

## When Should Naloxone Be Administered to the Undifferentiated Unresponsive

1 December 2017

Person?

Dear Editors:

Sudden death from opioid use has increased significantly in recent years. The Centers for Disease Control has reported that over half a million people have died of opioid overdoses from 2000 to 2015 and 91 Americans die every day from opioid overdose (Rudd, Seth, David, & Scholl, 2016). Naloxone reverses the effects of opioids, and if administered in a timely manner with other resuscitation techniques may prevent death. The World Health Organization has published recommendations (2014) that in suspected opioid overdose, first responders should focus on airway management, assisting ventilation and administering naloxone. In 2017, the American Red Cross Scientific Advisory Council (ARC SAC) reviewed the scientific literature on the use of naloxone in the undifferentiated unresponsive person by first aid responders.

Our work included a review of the most common causes of cardiac arrests and the recommendations of other review organizations. The most common cause of cardiac arrest remains heart disease. Approximately 610,000 people die of heart disease every year in the United States. This represents one of every four deaths ("Heart Disease Facts," 2017). A previous evaluation of the Cardiac Arrest Registry to Enhance Survival database on out-of-hospital cardiac arrest (OHCA) showed that approximately 300,000 people suffer OHCA annually which translates to about

## Scientific Advisory Council

The American Red Cross <u>Scientific</u>
<u>Advisory Council</u> is a 50+member panel of nationally-recognized medical, scientific, and academic experts dedicated to ensuring that the Red Cross is at the vanguard of best-science and best-practice.

With members from a broad range of professional specialties, the Council has an important advantage: a broad multidisciplinary expertise for evaluating new emergency response methods and techniques. And with on-the-ground experience, its members also bring the know-how for real-world emergencies. Whether it's the best way to administer CPR to an unconscious co-worker or preparing your family and home for a hurricane, the Council is keeping you current.

This Letter to the Editor went through a process of a question being researched and peer evaluated at the Resuscitation Sub-council level and then brought to the full council for peer review and approval.\*



\*The Editor-in-Chief, and Senior Editors of the IJFAE participate on the Scientific Advisory Council. 820 Americans every day (Roger et al., 2011). We also note that the American Heart Association updated their recommendation in October 2015 to include that empiric administration of IM or IN naloxone to all unresponsive opioid-associated life-threatening emergency patients may be reasonable as an adjunct to standard first aid and non–healthcare provider BLS protocols (Lavonas et al., 2015).

Thus, for any given undifferentiated patient in cardiac arrest, coronary artery disease is nearly ten times more likely than opioid overdose to be the cause. For this reason, ARC SAC believes that it is important to not disrupt or delay any currently accepted resuscitation techniques. High performance CPR and AED use are still the most important therapy for cardiac arrest and should not be delayed or interrupted. If opioids are suspected, the administration of naloxone should occur as soon as possible, provided the delivery system will not cause a longer than 10 second hands-off time for CPR delivery. Empiric use of naloxone in cardiac arrest is an unproven option if it will not delay other resuscitation efforts.

Ira Nemeth, MD, FACEP, FAEMS

Andrew MacPherson, MD, CCFP-EP, FCFP

Richard Bradley, MD, FACEP

## References

Rudd, R.A., Seth, P., David, F., & Scholl, L. (2016). Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. *MMWR Morb Mortal Wkly Rep, 65*, 1445–1452. doi: 10.15585/mmwr.mm6450a3

World Health Organization. (2014). *Community management of opioid overdose*. Retrieved from <a href="http://www.who.int/substance">http://www.who.int/substance</a> abuse/publications/management opioid overdose/en/

*Heart Disease Facts.* (2017) Retrieved September 29, 2017, from Centers for Disease Control and Prevention website, <a href="https://www.cdc.gov/heartdisease/facts.htm">https://www.cdc.gov/heartdisease/facts.htm</a>

Roger, V. L., et al. (2011). Heart disease and stroke statistics—2011 update: a report from the American Heart Association. *Circulation*, 123, e18—209. doi: 10.1161/CIR.0b013e3182009701

Lavonas, E.J, et al. (2015). Part 10: special circumstances of resuscitation: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*, *132*(suppl 2), S501–S518. doi: 10.1161/CIR.0000000000000264