



UNABLE TO ESTABLISH INTRAVENOUS ACCESS, SO I MADE THE DECISION TO PERFORM THE AWAKE IO PROCEDURE WITH THE SAM IO IN ORDER TO PROVIDE THE NECESSARY ADENOSINE ADMINISTRATION QUICKLY. THIS WAS A TIME-SENSITIVE EMERGENCY REQUIRING EMERGENT INTERVENTION.

— LANE ABSHIRE
FTO, NRP, FP-C, MEDEXPRESS

CARDIAC ARREST AND CRITICAL SVT PATIENTS REVIVED BY SAM IO DURING COVID-19 PANDEMIC

On the frontlines of the fight against COVID-19 within New Orleans - a hot spot area that was killing residents at higher rates than in other parts of the US - seasoned first responder with experience as a search and rescue paramedic, hoist operator and flight paramedic, Lane Abshire raced to help two different patients suffering from cardiac arrest and a serious supra-ventricular tachycardia (SVT) episode. In these cases, intravenous access was necessary, but both were unattainable with an IV. He recalls the scenes of the incidents:

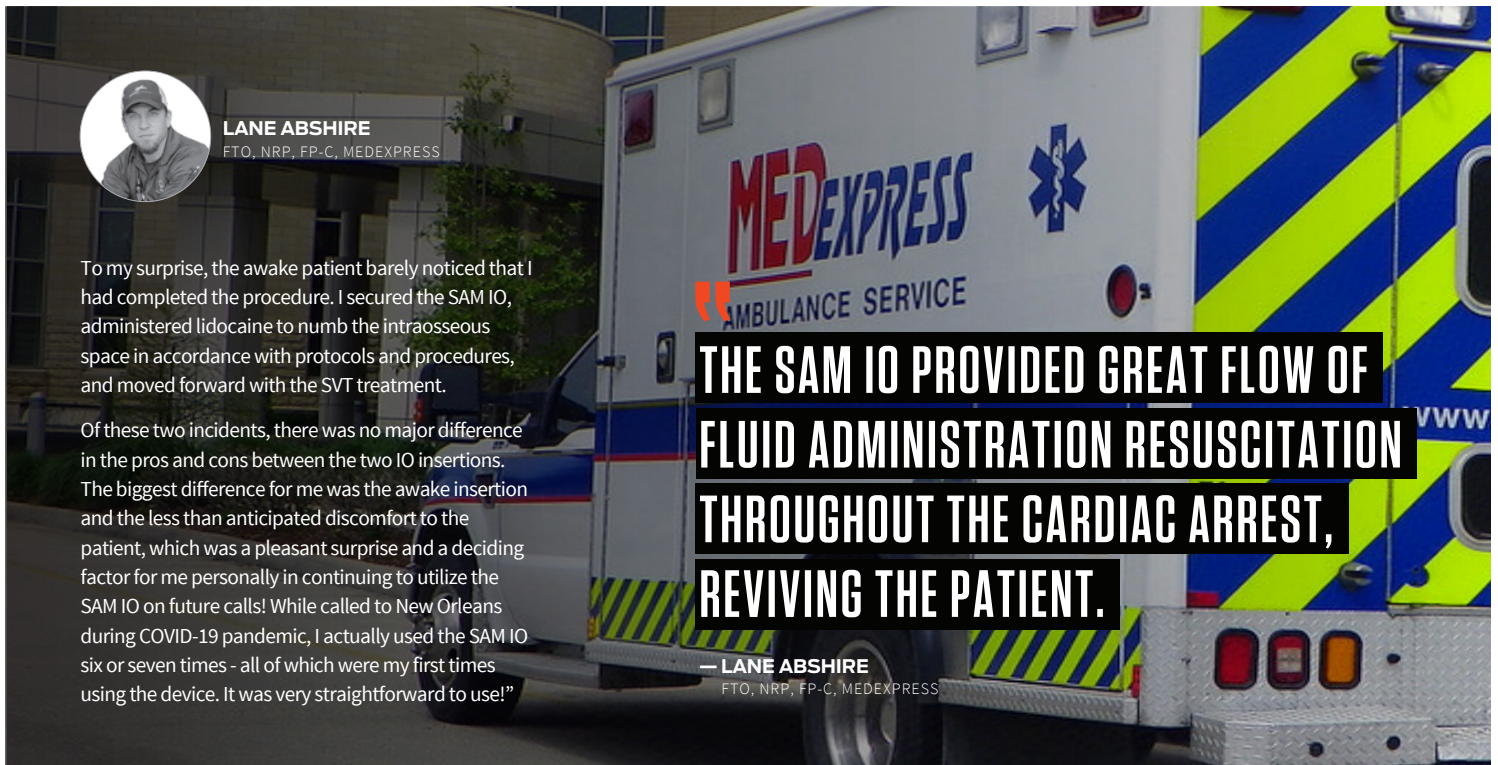
“The first patient was an adult male suffering cardiac arrest. Based on his critical condition, I reached for the SAM IO to access the vascular system fast. The first insertion was a proximal tibia insertion. The device fit comfortably in my hand and the 25mm SAM IO needle was easy to seat on the device. I had no issues with insertion of the needle after identification

of landmarks. The needle was successfully inserted after puncturing the skin and performing 2-3 full squeezes of the device.

I was impressed I could easily remove the needle while still attached to the device and securing the needle in the sharps device that came with the needle. I found that having the needle attached to the device during removal provided good leverage and safety as opposed to having to remove a needle bare-handed with the potential of having soiled gloves and slippery hands depending on the type of emergency. The SAM IO provided great flow of fluid administration resuscitation throughout the cardiac arrest, reviving the patient. I have not had to use a pressure bag to infuse fluids on any attempt that I have had with the SAM IO. To me, the SAM IO has a better flow rate than other IO devices I have used. The second incident was with an alert adult male

experiencing supra-ventricular tachycardia (SVT). I had an additional medic on scene who was unable to establish intravenous access, so I made the decision to perform the awake IO procedure with the SAM IO in order to provide the necessary Adenosine administration quickly. This was a time-sensitive case requiring emergent intervention.

Given the patient was awake, I was concerned about the pain he was about to experience with the insertion, especially because the SAM IO is not a continuous rotation of the needle. I prepared all the equipment and identified landmarks without incident. I punctured the skin with the device and began squeezing the SAM IO device upon feeling the needle on the head of the humerus. I believe I squeezed a total of 4 times by the time the needle was inserted to an appropriate depth.



LANE ABSHIRE
FTO, NRP, FP-C, MEDEXPRESS

To my surprise, the awake patient barely noticed that I had completed the procedure. I secured the SAM IO, administered lidocaine to numb the intraosseous space in accordance with protocols and procedures, and moved forward with the SVT treatment.

Of these two incidents, there was no major difference in the pros and cons between the two IO insertions. The biggest difference for me was the awake insertion and the less than anticipated discomfort to the patient, which was a pleasant surprise and a deciding factor for me personally in continuing to utilize the SAM IO on future calls! While called to New Orleans during COVID-19 pandemic, I actually used the SAM IO six or seven times - all of which were my first times using the device. It was very straightforward to use!”

THE SAM IO PROVIDED GREAT FLOW OF FLUID ADMINISTRATION RESUSCITATION THROUGHOUT THE CARDIAC ARREST, REVIVING THE PATIENT.

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FTO, NRP, FP-C, MEDEXPRESS

3 THINGS EVERY EMERGENCY MEDIC SHOULD KNOW ABOUT IO DEVICES

- 1 The actuation of the IO needle system should occur only after the stylet is in full contact with the targeted bone.
- 2 Because IO access provides a rapid, safe, and efficient route for the treatment of all types of hypovolemic and vascular compromised patients as well as a medication life-line, IO devices are an acceptable primary or alternative route for all medications, fluids, or blood products that are approved to be delivered intravenously.
- 3 Absorption rates via the IO route is comparable to IV routes including short half-life medications like Adenosine.



THE AWAKE PATIENT BARELY NOTICED THAT I HAD COMPLETED THE PROCEDURE.

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SAM[®] IO Intraosseous Access System

SAM IO is a manually operated intraosseous access system. Catheter placement is achieved by continuously actuating (repeatedly compressing) the driver's trigger assembly while gently guiding needle assembly into position. Repeated, full trigger actuation creates rotational spin of the needle assembly which, when combined with gentle downward pressure, results in controlled IO placement. Once needle assembly is properly positioned, the stylet is removed to expose standard Luer-lock for extension set connection. With the extension set connected, aspiration verification, flushing and selected treatment(s) may commence.

THE SAM IO INCLUDES

- 1 **SAM IO NEEDLES**
A stylet and catheter assembly secured by a press-fit connection. 15 mm, 25 mm, and 45 mm lengths are intended to address a broad range of patient demographics and multiple application sites.
- 2 **NEEDLEWISE[®] BLOCK**
Single-use sharps containment device for the stylet.
- 3 **SAM IO DRIVER**
A multi-use manually operated intraosseous access driver.
- 4 **SAM STABILIZER**
Cylinder design intended to protect the catheter from dislodgement.
- 5 **EXTENSION TUBING**
Connects to the catheter for flexible infusion.
- 6 **SAM IO NEEDLE ADAPTOR**
Attaches to the SAM IO Driver to accommodate alternative IO needles.



For over 30 years, SAM Medical has developed and manufactured innovative medical products used by military, law enforcement, emergency, wilderness and sports medicine, and pre-hospital care around the world. A resounding favorite of medical professionals, SAM Medical's lineup of products is engineered to save lives. Innovations include SAM XT Extremity Tourniquet, SAM IO Intraosseous Access System, SAM Splint, SAM Chest Seal, SAM Junctional Tourniquet, SAM Pelvic Sling, ChitoSAM, and SAM Soft Shell Splint. For more information, visit www.sammedical.com

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