

# Improving Security and Safety While Reducing Risk through Design

Tom Smith, CHPA, CPP  **IAHSS**  
International Association for Healthcare Security & Safety

Kevin Tuohey, CHPA  **IAHSS**  
International Association for Healthcare Security & Safety

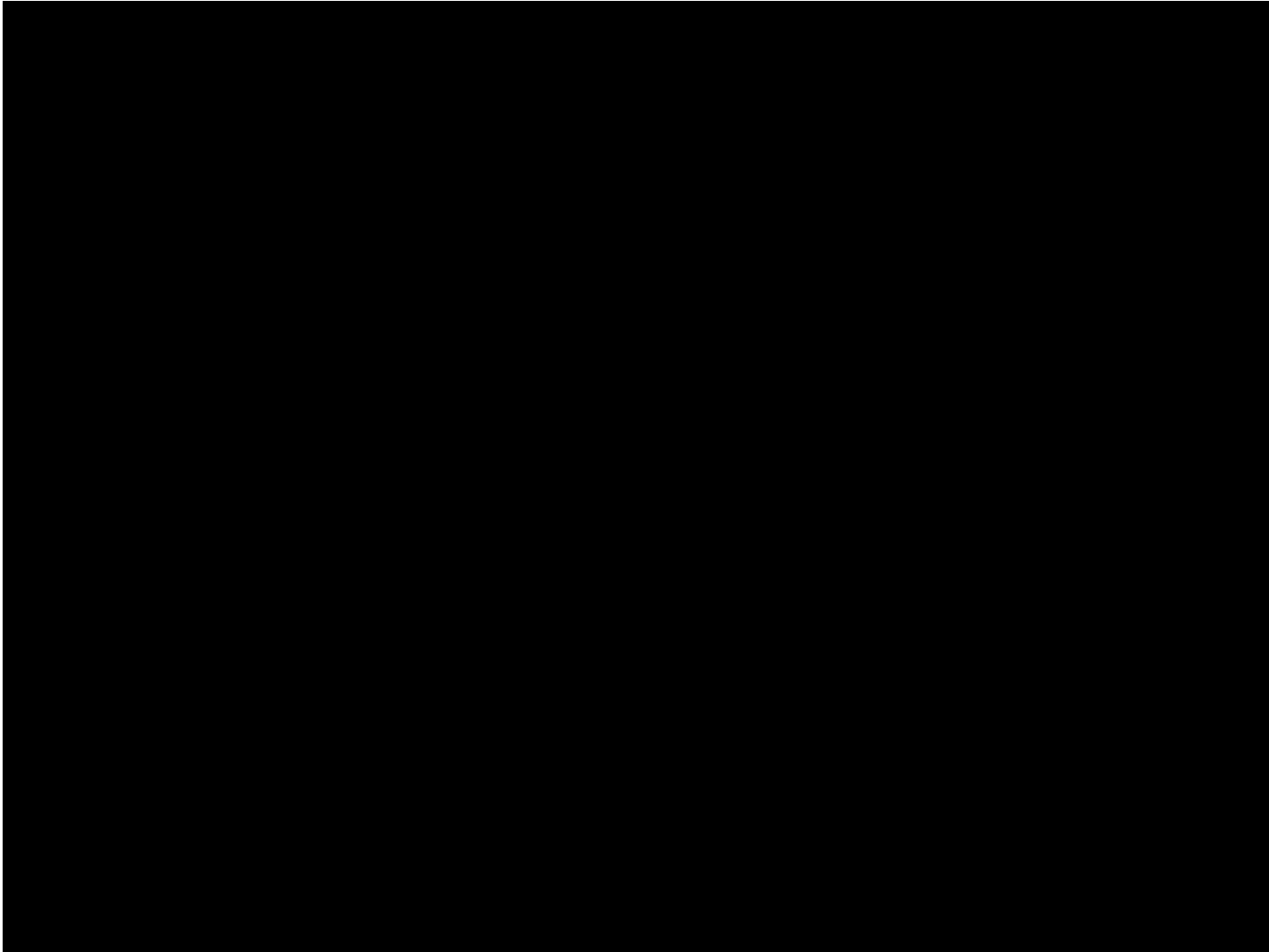
Videos from presentation can be found  
at <https://iahss.site-ym.com/?page=memberresourcesmsc>

**Tom Smith** is a former [International Association for Healthcare Security & Safety](#) (IAHSS) President, the current Chair of the IAHSS Council on Guidelines and the President of [Healthcare Security Consultants](#).

**Kevin Tuohey** is the President Elect, IAHSS and the Executive Director for Research Compliance at Boston University and Boston Medical Center.

Tom and Kevin have extensive experience working on both the IAHSS design and industry guidelines and as members of the Health Guidelines Revision Committees for the 2014 and 2018 FGI Guidelines,





## Session Objectives

- Explain the importance of addressing physical and operational security issues during concept development and design.
- Recognize security-sensitive areas in health care settings and design security measures to complement the services provided.
- Identify the expertise needed for multidisciplinary project teams to successfully address security concerns.
- Describe actions hospitals and outpatient facilities need to take to be prepared for natural and man-made emergencies.

## IAHSS Council on Guidelines

- Appointed to develop non-prescriptive basic industry guidelines.
- Guidelines evolved into a mix of basic and more detailed guidelines.
- Became evident that guidelines for the built environment – during design - prior to “operations” – could improve program quality and compliment the operations guidelines.
- The concept for Design Guidelines was developed by the Guidelines Council in October 2009.
- The Council agreed to empower a Task Force to develop the HCF Security Design Guidelines.



**“Good judgment comes  
from experience and a lot  
of that comes from bad  
judgment”**

**Will Rogers**

## IAHSS Design Guidelines Task Force

### Membership

Chair, IAHSS Guidelines Council

Vice Chair, IAHSS Guidelines Council

Member, IAHSS Guidelines Council and  
Chair, Design Guidelines Task Force

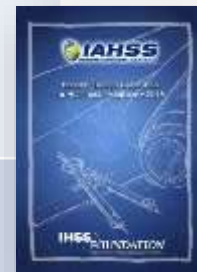
Representative from Industry – Public  
Safety Advisor, ADT

Representative of Authority having  
Jurisdiction, Architect and Health Care  
Surveyor - Wisconsin

Representative of Emergency  
Management Agency and Regional  
Administrator - Maryland

Representative of Health Care  
Facilities, Design & Construction, IAHSS  
member - Massachusetts

Representative from Industry –  
President, SafirRosetti





## IAHSS Design Guidelines

### **Who Are the Design Guidelines For?**

(healthcare security practitioners, designers, engineers, architects, project planners, building owner representatives, department stakeholders)

### **How and Why Were they Developed**

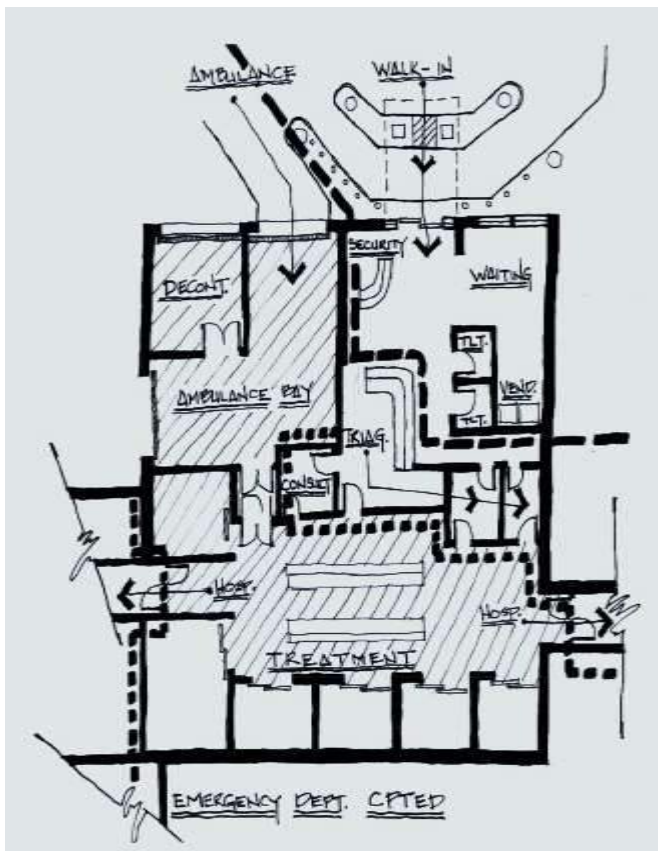
(multidisciplinary expertise, proactive and more prescriptive approach. Includes tools to design and build security into each renovation or new construction project)

Who was  
involved in  
planning this  
work....who  
was not  
involved?



**Is it too early or too late for security?**

## IAHSS Design Guidelines



- Applicable to **all** Healthcare Facilities (HCFs) by addressing security expertise needed.
- Address security **upfront** and **early** on during design
- Focus on **‘What should be done’** (checklist) not how or why
- Clear, concise & **reasonable** (more prescriptive than our Basic Industry Guidelines)
- **Cost effective** (expense avoidance)
- **Security emphasis** impacting wide range of areas including Safety, Emergency Management, Regulatory Compliance.
- **Compliance and consistency** with regulatory requirements and best practices.

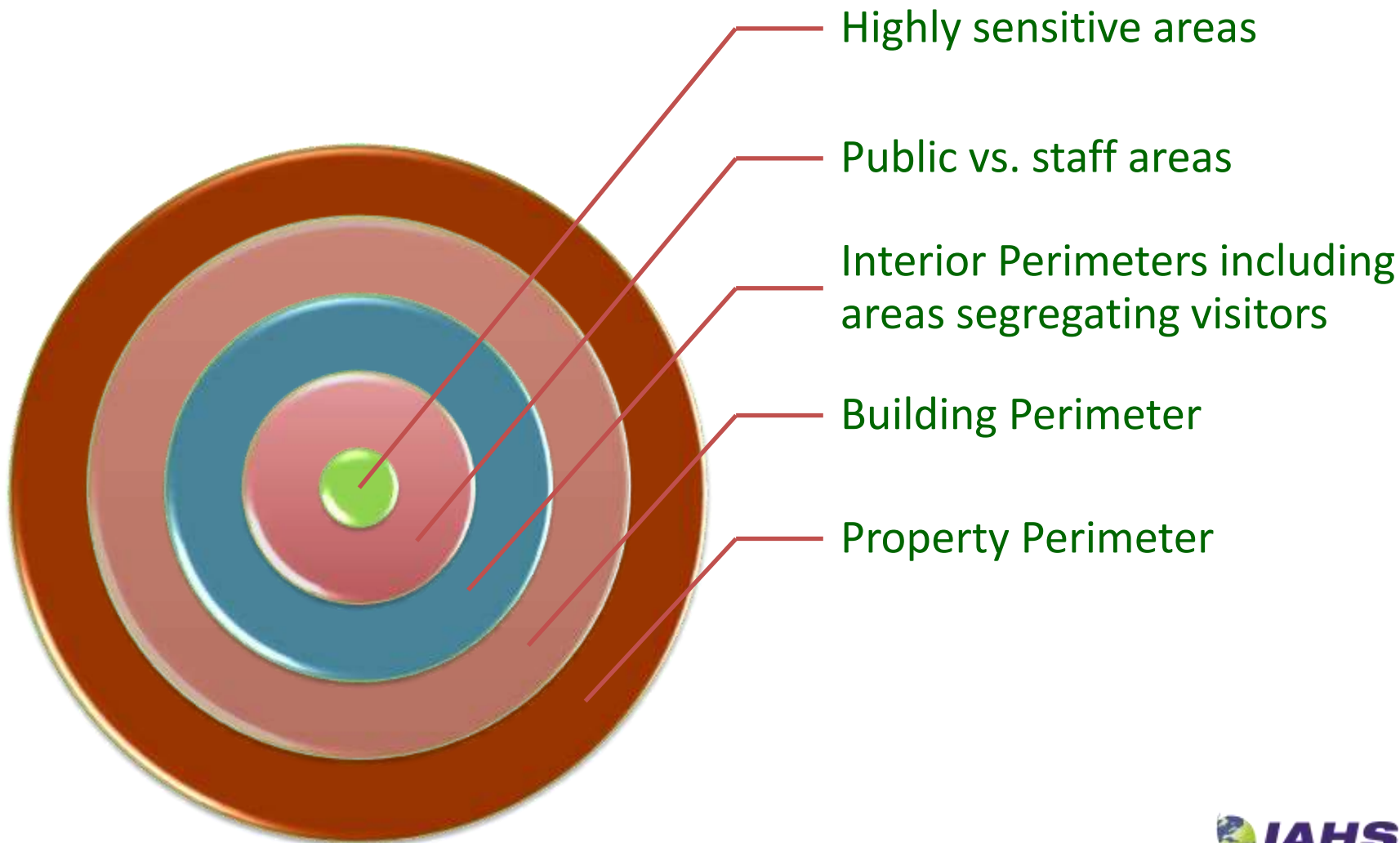
# IAHSS Design Guidelines

## General Guideline

- Parking and External Campus Environment Design
- Buildings and the Internal Environment Design
  - Inpatient Facilities
  - Emergency Department
  - Mental Health Areas
  - Pharmacies
  - Cashier and Cash Collection Areas
  - Infant and Pediatric Facilities
  - Protected Health Information Areas
  - Utility, Mechanical, and Infrastructure Areas
  - Biological, Chemical, and Radiation Areas

## Emergency Management Design

## IAHSS Design Guidelines - General

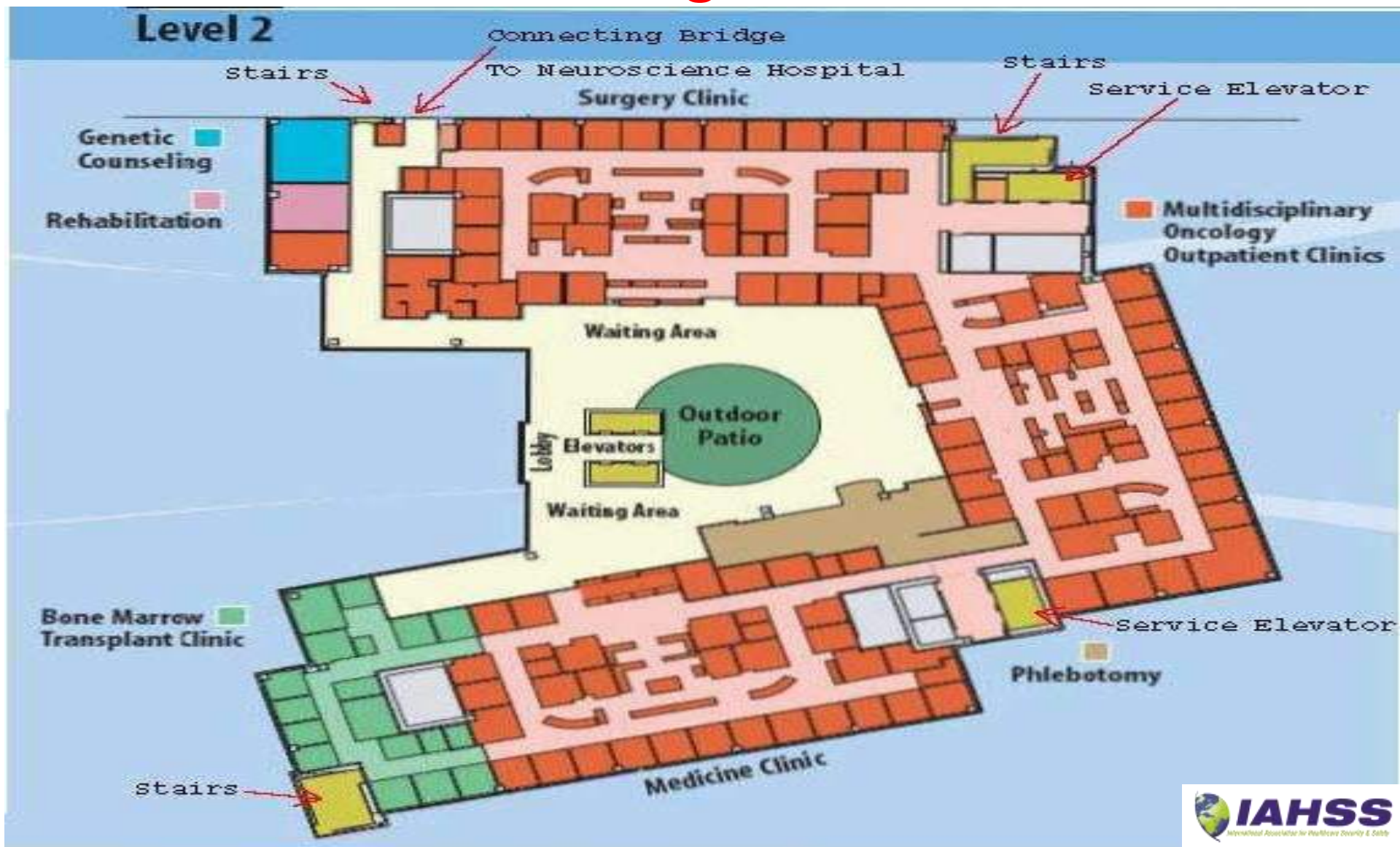




## IAHSS Design Guidelines - General



# What Is Wrong With This Picture?







## IAHSS Design Guidelines - External

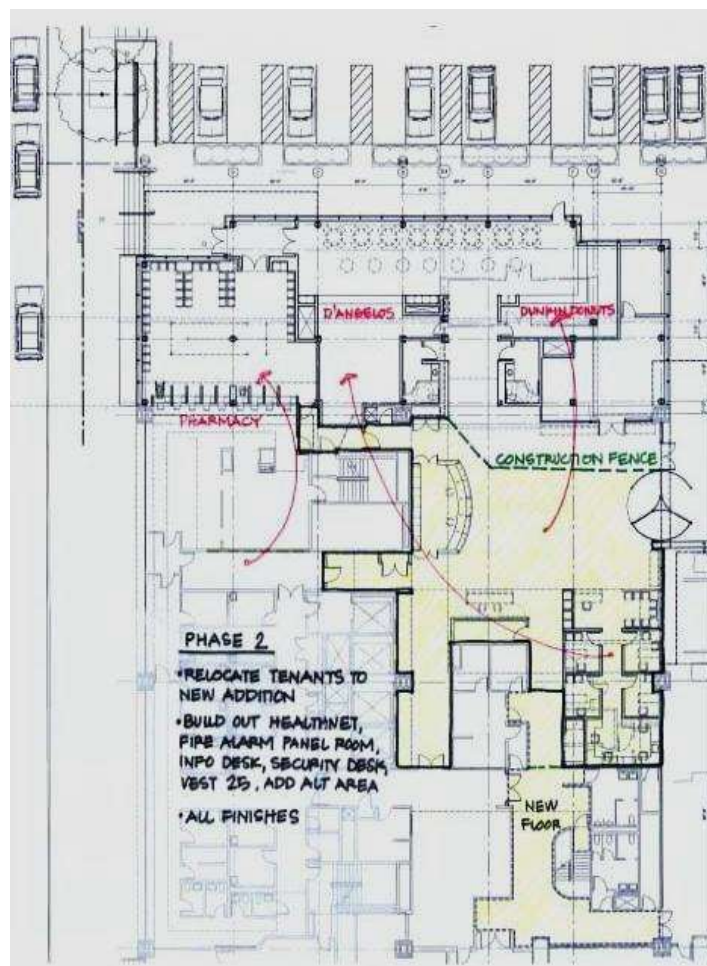
The security of parking facilities and the external campus environment is a significant concern for Healthcare Facilities (HCFs) and for users of those

facilities. The proper design and effective management of the external campus environment can minimize violent and property crime, promote efficient resource management, and provide a welcoming environment.



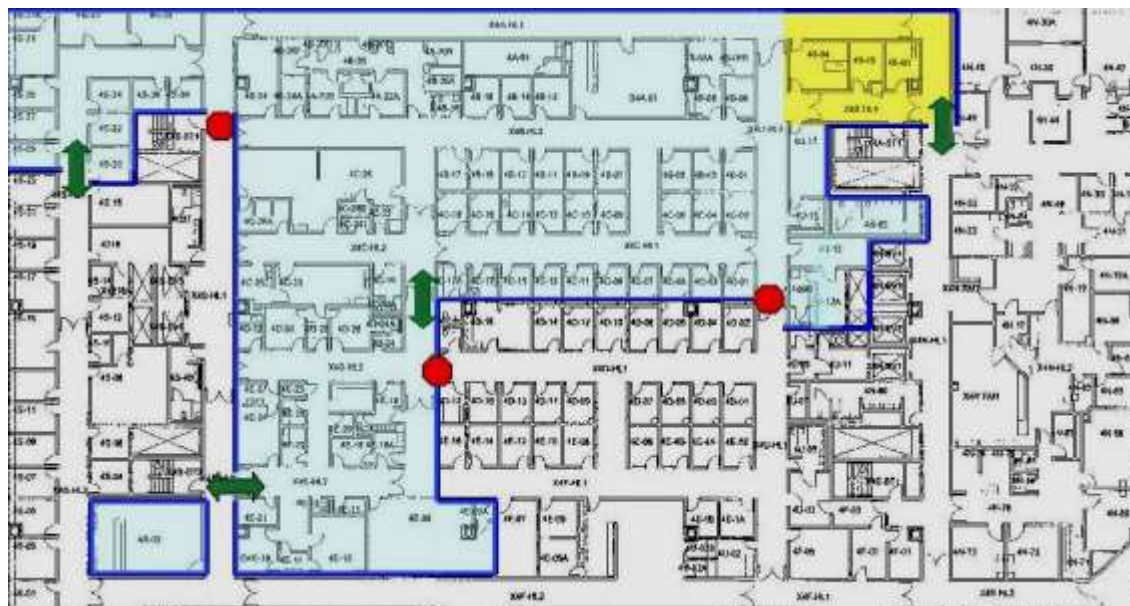
## IAHSS Design Guidelines – Internal

The physical design of buildings and integration of electronic security systems within the internal built environment are important components of the Healthcare Facility (HCF) protection plan and the patient, visitor and staff experience. Security design considerations must address the particular requirements and services offered by the HCF.



## IAHSS Design Guidelines – Infant / Pediatrics

Access to the infant or pediatric care area should be limited. Access to all doors, interior elevators, and stairwells into the infant or pediatric care area should be controlled and restricted to authorized personnel only. All stairwells and emergency exits serving the infant or pediatric care area should be equipped with delay egress hardware in accordance with applicable codes. Where possible, consideration should be given to a designated staff entry/exit that is separate from public entrances.



Relational factors, including movement of personnel and equipment to and from adjoining departments, should be considered when designing the secured compartment (e.g., labor, delivery & recovery, post-partum, NICU).



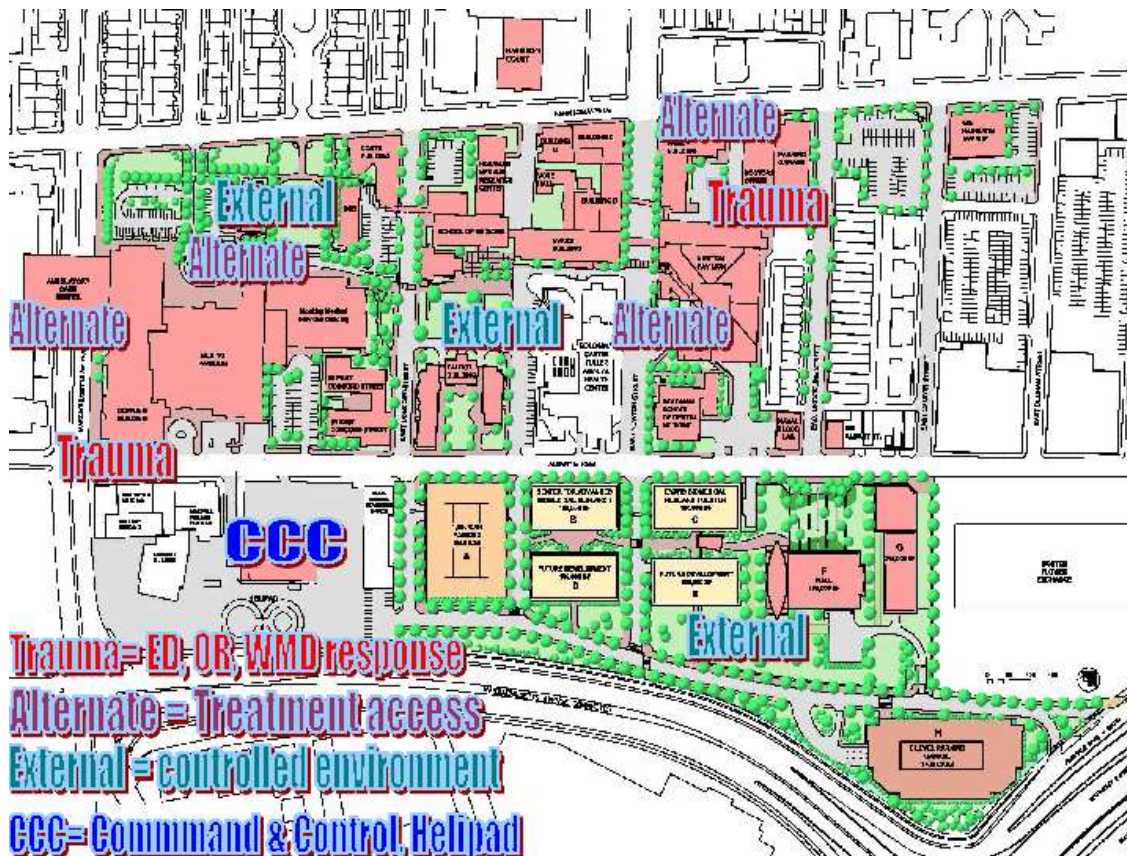
## What Is Wrong With This Picture?



# IAHSS Design Guidelines – Emergency Management

The design of the Healthcare Facility (HCF) should consider emergency management practices that allow for the flexibility and resilience

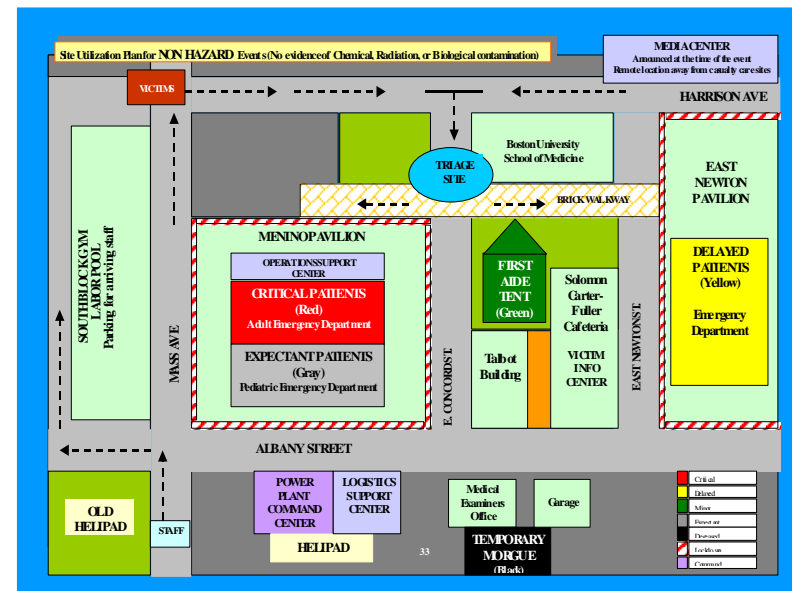
required to manage emergency events. An all-hazards approach to design should be applied to help the HCF prepare for, respond to, and recover from manmade events and natural disasters.



# IAHSS Design Guidelines – Emergency Management

The design should support the ability to shelter-in-place, repurpose space and should include consideration for:

- Increased inpatient capacity.
- Staging area(s) for emergencies.
- Mass triage during epidemic/pandemic outbreaks
- Assignment of patient populations based on mobility.
- Increased isolation capacity, including medical gasses and other patient care elements in walls/ceilings of rooms intended to be dual-use, convertible space.
- Community support related to widespread utility outages or severe weather.
- External areas for supply or other support vehicles or trailers.
- Areas for permanent or temporary helipad facilities.
- Increased morgue capacity, including racks for storage and cooling capability.



- Revised in 2016.
- Reviewed by the Emergency Nursing Association and IAHSF members.
- Included new language on exam and interview spaces, emergency departments, behavioral/mental health treatment areas, decontamination rooms, etc.
- Updated reference materials.



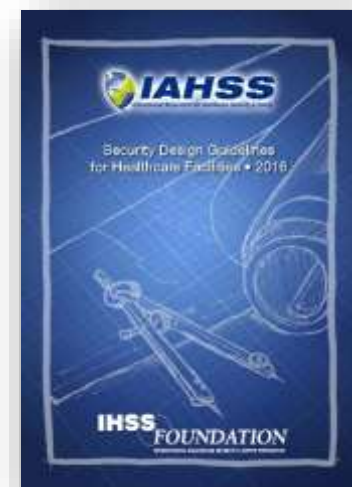


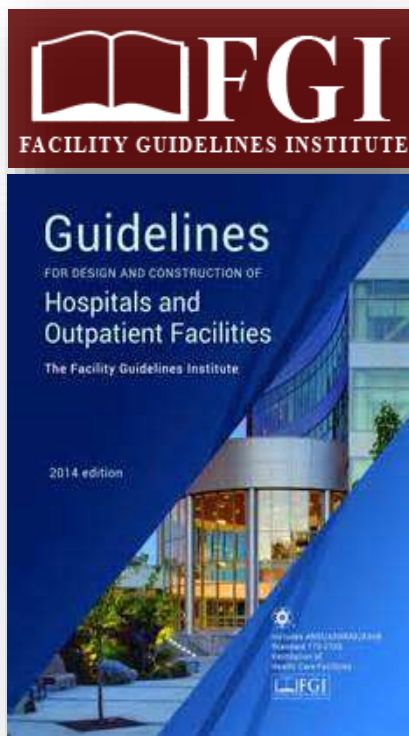
- Like FGI Guidelines, refer to other guidelines, requirements, regulations including NFPA, WHO, etc.
- Both Design and Industry Guidelines offered as reference material to Accreditation Canada and The Joint Commission.
- Can be used as checklist for safe operations, secure design, sensitive area preparedness, program audit, staff development, worker safety, strategic direction of security function and many other uses.
- Recently provided to American Hospital Association and ASIS for use as reference material.



## Continues to “Open Doors”

- Provided for use as reference material to:
  - American Organization of Nurse Executives
  - American Society for Healthcare Engineers
  - American Society for Industrial Security
  - Emergency Nurses Association
  - Joint Commission
- Presented at Annual Meetings to:
  - American Society for Healthcare Engineers
  - Canadian Healthcare Engineering Society





In 2012, the IAHSS Guidelines Council, Security Design Guidelines Task Force, submitted approximately 40 comments to the FGI Health Guidelines Revision Committee.

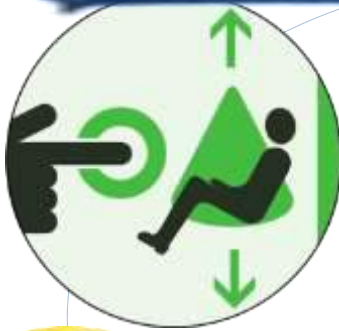
The response was very positive and two IAHSS members were appointed, mid-cycle, to the 2014 HGRC.

It was made clear that design information related to security and emergency management was needed.

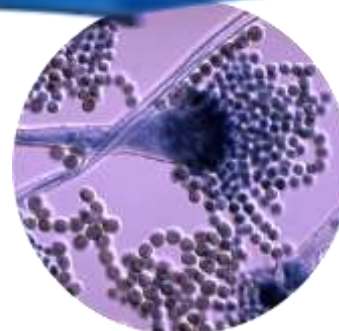
The IAHSS Design Guidelines are now referenced within the 2014 FGI Guidelines.

## Safety Risk Assessment Team

Patient  
Handling  
(existing)



Infection  
Control  
(existing)



Security



Medication  
Safety



Falls



Psychiatric  
Injury  
(existing)



Immobility



SRA Component	Facility Type/Area	Project Scope
Infection control risk assessment (ICRA)	All	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. All renovations</li> </ol>
Patient handling & movement assessment (PHAMA)	Where pt handling, transport, transfer and movement occur	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. Major renovation/renovations changing functional use of space</li> <li>3. Minor and minimal renovations where patient handling occurs</li> </ol>
Patient fall prevention	Any area to which a patient or family member has access	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. Major renovation/renovations changing functional use of space</li> <li>3. Minor and minimal renovations where patient falls may occur</li> </ol>
Medication safety	Medication safety zones	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. Major renovation/renovations changing functional use of space</li> <li>3. Minor and minimal renovations where medication preparation, processing, and distribution occurs</li> </ol>
Behavioral and Mental Health Risks	Any area where behavioral health patient care is provided	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. Major renovation and renovations changing functional use of space to include the care of behavioral health patients</li> <li>3. Minor/minimal renovations where behavioral health patient treatment occurs</li> </ol>
Patient Immobility	Inpatient	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. Major renovation/renovations changing functional use of space to inpatient use</li> <li>3. Minor and minimal renovations where inpatient care occurs</li> </ol>
Security Risks	All	<ol style="list-style-type: none"> <li>1. New construction</li> <li>2. All renovations</li> </ol>



- Health Guidelines Revision Committee (HGRC) appointed in early 2015
- 100 members appointed with two specifically to provide expertise in designing for security
- Three year process including assignment to:
  - Hospital, Outpatient or Residential Guidelines Group
  - Specific parts / sections of document to identify “fundamental” verses “beyond fundamental” language
  - Two meetings in person in 2016 and 2017

- 2018 Guidelines development included concerted effort to address seven specific areas throughout the three documents.
- Topic Groups addressed the above included:
  - Security Topic Group
  - Emergency Management Topic Group
  - Technology Topic Group
- Security Topic Group chaired by two members of IAHS  
Guidelines Council as well as five public volunteers - two other  
IAHS Senior Members, one nursing administrator, one facilities  
administrator, and one design professional.

## Proposals - Security

Continue from 2014 effort with identification of areas that require greater security needs. Proposals addressed:

- Security of patient care areas serving pediatrics, intensive care, behavioral / mental health areas.
- Security of infrastructure including mechanical spaces and chemical, biological, radiation storage / waste areas.
- Security of sensitive areas pharmacies and morgue spaces.
- including mechanical spaces and chemical, biological, radiation storage / waste areas.

## Proposals - Emergency Management

- Consider design needs related to ability to both evacuate and to shelter in place.
- Consider ability to provide services in adjacent or alternate space when primary space is lost due to incident (hazard present, lockdown in place, patient surge event).
- Consider ability to use alternate entrances and exits to accommodate patients, staff, responders when primary paths cannot be used.
- Consider storage needs for emergency response.
- Consider design of both internal and external spaces in the event that they are needed with plan for how they would connect.
- Consider back up power and fuel connections and needs.





# Healthcare workers face significant risks of job-related violence



While under **20%** of all workplace injuries happen to healthcare workers...



Healthcare workers suffer **50%** of all assaults.

Source: Bureau of Labor Statistics

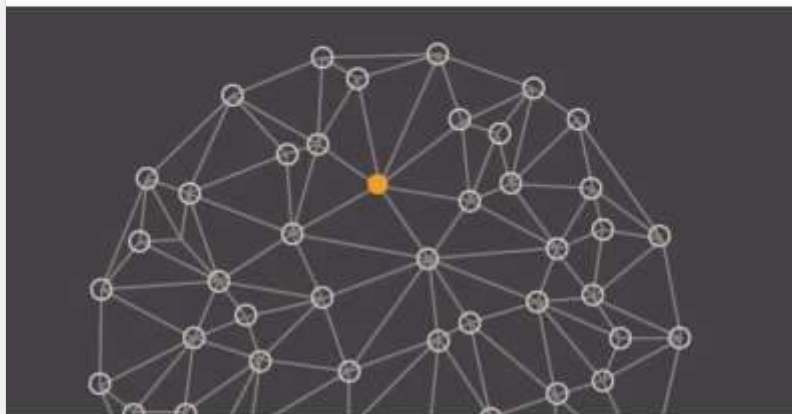
MILLIMAN RESEARCH REPORT

## Cost of community violence to hospitals and health systems

Report for the American Hospital Association

July 26, 2017

Jill Van Der Sijde, ASA, MAIA  
Rick Crater, FSA, MAIA  
Stoddard Davenport  
Mason Roberts, MBA

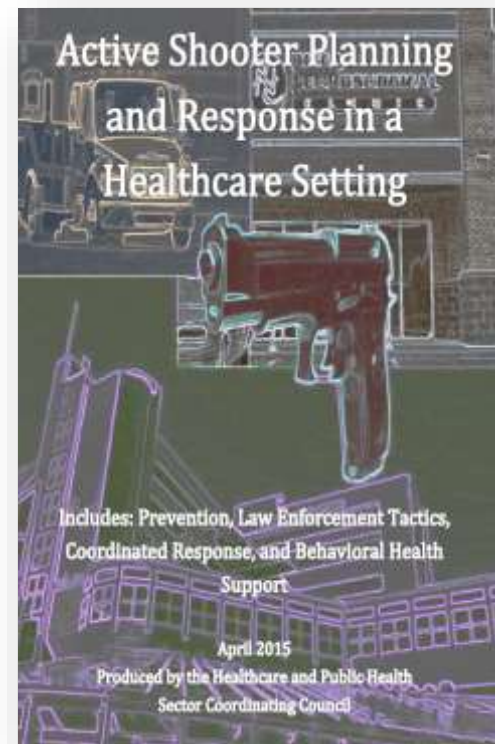


 Milliman

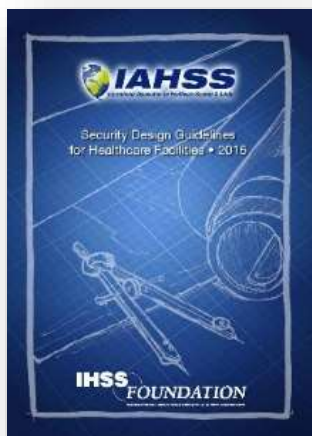
“Overall, we estimated that proactive and reactive violence response efforts cost U.S. hospitals and health systems approximately \$2.7 billion in 2016. This includes \$280 million related to preparedness and prevention to address community violence, \$852 million in unreimbursed medical care for victims of violence, \$1.1 billion in security and training costs to prevent violence within hospitals, and an additional \$429 million in medical care, staffing, indemnity, and other costs as a result of violence against hospital employees.”

Lets talk about

More Specifically







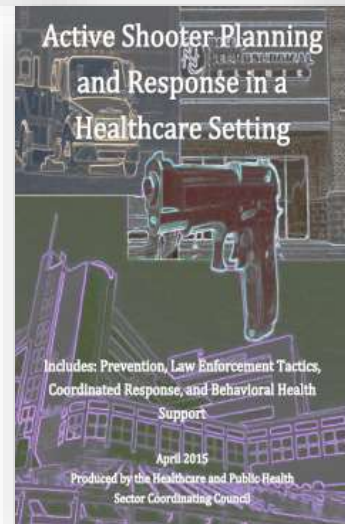
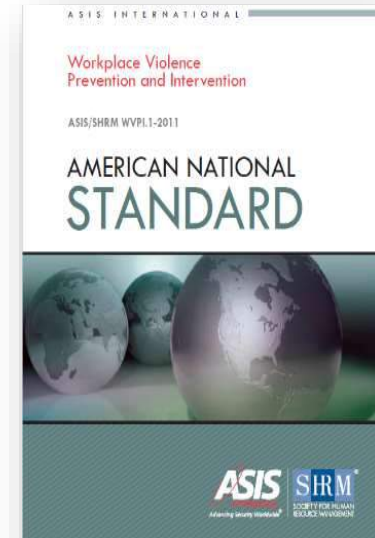
## General Guideline

### INTENT d:

The development or continuation of institutional design standards related to the protection of vulnerable patient populations, the securing of sensitive areas, the application of security and safety systems—as well as the infrastructure required to support these needs—are issues best addressed early in the design process to be most cost-effective.











Security Risk Assessments  
Violence in Healthcare  
Management of Weapons  
Searching Patients  
Security in the Emergency Setting  
Behavioral/Mental Health Areas  
Prisoner Patient Security  
Security Sensitive Areas  
Active Shooter



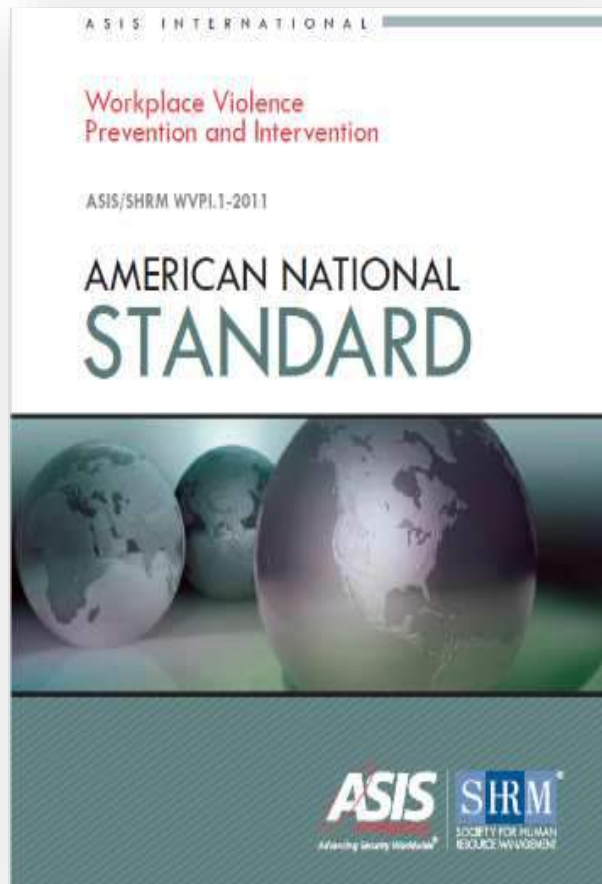
## The Impact of Workplace Violence on Healthcare and Social Services Workers

Risk Factors

Violence Prevention Programs

Workplace Violence Program  
Checklists





Scope

References

Definitions

Establishing Multidisciplinary Involvement

Planning Prevention and Intervention  
Program

Threat Response Management

The Role of Law Enforcement

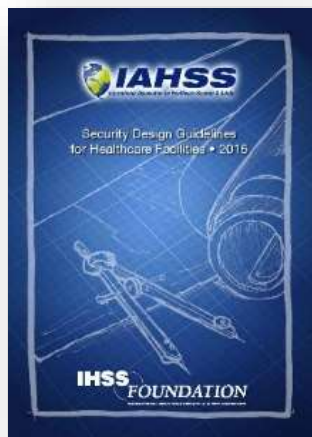
Intimate Partner Violence

Post Incident Management

The following video was filmed on February 3, 2015 during BMC's latest Live Action Active Shooting Exercise. The visual and auditory demonstration of what you can do to protect yourself will be used as a training tool for BMC employees and staff.





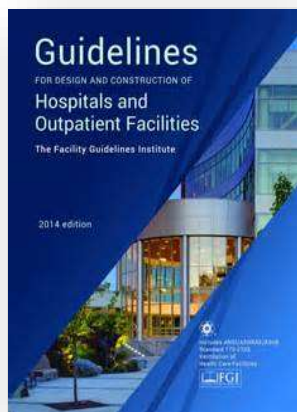


## General Guideline

### STATEMENT:

Acts of violence, the potential for crime and terrorism, and the response to and mitigation of emergency incidents are significant concerns for all Healthcare Facilities (HCFs). A consideration of these concerns in the design of new or renovated HCFs presents an opportunity to implement and integrate security design elements that address the delivery of patient care services in a reasonably safe and secure environment, and allows for the cost-effective integration of security applications in architectural, engineering, and environmental design.





## A1.2-3.8

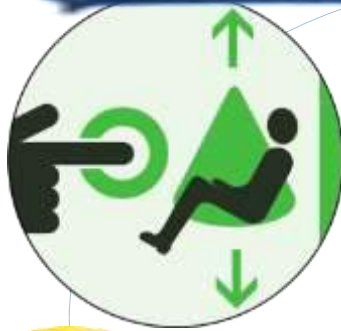
A security risk assessment addresses the unique security characteristics of a health care facility, including specific needs related to the protection of vulnerable patient populations, the security of sensitive areas, the application of security and safety systems, and the infrastructure required to support these needs. The assessment addresses external and internal security needs as well as security needs related to emergency management and response. Security requirements for construction, commissioning, and move-in vary according to the complexity and scope of services provided.



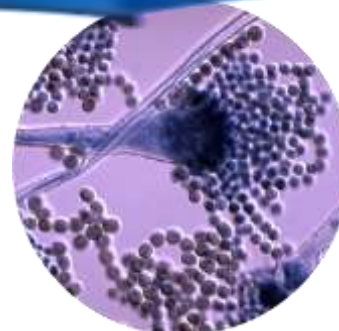


**Safety Risk Assessment Team**

Patient  
Handling  
(existing)



Infection  
Control  
(existing)



Security



Medication  
Safety



Falls



Psychiatric  
Injury  
(existing)



Immobility





- Are intended to be applicable to:
  - Rural, suburban, urban environments
  - All size healthcare facilities
  - All levels of risk and hazard vulnerability
- Provides healthcare facilities with solid direction in the management of security regardless of expertise in the area.
- Provides references to supporting documents, regulations and best practices.
- Like the design guidelines – are risk-based and strongly suggest collaborative multi-disciplinary processes

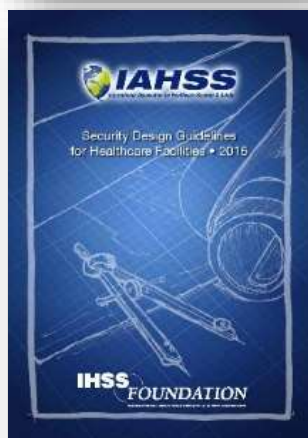
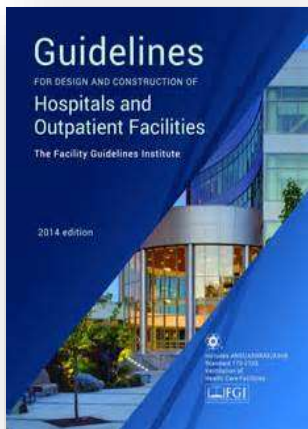
The diagram illustrates the structure of a Workplace Violence Assessment & Response Team. At the top, a large blue umbrella is labeled "Workplace Violence Assessment & Response Team". Below the umbrella, two circular images represent the team's components. The left circle, labeled "Clinicians", shows four healthcare professionals in a clinical setting. The right circle, labeled "External Responders", shows three individuals: a firefighter, a police officer, and a medical professional. A blue line connects the umbrella to the "External Responders" circle.

A photograph of three emergency responders standing together. On the left is a firefighter in full gear, including a helmet and a jacket with reflective yellow stripes. In the center is an EMT wearing a white short-sleeved shirt with a stethoscope and dark pants. On the right is a police officer in a dark uniform with a peaked cap. The background is a plain, light-colored wall.



## Human Resource

[illegible][illegible]



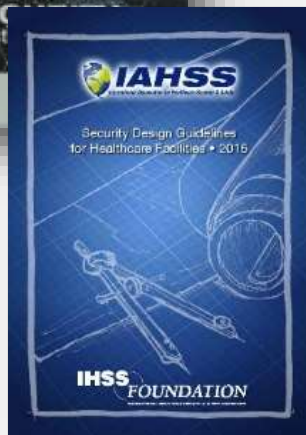
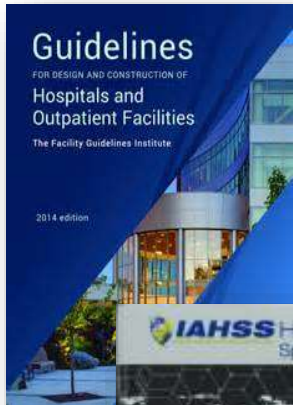
## Design should include:

- Safety Risk Assessment
- Use of IAHSS Security Design Guidelines.
- Methods of securing higher risk areas
- Ability to secure Emergency Department entrance(s) as well as access to rest of facility from the Emergency Department.
- Safe Rooms – regular rooms in plan that can be secured from areas of potential violence
- Alternate Entry / Egress points that can be used if a specific area is under controlled access or locked down



Violence Prevention planning should consider:

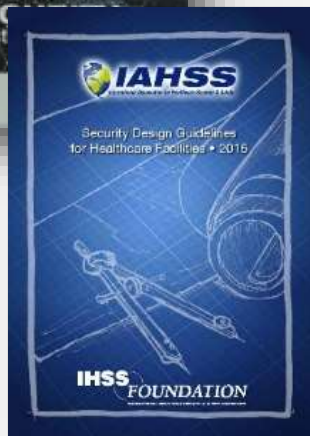
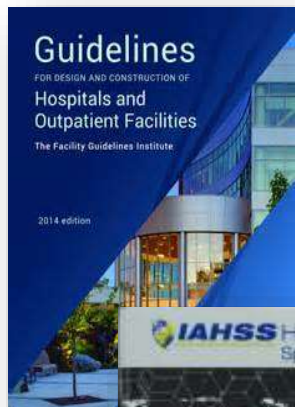
- Risk identified due to location of Healthcare Facility.
- Risks associated with types of services provided
- History of violence / potential for violence
- Access to facilities
- Capabilities, expectations and training of staff with security response responsibilities.
- Availability of external responders to assist in an emergency



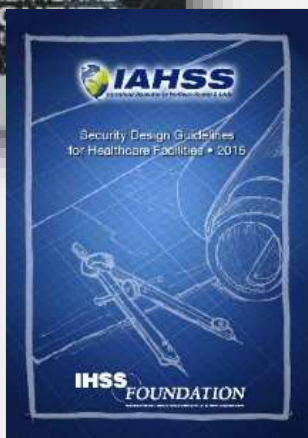
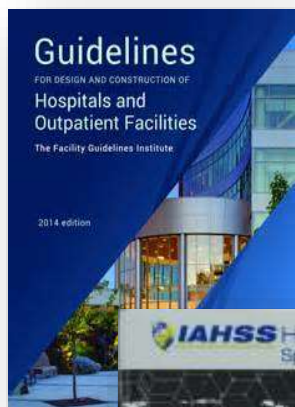


Ongoing plan management should be the responsibility of the multi-disciplinary team and should include:

- Annual assessment of risk related to violence
- Annual review of systems allowing for controlled access / lock down and securing of internal areas if applicable.
- Review of spaces identified for alternate uses including Safe Rooms or those with secondary exits.
- Exercise design and participation to familiarize external responders while training staff and improving on plans.







## Summary - Your Programs and Practices

- Do you perform an HVA? Risk Mitigation in design?
- Do you educate through trainings, drills, exercises and corrective actions
- Are you ready to evacuate, shelter in place or lockdown
- Recovery and Counseling
- Do you address lock-down, safe-room, alternate access / egress when renovating or building

# Questions??

Tom Smith, CHPA, CPP



Kevin Tuohey, CHPA

