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Life Saving Emergency Medical Dispatch and Pre-Hospital Care Improvements in Rhode Island

In Rhode Island an estimated 1 in 10 people who have an out of hospital cardiac arrest survive. In other states, the chances of survival are much better^{1,2,3}.

It's time to improve our system and save lives.

On average, 130,000 Rhode Islanders call 9-1-1 for medical assistance every year⁴. A call triggers a response in the EMS system, sending qualified medical providers and ambulances to provide assistance and transport. In most 9-1-1 systems nationwide, the 9-1-1 operators go on to provide instructions to the caller. But not in Rhode Island. These “pre-arrival instructions,” when provided by certified Emergency Medical Dispatchers (EMDs) have been proven safe, effective, and lifesaving^{5,6}.

Pre-arrival 9-1-1 instructions are standard across the nation^{7,8}.

Trained 9-1-1 operators coach people through immediate measures such as CPR (known as telecommunicator CPR or T-CPR). They give instructions for other emergencies like bleeding control, choking, or assistance for drug overdose victims, meanwhile collecting key information for emergency responders prior to their arrival. In fact, T-CPR has been included in the American Heart Association guidelines for resuscitation care since 2010, and has been graded as the highest level (Class I) recommendation in the most recent 2017 guidelines^{9,10}.

In Rhode Island, no such system exists.

Instead, victims are at the mercy of bystanders, often family or friends, until the trained providers arrive. In the urban setting, this takes an average of 6 minutes¹¹. The wait can be longer in extenuating circumstances, such as a snowstorm or difficult to reach house. To a victim whose heart or breathing has stopped, 5 minutes without oxygen is long enough to cause irreversible, often fatal, brain damage. With dispatcher instructions, we can save lives by giving bystanders the ability to provide care.

Five minutes without oxygen is too long. We have to do better.

Every year about 1000 Rhode Islanders experience a sudden cardiac arrest outside of the hospital^{12,13}. That's 3 every day! Of these, an estimated 25 - 50% are due to a treatable arrhythmia like ventricular fibrillation (VF)^{9,13}. Rhode Island is missing one key factor in the chain of survival: early bystander CPR. Bystander CPR “slows the dying process” and gives the victim a fighting chance at survival¹⁴.

Studies have shown that bystander CPR increases rates of survival by over 200% in OHCA^{5,15}. Though most Americans are familiar with CPR¹⁶, rates of bystander CPR remain very low¹⁷. In a recent pilot study of OHCA in Rhode Island, bystander CPR was performed in only 20% of cases¹⁸. T-CPR pre-arrival instructions have been shown to double the rates of bystander CPR¹⁹ and are nearly as effective as CPR provided by a trained medical professional^{16,20,21}.

It's worth saying again. Bystander CPR improves chance of survival 200%.

It doesn't stop there. Survival from OHCA requires complex systems of care and chain of survival that begins with early access to CPR and an Automatic Defibrillator (AED), continued with robust prehospital management of cardiac arrest and care at the hospital^{9,22}. Dispatcher assisted bystander CPR has been **proven** to improve survival especially when integrated with other links in the chain like AED use, more CPR education and advanced systems of care^{6,19,21,22}.

Across the country, from Rochester to Seattle, communities have dramatically increased their cardiac arrest survival rate with programs that include dispatcher-assisted CPR. Arizona now has an overall survival rate of 35% for VF cardiac arrest³. In Rochester, victims of witnessed VF arrest have a 50% chance of survival². In Seattle/King County WA the survival rate for witnessed VF arrest is 62%¹... that translates to hundreds of saved lives every year. *Currently, Rhode Islanders who suffer from OHCA are lucky to have a 1 in 10 chance of survival⁹.*

This is unacceptable.

Our EMS crews and hospitals already provide excellent care, but this is just one link in the chain, and more needs to be done. Unfortunately, even 5 minutes without oxygen can be deadly. Even the fastest EMS response sometimes arrive too late. Bystander CPR is crucial. When 9-1-1 is called, an opportunity exists not just to send help, but to utilize the caller to provide immediate, life-saving aid. *Think of 9-1-1 dispatchers as the "first" first responders, not simply telephone operators.* With pre-arrival instructions a, including T-CPR, and strengthening the links in the chain, these first few crucial minutes can be a life-saving opportunity to *do something*.

We are asking the State of Rhode Island to:

- Restore full staffing implement for 911 operations centers
- Restrict and use e911 tax-supported and federal funds for 911 operations and related pre-hospital care separate from professional EMS services.
- Take immediate action to institute Emergency Medical Dispatch including T-CPR by training dispatchers using a nationally recognized curriculum.
- Institute physician led, medical oversight of Emergency Medical Dispatch, including quality assurance, call review, and participation in a national registry of cardiac arrest data.
- Continue to recommend investments in evidence based, proven investments to pre-hospital care that includes training, equipment, and technology enhancements as determined by an oversight committee.

The very lives of our residents and loved ones depend on it.

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