



Homeland Security Awarded

# WHITE PAPER

## AUTOMATIC INJURY DETECTION (AID) CRITICAL PANDEMIC COMMUNICATION

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### Overview:

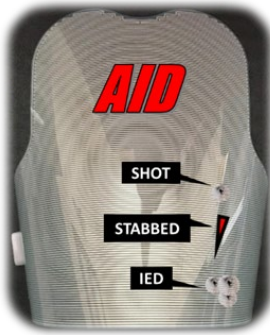
The Automatic Injury Detection (AID) system provides help in seconds when the sensing panel has been pierced by a bullet, knife, or shrapnel. The AID sensor sends automated emergency alerts to a phone, radio or via other communication system. The automated and instant emergency alerts help save lives by improving the response from medics and backup personnel to stop, apprehend or contain the attacker, even when the officer is incapacitated.

### Problem:

- **Emergency Notification** – In the case of a shooting or stabbing, it may be impossible to notify backup due to incapacitation, the need to fight back or flee the situation.
- **Response Time** – If the victim can communicate, it may take a critical amount of time for them or their partner to reach their radio/phone and report on the situation. Typically, the message must then be relayed to other personnel taking up more critical response time.
- **Response Details** - During battle, trauma and critical nature of the situation makes it difficult to provide accurate details of the attack including the location. The attack or ensuing chase make it impossible to know the exact location or provide useful landmarks. Messages relayed to others may include inaccuracies or omit the important details.
- **Critical factors**- Natural disasters or civil disobedience leads to thinning critical personnel, resources, and prioritization of your tactical/medical response.
- **Single Officer Patrols**- Prone to ambush/attack as resources are rationed.
- **Gunfire**- Makes Voice Radio/Cell communication impossible to decipher, adds repeats/time.
- **Dispatcher** (Current method) - Adds error and time having to re-explain and authenticate data increases coordinated response. Subjects call in false information to divert authority.
- **Fluid Nature of Battle** - Location data is obsolete in 20 seconds, foot chase = 1 block
- **Gun First** - Communicating is second to self-preservation, makes network data delayed or nonexistent. Vulnerable to enemy interdiction by incapacitating our friendly forces out on patrol. Postpones critically needed response time to thwart off an attack.
- **Time Enemy**- Every second affects the likelihood of survival and increases the size of the search and containment area. AID puts time back on the agency's side.

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### **Solution: Automatic Injury Detection (AID)** Detects:

- **Stabbed, Shot or IED** attack, automatically sends GPS location | Injuries | Heart rate | Blood type over Radio/Text messages.
  - **No User Input** – Only technology that sends attack location automatically. (agency wide) even if incapacitated during attack.
  - **Location Updates**- When officer moves 30 feet any direction.
  - **Injury Detection** - 4 penetration sensor zones indicate where the injury occurred - upper/lower and front/back reports (Golden Hour).
    - **Real Time**- Sensors provide a tactical time advantage, accurate data in seconds, vs. human factors point to point voice communication adds error and time.
    - **Body Coverage** – AID sensors are available in a variety of sizes to fit inside existing body armor and provide detection coverage for the front and back of the officer.

### **Benefit:**

- **Saves Lives** – By automating detection and communication to entire agency at the same time, the officer is more likely to get the help in time. (Golden hour).
- **Apprehend Suspect** – The automated communication with (real time) location updates improves chances of apprehending the suspect before more attacks occur.
- **Common Operating Picture (COP)**- Receive real time, agency-wide, automatic, updates independent from the dispatcher. Maximizes real time info sharing.
- **Automatic**- Upon penetration, automatically sends location turns on body worn camera and opens the officer's cell phone mic so you can listen in at attack scene. If paired to a smart watch, it will also transmit heart rate.
- **Deployment**- Easy setup no manual to read, quick reference cards, free download from Google Playstore or iTunes. No body armor modification required.

**AID Firebase Oversight**- The Oversight feature helps ensure that the department is protecting their officers with AID. The administrator for the departments Firebase account can now see the connectivity status for each user and monitor it to make sure they remain functional and connected in case of a shooting or stabbing. The officer may have removed the app or disabled their smartphone (unintentionally) which would make their AID sensors ineffective. Also, if sensors are removed from their vest, or the battery level may be low or completely discharged. The Oversight feature updates the administrator as to the battery level of every AID sensor within the department so that they can correct any non-operational issue. (Real Time)

**Homeland Security Awarded “Best Personal Protective Equipment Product”**

**Battery:** 1-year rechargeable | **Weight:** Less than two ounces | **Warranty:** 5-Years



AID News link: <https://www.youtube.com/watch?v=XkNE5OvQ5Gk>

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