



**Homeland  
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Science and Technology

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System Assessment and Validation for Emergency Responders

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) Program to assist emergency responders making procurement decisions. Located within the Science and Technology Directorate (S&T) of DHS, the SAVER Program conducts objective assessments and validations on commercially available equipment and systems, and develops knowledge products that provide relevant equipment information to the emergency responder community.

SAVER Program knowledge products provide information on equipment that falls under the categories listed in the DHS Authorized Equipment List (AEL), focusing primarily on two main questions for the emergency responder community: "What equipment is available?" and "How does it perform?" These knowledge products are shared nationally with the responder community, providing a life- and cost-saving asset to DHS, as well as to Federal, state, and local responders.

The SAVER Program is supported by a network of Technical Agents who perform assessment and validation activities.

This TechNote was prepared for the SAVER Program by the Idaho National Laboratory.



For more information on this and other technologies, contact the SAVER Program by e-mail or visit the SAVER website.

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# TechNote

## Individual Officer Trauma Kits

*Individual officer trauma kits contain essential supplies for treating life-threatening traumatic injuries, such as gunshot and stab wounds, in a field environment before certified medical assistance reach the scene. Whether used for emergency self-care or treatment of another person, these kits—sometimes referred to as individual first aid kits and individual patrol officer kits—can save lives by providing a means to immediately treat life-threatening injuries, primarily by stopping excessive external bleeding.*

### Technology Overview

The included components, size, and portability of the kits, as well as training requirements, are some factors to consider when procuring individual officer trauma kits for law enforcement officers. Striking a balance between these factors is important and may also affect costs, especially when equipping an entire department.

### Components

At a minimum, individual officer trauma kits typically include gloves, a tourniquet, a pressure bandage, and a hemostatic dressing. Gloves protect the wearer from contact exposure to pathogens and assist in preventing the introduction of contaminants into a patient's wounds. Tourniquets, pressure bandages, and hemostatic dressings all work to slow or stop bleeding. Chest seals, devices also used to stop bleeding particularly from penetrating chest wounds, may also be included. Additional components found in the kits may include cloth tape for securing bandages, a nasopharyngeal airway for securing a victim's airway, a face shield for the safe administration of cardio-pulmonary resuscitation (CPR), and trauma shears to cut through fabric to expose an injury. Some of these components may be available as options if not included in the original kit, and some kits are customizable to fit an agency's needs. Examples of individual officer trauma kits currently on the market are shown in Figure 1.



**Figure 1. Examples of Individual Officer Trauma Kits**

*Images courtesy of TSSi (top) and Chinook Medical Gear (bottom)*

In recent years, the FDA has warned that one of the leading brands of tourniquets sold in these kits, C-A-Tourniquet® (CAT) has been counterfeited and sold as the Element Airsoft C-A-Tourniquet (E-CAT). The noticeable differences, such as markings on the webbing and a date stamp (Figure 2), appear to be small; however, the counterfeit tourniquets have been shown to fail before the necessary force to stop bleeding can be applied, possibly leading to catastrophic results. These counterfeit tourniquets are not sold in pre-assembled kits, but emergency responders should ensure that genuine components are purchased when customizing these kits for their agency.

### Size and Portability

The size and portability of individual officer trauma kits are important factors because these kits should be within an officer's reach in the event they need to be used. Many kits are small enough to be comfortably worn on an officer's belt or vest, or carried inside a pocket. Holsters, clips, or webbing on the kit may provide alternate attachment options. The more components in a kit, the larger the kit tends to be. Larger kits may be too obtrusive to wear, and an officer may opt to stow the kit in a vehicle or bag instead. While this may work in most instances, there could potentially be cases where a traumatic injury occurs and the officer is nowhere near their vehicle or bag to retrieve the kit. An agency might develop a policy regarding where the kits should be stowed so they are in the same location for every officer. Further, an agency may consider storing additional kits in a designated location, enabling bystanders to render aid if needed.

### Training

Law enforcement officers are frequently the first to arrive at scenes where traumatic injuries are present, especially in cases where the suspect(s) may still be at large (i.e., an active shooter incident [Figure 3]) or when the scene is otherwise deemed unsafe for entry of certified medical personnel. In such cases, properly trained officers equipped with individual officer trauma kits can provide potentially lifesaving care to themselves, a fellow officer, or another victim of traumatic injuries until the area is cleared and medical personnel arrive. Although it is common for law enforcement officers to be trained in the dangers of blood borne pathogens and in performing first aid techniques, such as CPR, often an agency's minimum medical training requirements stop there. Consequently, additional medical training may be required to ensure officers understand how to safely and properly treat traumatic injuries using the items provided in individual officer trauma kits. For example, knowing where to place tourniquets and how to apply hemostatic dressing are some of the areas where additional training will likely be necessary. While some kits may require minimal training, more complex kits will likely necessitate more comprehensive training.



**Figure 3. Active Shooter Incident**

*Image courtesy of the Federal Bureau of Investigation (FBI)*

### Conclusion

With the proper training, law enforcement officers equipped with individual officer trauma kits may be able to provide life-saving care for themselves or other victims of traumatic injuries until certified medical personnel arrive. Kits vary by the number and type of components, size, and portability, and additional medical training may be required so officers can properly use components in the kit to treat life-threatening injuries. For additional information on individual officer trauma kits, refer to the *Individual Officer Trauma Kits Application Note* on the SAVER website at [www.firstresponder.gov/SAVER](http://www.firstresponder.gov/SAVER).



**Figure 2. Comparison Between a Counterfeit E-CAT and an Authentic CAT**

*Image courtesy of New York State Volunteer Ambulance and Rescue Association*