



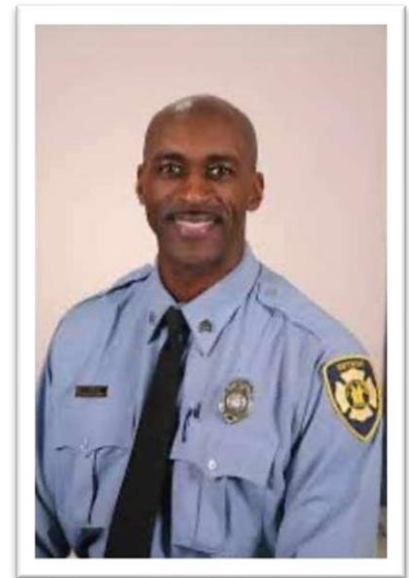
Let us take a moment to remember a fallen hero, Detroit Fire Sgt. Sivad Johnson, who died in 2020 while helping save 3 girls from drowning at Belle Isle. Per The Detroit News,

"The 26-year veteran of the department and his daughter were walking near the Yacht Club when they heard three young girls screaming for help from the water, Fornell told The Detroit News.

"He's a firefighter, he saw the girls in distress and jumped in. He's done that his entire career," Fornell said. "Something happened, and it's unfortunate to have lost one of our own that way." ...

"It is believed [Johnson] may have been dragged underwater by the rip-current and no one noticed," Michigan State Police said."

"Johnson was a 26-year veteran of the Detroit Fire Department's Fire Engine 59 and a recipient of the 2017 Medal of Valor. "He was my idol," said Jamal Johnson, Sgt. Sivad Johnson's brother. "He was always a hero to me." Sgt. Johnson always wanted to help others and he died doing just that."



References

Detroit News, Aug 21 2020 <https://www.detroitnews.com/story/news/local/detroit-city/2020/08/21/search-underway-man-reported-missing-detroits-belle-isle/3417039001/>



References to ruminate on, en-route to this station

1. Cohen, A. *Femoral artery Doppler ultrasound is more accurate than manual palpation for pulse detection in cardiac arrest*. Resuscitation, 2022.



2. Rolston, D. *Time is running out for manual pulse checks as ultrasound races past*. Resuscitation, 2022. [https://www.resuscitationjournal.com/article/S0300-9572\(22\)00622-0/fulltext](https://www.resuscitationjournal.com/article/S0300-9572(22)00622-0/fulltext)
3. Rabjohns, J et al. *Pseudo-pulseless electrical activity in the emergency department, an evidence based approach*. The American Journal of Emergency Medicine, 2020. <https://www.sciencedirect.com/science/article/abs/pii/S0735675719306527?via%3Dihub>
4. Koch, M et al. *Carotid Artery Ultrasound in the (peri-) Arrest Setting – A Prospective Pilot Study*. Journal of Clinical Medicine, 2022.
5. Adedipe, A et al. *Carotid Doppler blood flow measurement during cardiopulmonary resuscitation is feasible: a first in man study*. Resuscitation 2015.
6. Catena, E et al. *Association between left ventricular outflow tract opening and successful resuscitation after cardiac arrest*. Resuscitation, 2019.

Station 1: Resuscitation Station



(5-10mins) Board the Detroit Fire Boat and discuss a day in the life of the crew of the *Sivad Johnson*.
If we get a patient from them, what have they had to do to get that patient to us in the hospital?

- 1 Point Please describe to faculty at least three (3) things you learned from the crew of the *Sivad Johnson* about the Detroit Fire Boat and their challenges facing emergency scenarios on the water and pre-hospital patient care
- 1 Point Faculty will select the two teams that asked the *best* questions to get this extra point. What are the “best” questions? The ones deemed most insightful, provocative, or thoughtful; or the ones that generate interesting/unique answers from the crew

(≤10 mins) On shore, engage with faculty regarding POCUS guided resuscitation:

- 1 Point How accurate is a manual pulse check for determining pulselessness?
- 1 Point What is the difference between PEA and “pseudo”-PEA?
- 1 Point How can you tell the difference without ultrasound?
- 1 Point

Carotid doppler blood flow measurement is currently being researched as a means of guiding adequate CPR^{4,5}. In particular, the carotid **End Diastolic Velocity (EDV)** is proposed to be an important indicator, since adequate diastolic flow is required to ensure steady cerebral perfusion.⁴

- 1 Point What is a normal physiological **EDV**? (High quality CPR should try and match this!)
- 1 Point Measure the carotid **End Diastolic Velocity** on your teammate

Maybe there’s cardiac activity, but is there enough blood pressure? **Peak Systolic Velocity (PSV)** of the femoral artery has been shown to correlate with blood pressure in cardiac arrest. Specifically, a **PSV** ≥ 20 cm/s was more accurate than palpation to detect systolic blood pressure ≥ 60 mmHg.

- 1 Point Measure the femoral artery **PSV** on a teammate

(for SonoW.A.R. purposes please measure the femoral artery at the mid-thigh level for modesty and also because it’s more of a challenge!)
- 1 Point Complete this station within 10 minutes (time on Fire Boat does not count)