Weapons Detection in Healthcare:
A Complex Issue

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Weapons Detection in Healthcare

Technology is growing at an ever-increasing pace, and this is certainly true when it comes to weapons detection in a healthcare environment. This is a particularly complex issue due to resources required and the potential impact on privacy.

At the conclusion of this presentation, participants should be able to:

- Discuss emerging trends in weapons detection equipment and processes in the healthcare environment.
- Understand the pros and cons of weapons detection systems and the deployment strategies required to make them successful.
- Explain how weapons detection as a part of a holistic security and risk management program can have a meaningful impact on WPV issues within an organization.
- Sidebar: Discuss panic buttons and their use in healthcare facilities as part of a WPV prevention strategy

Weapons Detection is Not New

Anecdotal evidence suggests that as long ago as 200 BC the Chinese were experimenting with an archway constructed of a magnetic mineral that would draw metal towards it, alerting guards to the presence of hidden weapons. Later, village entries made of lodestone were used in some areas.

While technology has certainly improved since then, the concepts are pretty much the same.

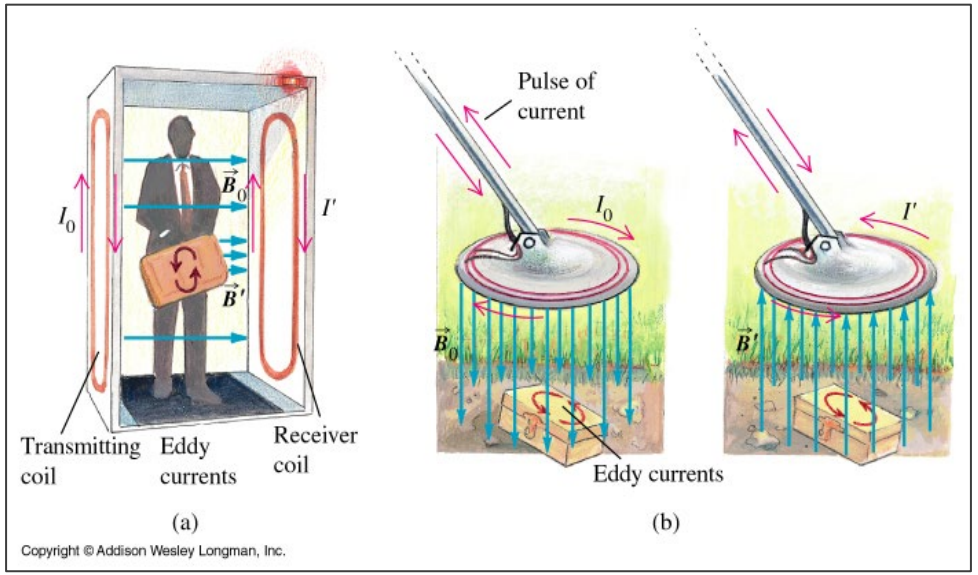
- Metal has certain physical properties
- Such properties cause a reaction or disruption to magnetic fields
- By interpreting these reactions, we can detect the presence of both ferrous (iron) and non-ferrous objects within the generated field area

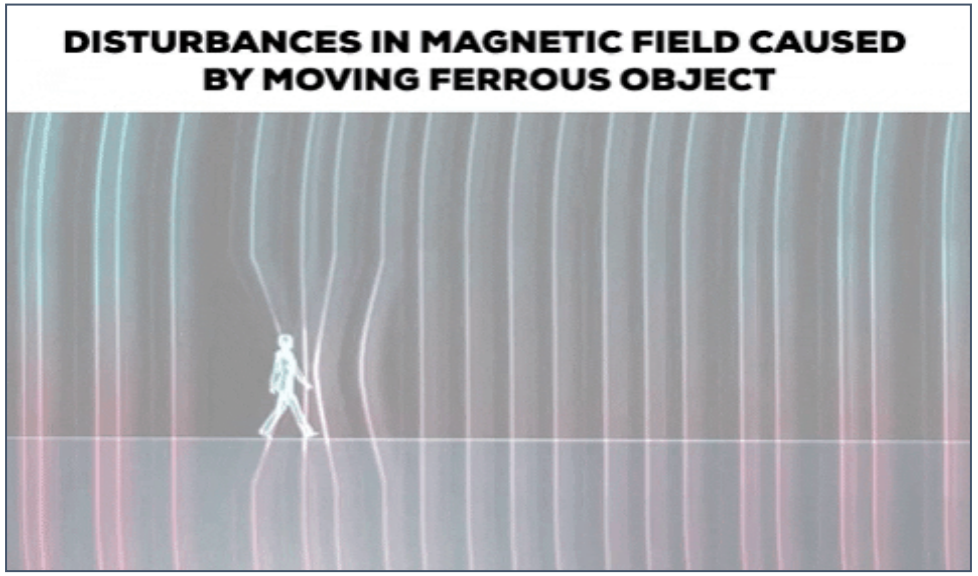
Common Types of Weapons Screening

While there are numerous manufactures of metal detection equipment and systems, there are basically two general categories of how these devices function, active or passive.

- Active devices generate a magnetic field with multiple parts to send and receive a signal, basically “bouncing” it off any metal items within their detection field.

- Passive detection is basically listening for any disturbances in the earth’s natural magnetic field in which the device has been placed (Ferromagnetic Detection).

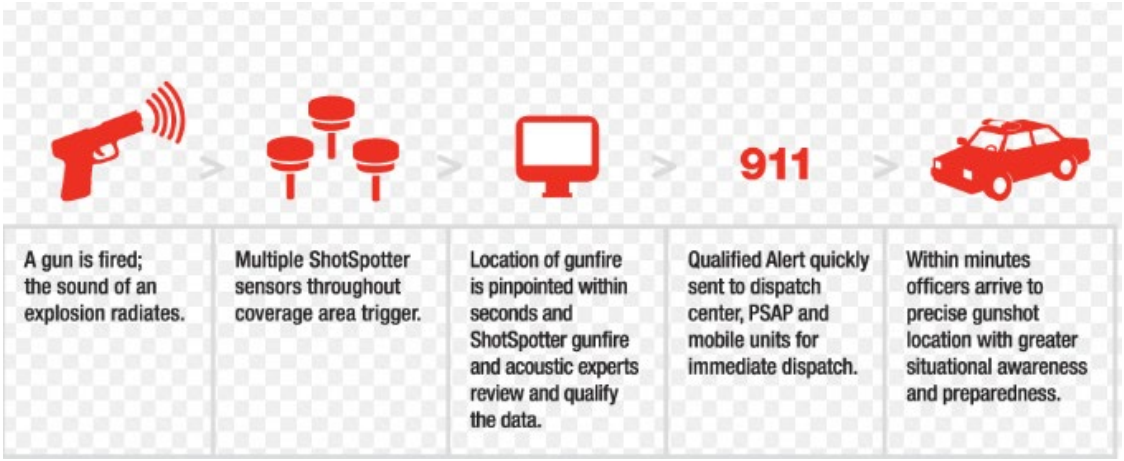




Alternative Types of Weapons Detection

Aside from the more traditional approach of weapons screening using some type metal detection, there are other technologies being used for this purpose (although not as widespread in healthcare facilities).

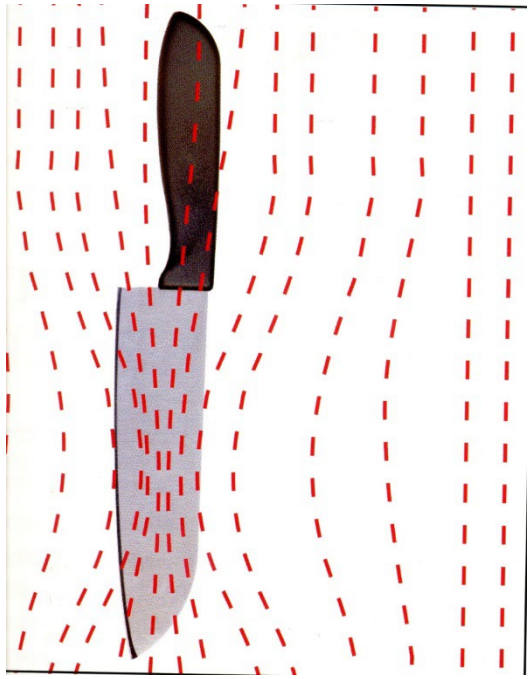
- X-ray screening (usually in conjunction with some type of metal detection).
- Visual detection using video analytics and surveillance cameras (which requires that the weapon be in the open and in clear view in order to be detected).
- Audio detection after a gunshot occurs.

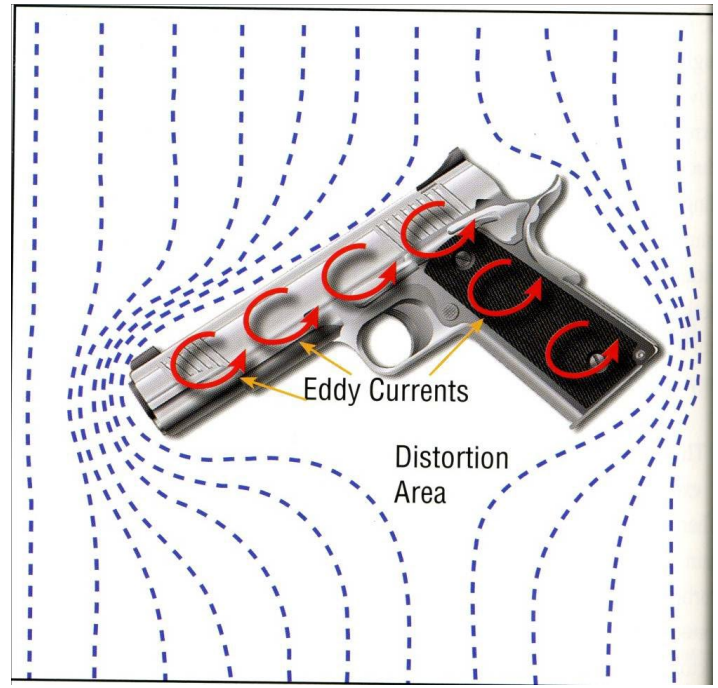


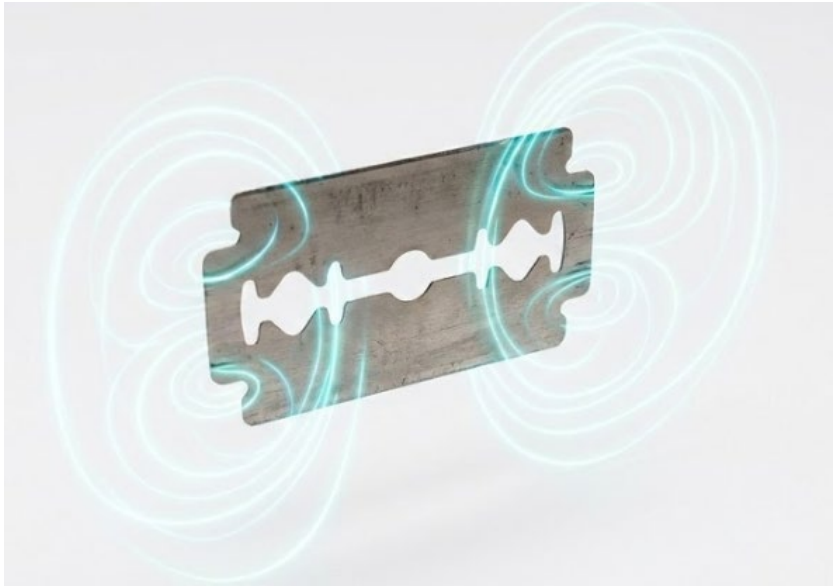
Active Metal Detection

Eddy currents are a phenomenon created when a moving magnetic field encounters a conductor (such as metal). Such currents cause a loss of power in the electromagnetic field and can be detected. These currents are affected differently based upon the type of metal (ferrous or non-ferrous) being scanned.

- Ferrous metal objects (those containing iron or iron derivatives) cause the currents to “attract” to the object based upon the quantity of metal detected.
- For Non-ferrous metal objects (aluminum, precious metals, copper, etc.) the eddy current flows “around” the object
- The larger the ferrous mass, the more disruption to the field, and the smaller the mass the harder it is to detect



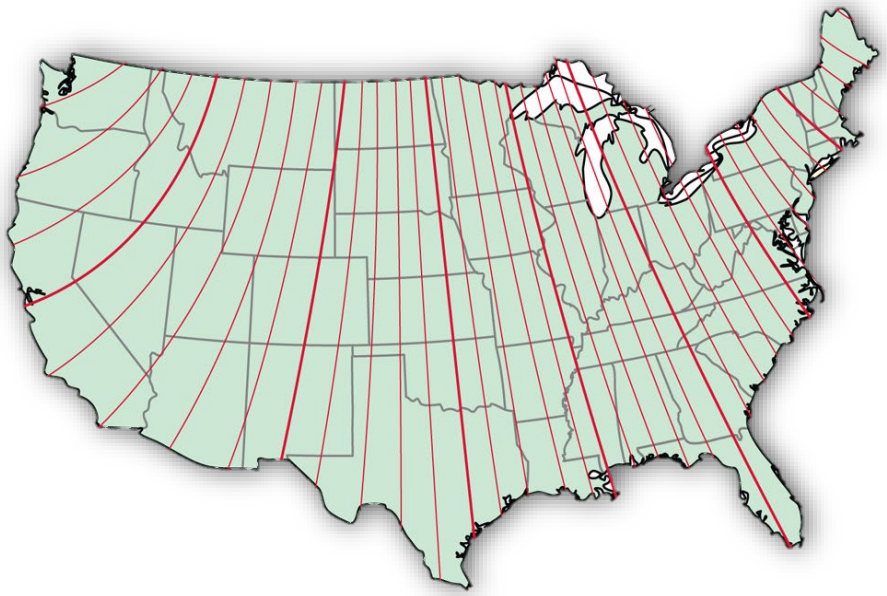




Passive Metal Detection

Passive metal detection, also known as Ferro-Magnetic Detection (FMD) systems use FMD sensors that monitor the earth's magnetic field.

- The earth's magnetic field is invisible and penetrates everything
- As ferrous (i.e., magnetic) items move through the field they create disturbances in the field
- FMD systems simply detect those disturbances, but require the object to be in motion through the magnetic field
- These systems can see through almost anything to find contraband and restricted items (clothing, hair, skin and flesh)



Limitations of Metal Detection

Items made of iron or steel or other materials that have a magnetic signature can be detected by both types of systems, however neither type of system will detect items that lack a magnetic signature.

Common items that are not detected yet could be used as a weapon include plastics, glass, wood, stone, chemicals, etc. and there are many such readily available non-metallic weapons for sale today through online portals.

Recent Examples of Hidden Weapons

Weapons Detection in Healthcare

The progression of screening for weapons and other contraband in healthcare facilities continues to increase, with new advances in technology and the continuing issue of workplace violence in our industry driving this evolution.

1 Pat Down / Wanding

- One historical process that is still in practice is the use of a handheld metal detection device (a “wand”) along with a physical “pat down” for any items detected on the subject's body.
- Without adequate training, this type of search can be ineffective with many items being missed and potential allegations of excessive physical contact.
- There is also the issue of potential injury to the person conducting searches such as needle sticks, cuts, exposure to hazardous substances, etc.

2 X-ray / Metal Detection

- Commonly seen in airports and other high-security areas (such as courthouses), these devices scan a person's belongings or their person to detect items.
- Many such devices require a person to walk through an arch which then actively or passively scans them for the presence of ferrous metals.
- New technologies being implemented include the use of passive detection of items using the earth magnetic field and AI algorithms to determine if the item may or may not be a weapon.

3 Common Privacy Concerns

- Such processes can impact the dignity of the subject, especially if patients who may already be suffering from anxiety regarding their treatment.
- The divestment of personal items and the searching personal belongings may be considered as invasive or excessive based upon how such searches are conducted, especially in public.
- Based upon who is conducting the search and why, there may be civil rights issues involved such as 4th Amendment violation claims and litigation.

When any type of weapons or contraband screening is being considered in a healthcare environment, one of the first questions which must be answered is “What problem are you trying to solve”. In other words, what are you looking for when conducing such screenings?

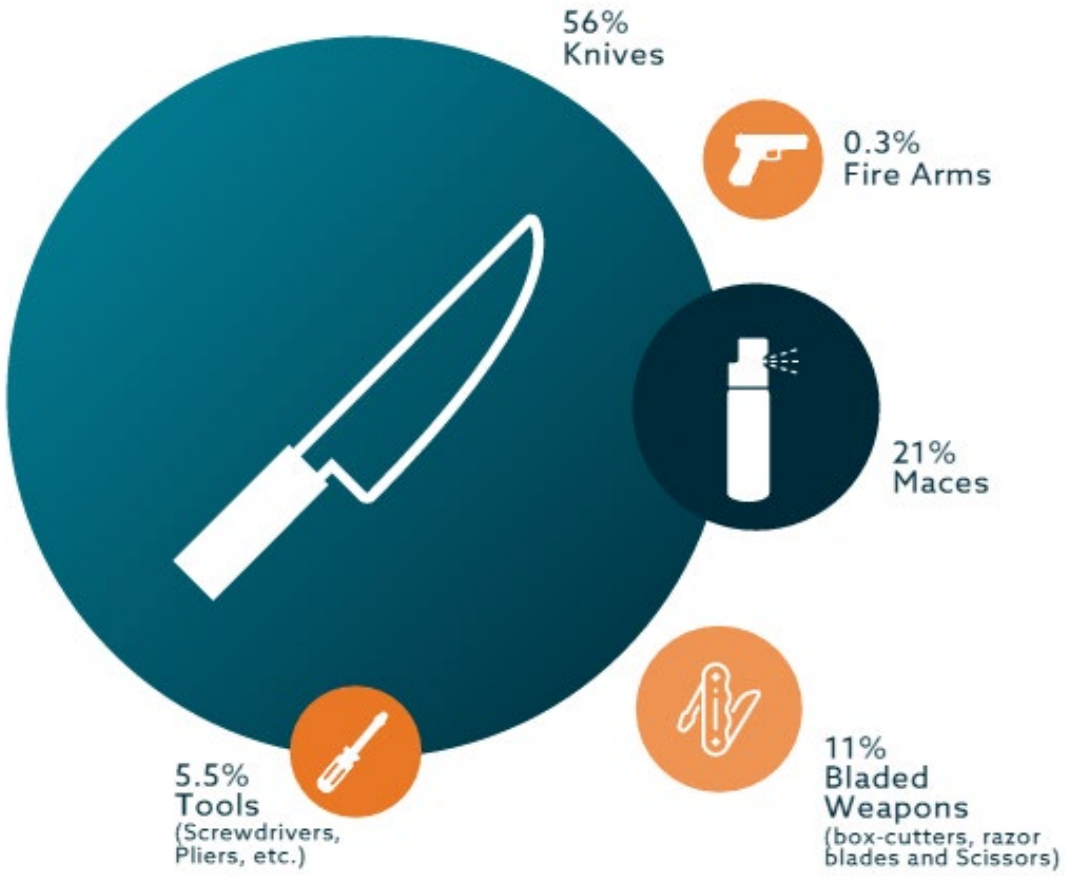
Advantages and Disadvantages

- Active devices (traditional metal detection) are comparably inexpensive; however, they can take a lot of space, are typically not portable, and can miss certain small items based upon settings and configuration. Their intent is to detect large weapons of mass injury, like firearms.
- Handheld wands require close physical contact with persons which could escalate issues and create additional personal privacy concerns.
- Ferromagnetic detection is often more effective at detecting both large and small items (knives, razor blades, etc.), are more adaptable as they are easily portable and do not emit radiation, making them safe for pregnant women, pacemakers, and medical implants.

Healthcare Facilities Require Specific Screening

The escalating violence in healthcare facilities calls for effective measures to prevent high-risk items from entering these environments. Hospitals must identify the most threatening items before selecting a weapons detection system. While guns are a common concern, knives, box cutters, and blunt objects are often used as weapons in healthcare settings.

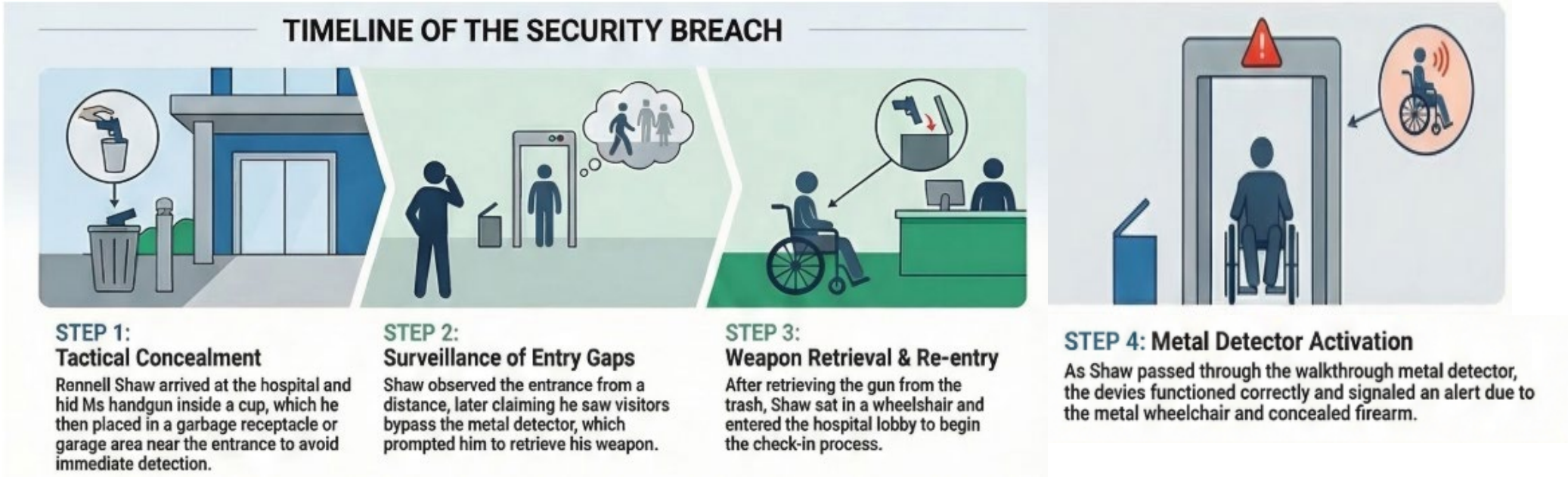
One study of a large urban healthcare system found that bladed instruments were the most frequently confiscated weapons. Therefore, hospitals must prioritize the detection of such items to combat violence in healthcare facilities effectively.



https://go.metrasens.com/l/219452/2023-08-25/21dbd1p/219452/1692990891yp3OtoTq/metrasens_infographic_weapons_healthcare.pdf

https://pubmed.ncbi.nlm.nih.gov/29306648/

Aurora Sinai Hospital Shooting – March 2nd, 2026



https://www.fox6now.com/news/aurora-sinai-medical-center-shooting-ronnell-shaw-makes-initial-appearance-court

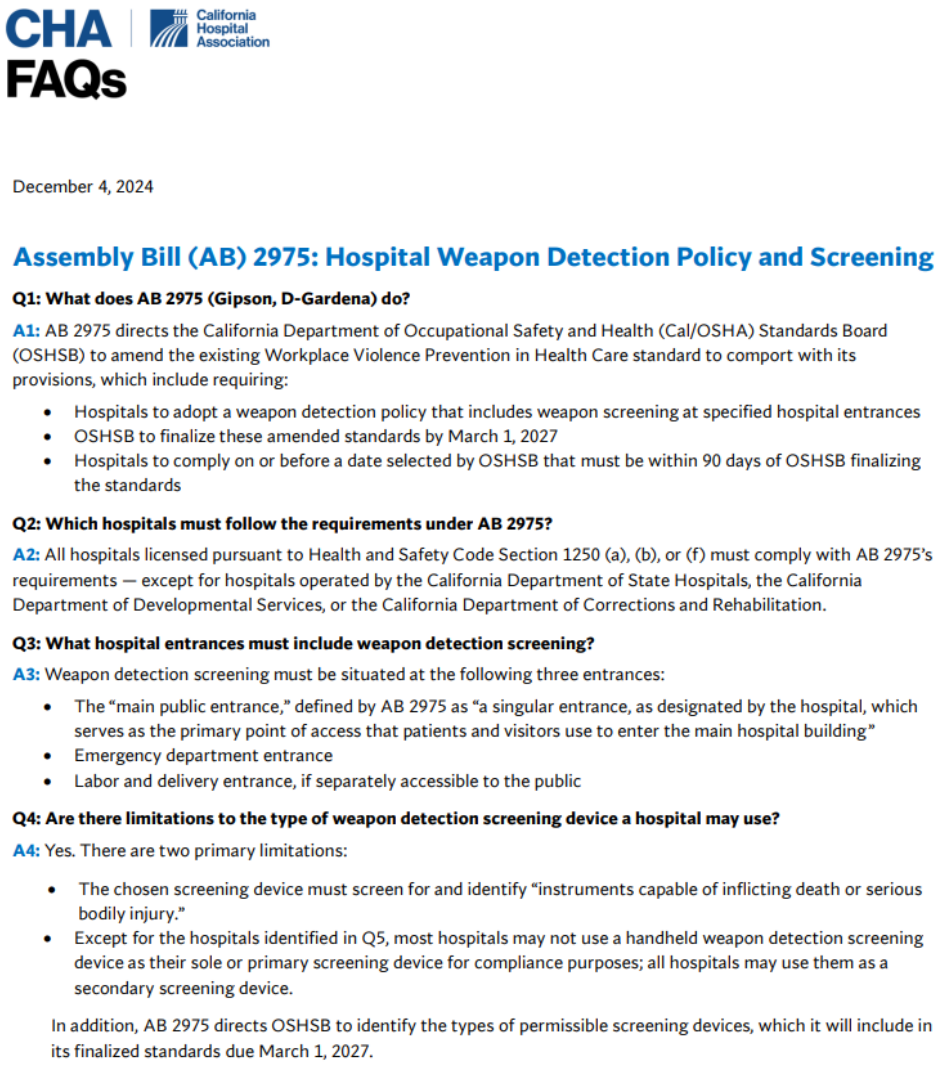
New Legislation Regarding Weapons Screening

In 2024, California passed Assembly Bill 2975 (AB 2975), a landmark new law requiring hospitals to implement weapons detection screening at key public entrances. Designed to reduce workplace violence and improve safety in healthcare settings, it places new operational and compliance demands on hospital administrators statewide.

These standards will also require hospitals to implement policies addressing personnel education and training, alternative search and screening protocols, response protocols for detected weapons, and public notification.

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240AB2975

https://calhospital.org/file/ab-2975-faqs/



CHA | California Hospital Association

FAQs

December 4, 2024

Assembly Bill (AB) 2975: Hospital Weapon Detection Policy and Screening

Q1: What does AB 2975 (Gipson, D-Gardena) do?

A1: AB 2975 directs the California Department of Occupational Safety and Health (Cal/OSHA) Standards Board (OSHSB) to amend the existing Workplace Violence Prevention in Health Care standard to comport with its provisions, which include requiring:

- Hospitals to adopt a weapon detection policy that includes weapon screening at specified hospital entrances
- OSHSB to finalize these amended standards by March 1, 2027
- Hospitals to comply on or before a date selected by OSHSB that must be within 90 days of OSHSB finalizing the standards

Q2: Which hospitals must follow the requirements under AB 2975?

A2: All hospitals licensed pursuant to Health and Safety Code Section 1250 (a), (b), or (f) must comply with AB 2975's requirements — except for hospitals operated by the California Department of State Hospitals, the California Department of Developmental Services, or the California Department of Corrections and Rehabilitation.

Q3: What hospital entrances must include weapon detection screening?

A3: Weapon detection screening must be situated at the following three entrances:

- The "main public entrance," defined by AB 2975 as "a singular entrance, as designated by the hospital, which serves as the primary point of access that patients and visitors use to enter the main hospital building"
- Emergency department entrance
- Labor and delivery entrance, if separately accessible to the public

Q4: Are there limitations to the type of weapon detection screening device a hospital may use?

A4: Yes. There are two primary limitations:

- The chosen screening device must screen for and identify "instruments capable of inflicting death or serious bodily injury."
- Except for the hospitals identified in Q5, most hospitals may not use a handheld weapon detection screening device as their sole or primary screening device for compliance purposes; all hospitals may use them as a secondary screening device.

In addition, AB 2975 directs OSHSB to identify the types of permissible screening devices, which it will include in its finalized standards due March 1, 2027.

Issues Regarding Signage

As rates of incivility and violence increase in healthcare facilities, organizations representing U.S. healthcare workers have been seeking clarity on lawful, appropriate signage in EDs to discourage threats and violence. In a Jan. 20 letter to CMS, the American College of Emergency Physicians, American Hospital Association and eight other national healthcare organizations asked the agency to clarify what signage could be interpreted as deterring patients from seeking or continuing care, which risks violating EMTALA.

“Enforcement to date has been uneven, with hospitals reporting that surveyors sometimes question or cite even neutral workplace violence signs as potential EMTALA violations,” the letter said.

January 20, 2026

The Honorable Mehmet Oz, MD, MBA
Administrator
Centers for Medicare & Medicaid Services
7500 Security Boulevard
Baltimore, MD 21244

Re: Clarifying Guidance on Emergency Department Signage and Workplace Violence

Dear Administrator Oz:

On behalf of the undersigned organizations representing emergency physicians, nurses, pharmacists, hospitals, health systems, and other frontline clinicians, we respectfully request that the Centers for Medicare & Medicaid Services (CMS) issue clear guidance enabling hospitals to post appropriate signage in emergency departments (EDs) to discourage threats and acts of violence against health care workers, consistent with the Emergency Medical Treatment and Labor Act (EMTALA).

Violence in the ED has escalated significantly in recent years. Emergency clinicians, nurses, and other staff routinely experience physical assaults, verbal abuse, and threats on an almost daily basis while delivering care. As a result, many are reaching their breaking point and leaving a health care workforce that is already stretched distressingly thin.

While many hospitals are investing in comprehensive workplace violence prevention programs to address these growing threats, the most basic element of prevention is often out of reach – that is, signage that sets expectations for respectful behavior and emphasizes that violence toward staff, patients, or visitors is unacceptable and could have consequences.

In prior correspondence with several of our organizations, CMS staff have noted that while CMS and the HHS Office of Inspector General discourage ED signage that could deter individuals from remaining for medical screening examinations and stabilizing treatment, hospitals may post additional signs if they can demonstrate that they would not be such a deterrent. But when pressed for clarity of what could, and could not, be considered a deterrent, CMS has thus far declined to provide further explanation and overarching guidance, and instead stated that potential EMTALA violations are considered on a case-by-case basis.

This essentially forces hospitals who want to protect vulnerable frontline staff to take a leap of faith in posting signage that is their “best guess” as compliant. Further confusing the issue, enforcement to date has been uneven, with hospitals reporting that surveyors sometimes question or cite even neutral workplace violence signs as potential EMTALA violations. The resulting uncertainty undermines and discourages hospitals’ efforts to protect staff while fully honoring EMTALA obligations.

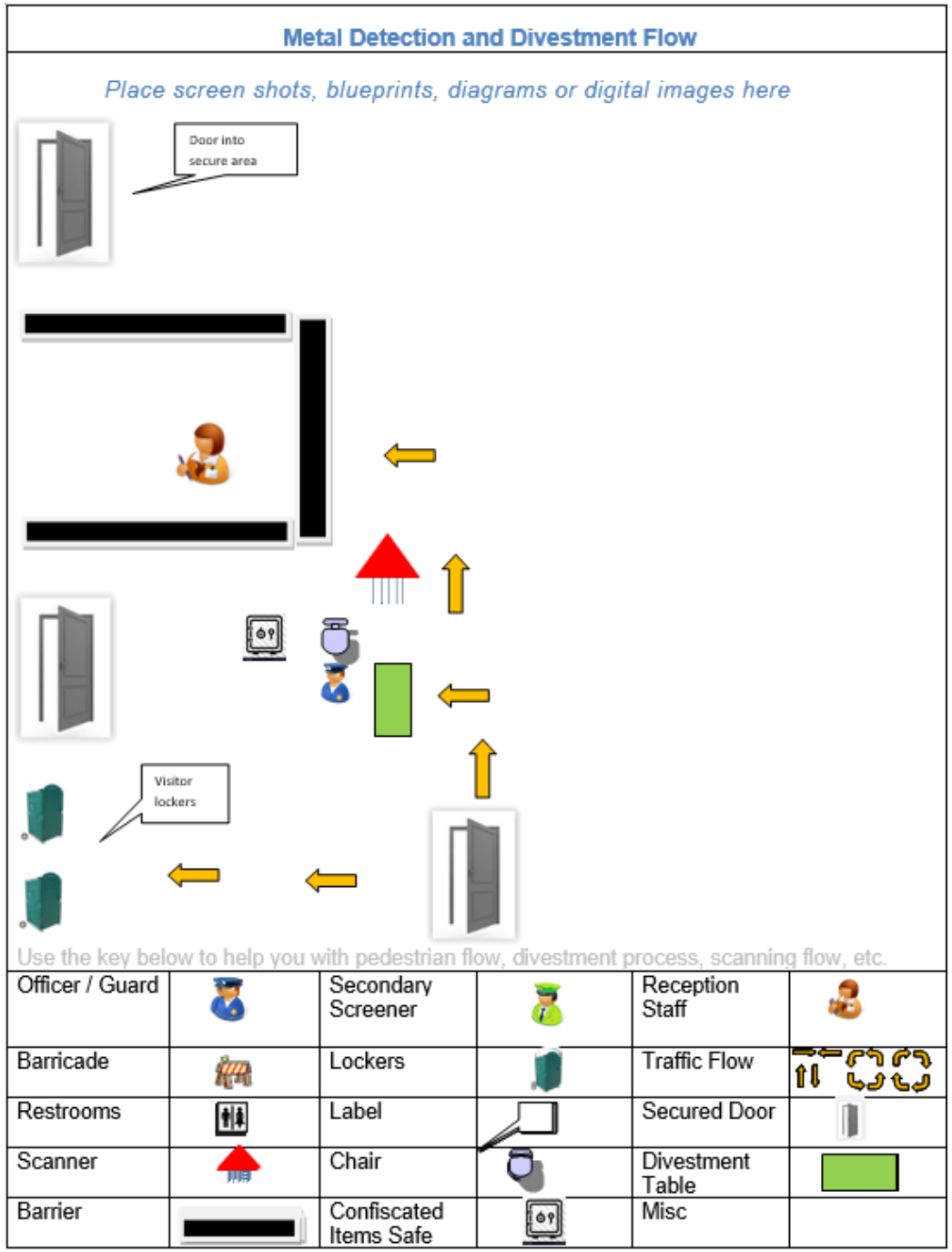
https://www.beckershospitalreview.com/quality/patient-safety-outcomes/when-emtala-collides-with-hospital-anti-violence-signs/

https://www.acep.org/SysSiteAssets/new-pdfs/advocacy/sign-on-letter-to-cms-on-violence-and-ed-signage-1.pdf

Weapons Screening Checkpoints

Based upon the need and types of persons and objects being screened, security checkpoints using metal detection can vary significantly, but the concepts are somewhat universal.

- Deter those that would attempt to enter an area with an unauthorized item or weapon
- Detect such objects on the peripheral or outermost perimeter of the area being protected
- Detain those persons or items to prevent them passage into the secure zone



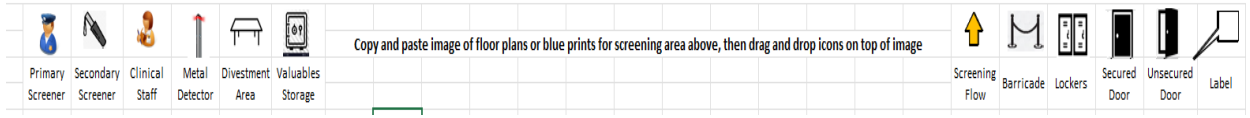
Weapons Detection Toolkit

WarSec Security has developed a Weapons Detection toolkit specifically for healthcare environments. It address common issues with areas for deployment such as Emergency Departments, Behavioral Health areas and entrances to a facility.

Weapons Detection Implementation Toolkit	Current Status	Assigned To:	Estimated Completion Date:	Notes / Comments:
Physical Environment Issues				
Signage				
• Clear signage indicating No Weapons allowed within the building displayed prominently at entrances	1			
• No Weapons signage includes pictograms and / or bilingual instructions	1			
• No Weapons signage includes reference to appropriate local statutes (if applicable or required)	1			
• Clear signage indicating Metal Detection in Progress displayed prominently at entrances with screening	1			
• Metal Detection in Progress signage includes pictograms and / or bilingual instructions	1			
• Metal Detection in Progress signage includes notice regarding medical devices or implants	1			
• Metal Detection in Progress signage includes additional instructions regarding disposition of items	1			
• Clear signage indicating Video Surveillance In Progress displayed prominently at entrances	1			
• Video Surveillance signage includes pictograms and / or bilingual instructions	1			
• Clear signage indicating that violence against healthcare workers is a criminal act (if applicable)	1			
• Violence against healthcare workers signage includes pictograms and / or bilingual instructions	1			
• If Amnesty Box is used, signage clearly indicates disposition of all items surrendered	1			
•	1			
Architecture / Construction and Design				
• Metal screening area allows for *** inches / *** feet of clearance for optimal operation	1			
• Metal screening area provides adequate space for queuing of persons to be screened	1			
• Metal screening area provides adequate space for divestment and other related processes	1			
• Metal screening area prevents circumvention of screening process without easily being detected	1			
• Metal screening area provides adequate lighting for screening and divestment areas	1			
• Divestment area provides adequate space for temporary secure storage of confiscated	1			

Instructions and Definitions | Emergency Department Entrance | ED Psych Patients | Behavioral Health Inpatient | Restricted Access Events

Place screen shots, blueprints, diagrams or digital images here



Weapons Detection Program Considerations

Issues for deliberation before implementing a weapons screening stations should include:

- Signage and Impacts on Medical Implants / Prosthetics
- Architecture and Construction (due to NFPA Life Safety code considerations)
- Power and Network Connectivity
- Equipment Placement and Settings (to avoid interference)
- Integration with Video Surveillance and Visitor Management
- Staff Training and Divestment Procedures
- Search Policies and Legal / Regulatory Impacts (4th Amendment, ADA, etc.)
- Resources and Recurring Costs of Operation (FTEs)

Weapons and Contraband Screening Policy / Procedure Considerations

If your organization is considering the use of weapons / contraband screening or has already implemented such technology, the following are some items that should be included in policies governing their use:

- When, where and on who will such processes be used (high risk patients only such as BH / ED, all visitors and outpatients entering the facility, staff / vendors, in use 24 hours a day or only during certain hours, etc.)
- What type of screening will be used and to what extent? For example, if all visitors are to be screened, what are you searching for (weapons of mass injury, knives, tools, etc.)? How are unidentified items treated once a scan detects their presence (divestment and pat down, public vs private searches, etc.)
- Training of those conducting such scans / searches including use of equipment, interpretation of findings, seizure, storage and disposition of prohibited items, use of amnesty bins, involvement of local police, etc.
- Restrictions based upon expectations of privacy, organizational policy and procedure and applicable regulations and legal statutes (4th Amendment issues, EMTALA, administrative vs criminal searches, etc.)

Portable Duress Alarms

Another technology which many healthcare organizations are considering is the implementation of portable duress alarms for staff. Such systems can offer many advantages to static “hard-wired” panic buttons.

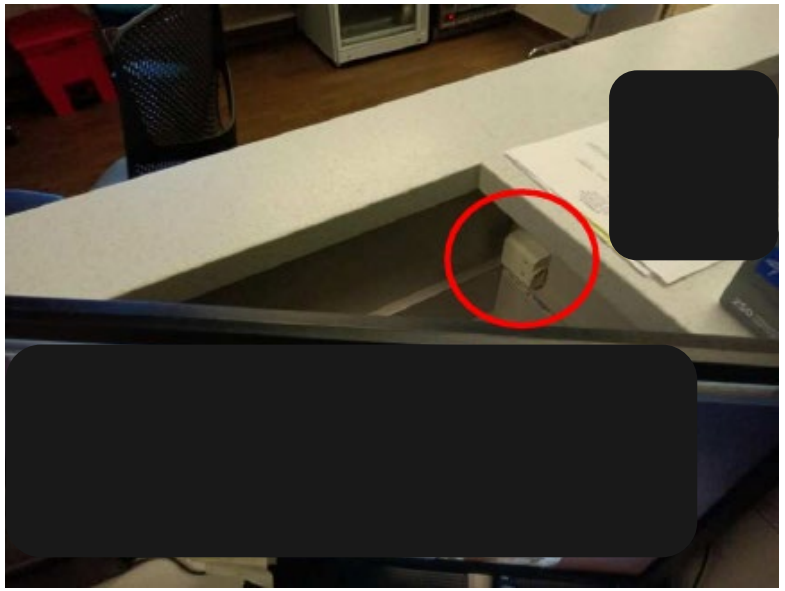
- Constant Protection: Since the button moves with the staff member, help is accessible in hallways, patient rooms or places where violence can occur, but static buttons are impractical.
- Discreet Activation: Staff can trigger an alarm from their pocket or behind their back without escalating a situation by reaching for a wall or desk-mounted unit.
- Real-Time Location Services (RTLS): Most modern portable systems tell security exactly where the staff member is, which is vital if the victim is being moved or is in a large unit.

Portable Duress Alarms (cont.)

There are also several disadvantages to using portable systems rather than fixed panic buttons.

- Preventative Maintenance: If a staff member forgets to charge their device or the battery dies during a shift, they are unprotected and may not realize it until they try to use it.
- Coverage and Dependability: Certain areas of the facility may have “dead zones” to contend with (e.g. radiology) and will require extensive use of beacons to ensure coverage.
- Real-Time Location Services (RTLS): While most think of this as an advantage, some staff will feel that the organization is “tracking” them and may choose not to wear provided devices for this reason.

Portable Duress Alarms (cont.)



Portable Panic Button Policy / Procedure Considerations

If your organization is considering the use of portable or body worn panic buttons or has already implemented such technology, the following are some items that should be included in policies governing their use:

- Consistent training and education to staff regarding the use of such devices, including location, how to operate and expectations for response when buttons are activated as well as routine refreshers as part of the overall WPV program.

- Preventative maintenance and testing schedules for all devices, including those that have self-diagnostic capabilities, to provide that they do not fail when needed and are in a constant state of readiness.

- Clear expectations for staff concerning such devices and their use, including potential disciplinary action for noncompliance. Consider categorizing such items as PPE and use existing HR policies as needed.

Ideally an organization should consider a blend of portable and fixed panic buttons based upon location and patient populations, making certain that fixed buttons are identifiable and can be easily accessed by staff when needed.

Research and Reference Materials

There is a significant amount of reference material on these topics, below are just some examples.

INTERNATIONAL ASSOCIATION OF PROFESSIONAL SECURITY CONSULTANTS

Evidence-Based Security Practices

WEAPON DETECTION IN PUBLIC ACCESS FACILITIES

César Leonardo Pinzón-Gómez, MD, MPH
EBSP-23-02

Campus Safety EXPERT SERIES

18 TIPS FOR USING METAL DETECTORS EFFECTIVELY

Effective Controls on Emergency Department Violence

By Dr. Scott Hill, CPP, CHPA and Dr. Mindy Burch

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WarSec Security

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"Protecting Those That They May Heal"