editorial published last month (Nov 2023) in the AHA official journal *Circulation*, Domineco Corrado, an international expert on sudden cardiac death, commented that Michelland’s study is *“compelling evidence that early shock is life-saving (and) makes the terms ‘cardiac arrest’ and ‘sudden cardiac death’ in the athlete- fortunately- no longer interchangeable, with SCA being a treatable event.”*<sup>5</sup>

### **The value of an Emergency Action Plan (EAP)**

Best practices now emphasize that every institution sponsoring athletics and athletic events must have a written and rehearsed emergency action plan (EAP). The EAP should identify the initial actions to occur once a life-threatening event occurs. The EAP is essential for managing student-athletes with catastrophic injuries, as it recommends the necessary equipment and a step-by-step plan of action to guide individuals providing care. An EAP is what the world saw in Cincinnati on January 2, 2023. The pre-planning and rehearsal of their EAP by our Buffalo and Cincinnati colleagues was the key to success in implementing the on-field processes that saved Damar Hamlin's life.<sup>6</sup>

In 2002, The National Athletic Trainers Association first described the importance of developing and practicing an EAP in a position statement for NATA members published in the *Journal of Athletic Training*.<sup>7</sup> Overall, many athletic trainers have adopted best practices for creating an EAP. In fact, within ten years after this position statement, Drezner and colleagues reported that in high schools with an established EAP, survival after sudden cardiac arrest was 79% versus 44% for those without an EAP.<sup>8</sup> It should be emphasized that most of these rescues were done by athletic trainers, coaches, and bystanders with CPR and AED use training.

If HB47 passes into law, will that legislation increase the number of schools and sports facilities with an active and effective EAP that will save lives? I believe the answer is yes. Evidence

suggests that statewide policy requirements will facilitate even greater local policy adoption in the secondary school setting. In a 2019 nationwide survey of athletic trainers by Scarneo-Miller and colleagues at the Korey Stringer Institute, athletic trainers working in secondary schools in states that require an EAP reported having an active EAP in place at their schools than those who worked in states without such a requirement. The same group also found that the prevalence of schools reporting compliance with CPR and AED training for all coaches was highest in states requiring CPR and AED training to be included within an active EAP.<sup>9</sup>

Identifying the important elements to be included within an EAP in the secondary school setting is imperative. The most basic example of an EAP has been proposed by The Smart Heart Sports Coalition, which “advocates for all 50 states to adopt evidence-based policies that will prevent fatal outcomes from Sudden Cardiac Arrest (SCA) among high school students”.<sup>10</sup> Quite simply, this recommendation is that:

1. Emergency Action Plans (EAPs) for each high school athletic venue are widely distributed, posted, rehearsed, and updated annually.
2. Marked automated external defibrillators (AEDs) at each athletic venue are within 1-3 minutes of each venue where high school practices or competitions are held.
3. CPR and AED education for coaches.

Understandably, opponents of HB47 will not support the concept of legislating an unfunded mandate to purchase one or more AEDs for their campuses. If passed, I would ask those school districts to review their budgetary priorities and ask themselves how much one student-athlete's life is worth.

I would also encourage Districts to look for private funding opportunities, such as the “Mathew Mangine Jr., One Shot Foundation,”<sup>11</sup> founded by Kim and Matt Mangine after they lost their son Mathew in 2020.

With my Smart Heart Coalition colleagues, I ask that HB47 urge Ohio Senators to vote in favor of HB47.

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