SPECIAL REPORT

Findings from Healthcare in Danger Project: Pakistan security assessment of a public and private tertiary care hospital in Karachi: Gaps and way forward

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Abstract

Objectives: To identify and compare security gaps in a public and private tertiary care hospital.

Methods: The study was conducted in January 2016 using a tool adopted from Ingersoll Rand Security Technologies, Occupational Safety and Health Association and findings of baseline research carried out by Health Care in Danger Project at a public and private sector hospital in Karachi. The names of hospitals were kept confidential. Areas assessed included adequacy of workforce, existing institutional mechanisms and campus security. The tool was completed by interviewing administration, security department, and healthcare workers in wards and the emergency departments as well as patients, attendants and through observation visits.

Results: The burden of doctors at the private-sector hospital was higher compared to the public-sector hospital (40 versus 22 patients per doctor per day) in the outpatient department. Private-sector hospital scored better than public-sector hospital with regards to compliance to security management standards (68% versus 50%), security perception of staff (90% versus 50%), security staffing (60% versus 50%), and visitor management (80% versus 40%). Campus security was better at private-sector hospital (56% versus 31%). Scores for employee orientation and training were low (30% and 20%), while scores for organisational partnerships were high in both hospitals (80% each).

Conclusion: Four-pronged strategic framework is recommended that shall comprise restricting access of attendants/visitors/vendors, improving interaction between patients/healthcare workers/guards, mechanisms of reporting and responding to violent events, and maintaining sufficient resources for enhancing and improving security in hospitals.

Keywords: Security, Hospitals, Violence. (JPMA 68:1672; 2018)

Introduction

Violence against healthcare workers (HCWs) in hospitals is a serious hazard and a professional threat. Violence can be of different types, including incivility, verbal abuse and physical violence. Violence is especially common in the emergency department (ED) of hospitals and is universally present in EDs of different sizes.[1] Healthcare staff members are susceptible to proactive and reactive violence which affects their mental and physical wellbeing.[2] If the workers are stressed about security, it can lead to post-traumatic stress disorder (PTSD) and can decrease job performance and increase burnout. This also negatively impacts patients who are deprived of quality care responsive to their genuine needs in times of trouble. As a result, there can be lower rate of productivity and excessive lawsuits that can increase costs.[3]

A multicentre research conducted in Karachi identified poor security arrangements in terms of infrastructure, resources and policy as one of the major causes of violence faced by HCWs.[4] Literature also suggests that healthy communication between care-provider and care-seeker builds trust between them and reduce the chance of violence.[5] Hospital policies, like having a mediator in the waiting rooms to address the concerns of patients, having surveillance cameras to monitor ongoing activities, preventing weapons from entering the hospital, showing

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informational videos for patients and attendants, and standardised triage, reduce tensions and prevent the escalation of violence.[3,6] Determining the optimal size of security team and healthcare staff also helps making hospitals secure.[7,8] Encouraging staff to report events of violence can also help control violence in the long run.[9]

Assessing security in hospitals involves accounting for many different risks and threats, including sufficiency of resources, efficiency of staff, overall infrastructure and institutional policies. The current study was planned to identify security gaps in a public and private tertiary care hospital, and to make recommendations that may help improve security and safety of HCWs in hospitals.

Subjects and Methods

The study was conducted in January 2016 using a tool adopted from Ingersoll Rand Security Technologies,[10] Occupational Safety and Health Association[11] and findings of baseline research[4] carried out by Health Care in Danger Project at a public and private-sector hospital in Karachi. The names of hospitals were kept confidential. Both hospitals have multiple departments of different clinical specialties, including EDs.

The survey instrument was completed by administration and security department, HCWs working in wards as well as EDs, patients and attendants. Observation visits were carried out in wards, outpatient department (OPD), ED, pharmacy, medico-legal department and parking space. Each assessment was completed in four days. Key informants were interviewed individually and in groups. Official permission was taken from the administration of both the hospitals. Verbal consent was taken from all the participants. Ethical approval was obtained from the National Bioethics Committee, Islamabad, Pakistan. The adopted tool had three sections. Section A gathered information about patient volumes and number of HCWs attending the facility in EDs and OPDs. It assessed adequacy of human resources by calculating patient-doctor ratio in ED, patient-nurse ratio in ED, and patient-doctor ratio in OPD.

Section B gathered information about existing institutional mechanism for security and safety. This included questions on security management plans, perceptions of staff regarding security, observations for any signs of insecurity, mechanisms for hiring and training security and HCWs, perception of HCWs about security staff, mechanisms for managing visitors and vendors, organisational partnerships with key internal and external stakeholders.

Compliance to security management standards was assessed through eight items including determination by security organization to meet security related standards, existence of any process of hazard vulnerability assessment, having a security management plan, process of reporting violence, procedures for response to violence, no weapon policy, warning signs for strict action on any form of violence and presence of call for assistance mechanism.

Security perception and observation was assessed through six items including obvious signs of social disorder, lighting at night time, perception of visitors and staff on surrounding area, satisfaction of staff with security, publication of any article highlighting security concerns in the hospital and engagement of hospital in any litigation related to security incidents.

Security Staffing and Performance was assessed through five items including background investigation of hired guards, orientation process, training requirements, training refreshers and their perception as professionals.

Employee orientation and training was assessed through five items including background investigation of hired employees, orientation process, training requirements, training needs and participation of security personnel in orientation of employee.

Visitor and Vendor Management was assessed through five items including existence of enforced visitor management policy, issuance of physical badge for visitor identification, policy on number of attendants, registration and screening of vendors and access of vendors in patient care areas.

Organisational partnerships were assessed through five items including existence of strategic partnership of security department with key departments, their relationship with law-enforcement agencies (LEAs) and fire department, involvement of security administrators in planning security for facilities, consideration of police department as a strategic partner and technological expertise of security department.

Section C assessed security at different places, including parking lots, wards, OPDs, EDs, pharmacy and medico-legal department in terms of security protocols, availability of facilities, perception of workers and functionality of security equipment.

Security at parking lots was assessed through three items including incidents of violence, incidents of thefts and perception of staff regarding safety. Security in wards was assessed through nine items including events of robbery or assault, availability of security technologies, timely repair of security technologies, adequate separation of security sensitive areas, training of staff in security sensitive areas, availability designated space for counselling attendants, seating arrangements of patient waiting areas, waiting chairs fixed and immovable and availability of lockers to staff.

Table-1: Patient-Doctor and Patient-Nurse ratios at Emergency Department (ED) and Patient-Doctor ratio at Outpatient Department (OPD) of a public and private sector hospital.

	Doctors	Nurses	Average Daily Visits	Patient-Doctor ratio	Patient-Nurse ratio
Public Sector Hospital					
ED	58	78	1120	1120/58=19.31	1120/78=14.35
OPD	306	na	5147	5147/230 75%)=22.3	NA
Private Sector Hospital					
ED	31	50	600	600/31=19.35	600/50=12
OPD	27	na	800	800/20(75%)=40	NA

Assumptions
- Interns are not included as they are trainees
- Patient/Doctor ratio in OPD is based on assumption that 75% doctors in the ward will be in OPD on OPD day of any ward
- ED: Emergency Department. OPD: Outpatients Department.

Security in ED was assessed through 13 items including availability of single dedicated public entrance, a separate ambulance entrance, video system coverage, metal detection technology, panic alarms, security guards, training of staff in violence management, visitor policy, emergency exit for staff designated space for counselling attendants, availability of lockers to staff, glass barrier protection for receptionist, and triage.

Security at pharmacy was assessed through four items including access restriction inside pharmacy, availability of protective barrier, video camera and panic alarms. At the private-sector hospital, questions related to pharmacy were not applicable because no purchasing of drugs took place inside the hospital.

Security at medico-legal department was assessed through four items including training of medico-legal officers, communication with security, access of attendants in the department, and audit of forensic policy. Each question for every section was assigned a score of 20 and aggregate percentage was calculated for every component of sections B and C.

Results

The burden of doctors at the OPD of the private-sector hospital was higher compared to the public-sector hospital (40 versus 22 patients per doctor per day. Both hospitals, however, showed almost similar patient burden in one ED shift (Table-1). Private-sector hospital scored better than public-sector hospital with regards to compliance to security management standards (68% versus 50%), security perception of staff (90% versus 50%), security staffing (60% versus 50%), and visitor management (80% versus 40%). Scores for employee orientation and training were low (30% and 20%), while scores for organisational partnerships were high in both hospitals (80% each) (Table-2; Annexure-1). Campus security was better at private-sector hospital (56% versus 31%) (Annexure-2).

At the private-sector hospital, all medico-legal cases were referred, and, therefore, questions were not applicable, while the public-sector hospital met none of the four items listed as part of the criteria.

Table-2: Scores obtained in different components of existing institutional mechanisms of safety and security.

	Public Sector Hospital	Private Sector Hospital
Existing Institutional Mechanisms		
Compliance to security management standards	50%	68.75%
Security perception and observation	50%	90%
Security staffing and performance	50%	60%
Employee orientation and training	20%	30%
Visitor and vendor management	40%	80%
Organizational partnerships	80%	80%
Campus Security		
Parking Lots	33%	50%
Internal Security: Wards and Outpatient departments	31.25%	56.25%
Internal Security: Emergency	50%	46%
Pharmacy,	50%	NA
Drugs and Supplies store	90%	100%
Medico-legal room	0%	NA

ANNEXURE-1: Comparison of Existing Institutional Mechanisms for Safety and Security at both hospitals.

1. Compliance to Security Management Standards		**Public Sector**	**Private Sector**
Has your facility been determined (by review) to meet Security related standards? (Respondent: Administration/Security Department)	Y=20, N=0	No=0	No=0
Is there any exercise conducted for Hazard Vulnerability Assessment? (Respondent: Administration/Security Department)	Y=20, N=0, P=10	P=10	P=10
Does the facility have an effective Security Management plan? (Respondent: Administration/Security Department)	Y=20, N=0, Some=10	Some=10	Y=20
Is there any system of reporting violence? (Respondent: Administration/HCP's/Security)	Y=20, N=0, P=10	P=10	Y=20
Are high priority findings being effectively addressed? (Respondent: Administration/HCP's/Security)	Y=20, N=0, Partly=10	Partly=10	Y=20
Is there any weapon free policy in the hospital? (Respondent: Administration/Security Department)	Y=20, N=0	Y=20	Y=20
Is there any warning sign for visitors not to engage in any violence/ zero tolerance for violence? Observation	Y=20, N=0	N=0	N=0
Does the facility have a clearly identified call for assistance system to permit individuals to communicate with a location that can answer these calls at all times of the day and night? Source: Security Department/Staff Description:_____	Y=20, N=0	Y=20	Y=20
	Score	50%	68.75%
2. Security Perception and Observation			
Are there obvious signs of social disorder such as graffiti, litter, condoms, broken windows, drug paraphernalia, abandoned cars, etc. . .on hospital grounds or within buildings? (Source: Observation:)	Y=0, N=20, Some=10	Some=10	N=20
Is the lighting at night time adequate at all places? (indoor, outdoor, parking, walkways) (Source: Observation:)	Y=20, N=0, Some=10	Y=20	Y=20
Is the facility perceived by patients, visitors, or staff to be in a high crime area?* Respondents: (Patients/Attendants/Staff)	Y=0, N=20	Y=0	N=20
Are workers satisfied with security arrangements in the facility? Source: Staff	Y=20, N=0, P=10	P=10	P=10
Has local news media focused any articles about security issues or incidents at the facility? Source: News Review/Administration)	Y=0, N=20	Y=0	N=20
Is the Facility currently engaged in any litigation related to security incidents or security staff performance? Source: Administration	Y=0, N20	N=20	N=20
		50%	90%
3. Security Staffing and Performance			
Does security staff undergo a background investigation including a criminal history check, education, and certification prior to employment? Source: Administration/Security Department	Y=20, N=0, P=	Y=20	Y=20
Does security staff participates in both new employee orientation and department specific training prior to assignment? Source: Administration/Security Department	Y=20, N=0 One of Them=10	Y=20	Y=20
Do training requirements address critical areas including use of force, nonviolent crisis intervention, legal requirements, job specific skills, hospital and department policies and procedures, emergency management, vehicle operation, officer safety, and other skills required by job descriptions? Source: Administration/Security Department	Y=20, N=0, P=10	P=10	P=10
Is mandatory re?training conducted annually? (or bi-annually) Source: Administration/Security Department	Y=20, N=0	N=0	N=0
Are police/security officers generally perceived as professionals?* Source: Attendants/HCP's	Y=20, N=0, P=10	N=0	Partly=10
4. Employee Orientation and Training		50%	60%
Does the employment process include background investigations of at least staff working in security sensitive areas and all areas that may be required by Provincial State or federal statute? Source: Administration/Staff	Y=20, N=0, Gaps=10	Gaps=10	Gaps=10
Do new staff members participate in a mandatory orientation process that includes information about their responsibilities for the organization's security programming, workplace violence, services provide by the Security Department, and emergency procedures? Source: Administration/Staff	Y=20, N=0, Gaps=10	Gaps=10	Y=20
Are all hospital staff required to participate in annual in?service training that includes appropriate security related topics. Source: Administration/Staff	Y=20, N=0	N=0	N=0
Are security related training needs routinely assessed and adjusted to address changes in risks, threats, and vulnerabilities? Source: Administration/Staff	Y=20, N=0	N=0	N=0

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		Public Sector	Private Sector
Does a staff member from the Police/Security Department actively participate in new employee orientation? Source: Security Department/Security Staff	Y=20, N=0	No=0	No=0
		20%	30%
5. Visitor and Vendor Management			
Does the facility have an enforced visitor management policy? Source: Administration	Y=20, N=0 Policy but not enforced=10	Policy not enforced=10	Y=20
Is a physical badge issued to each visitor during designated hours and are they required to display (wear or visibly carry) these? Source: Administration/Observation	Y=20, N=0	N=0	N=0
Is there any policy specifying number of attendants to accompany patient inside OPD/Ward/ER? Source: Administration/Observation	Y=20, N=0 Policy but not enforced=10	Policy not enforced=10	Y=20
Is there an enforced vendor management program requiring all vendors to register and be screened prior to visiting hospital departments? Source: Administration/Vendors	Y=20, N=0, P10	P=10	Y=20
Do vendors who have access to patient care areas undergo background screening consistent with the risks associated with their presence in these areas? Source: Administration/Vendors	Y=20, N=0	P=10	Y=20
		40%	80%
6. Organizational Partnerships			
Does the Police/Security Department have formal strategic partnerships with key departments including IT, Facilities, Risk Management, Human Resources, Emergency Department, Pharmacy, Parking, and others? Source: Security Department	Y=20, N=0, Some=10	Y=20	Y=20
Does the Police/Security Department have a positive and functional relationship with local LEA's and fire department? Source: Security Department	Y=20, N=0	Y=20	Y=20
Are police/security administrators involved in planning for security technology and programming for new and renovated facilities? Source: Security Department	Y=20, N=0, P=10	P=10	P=10
Is the police/security department seen as a "strategic partner" within your organization? Source: Security Department	Y=20, N=0	Y=20	Y=20
Does the police/security department possess the technological expertise to design, manage, and operate the technologies being installed? Source: Security Department	Y=20, N=0	P=10	P=10

Y=Yes, N=No, P=Partial, S=Sometimes

ANNEXURE-2: Comparison of Campus Security at both hospitals.

1. Parking Lots and Garages		Public Sector	Private Sector
Have there been any crimes of violence (robbery, assault, etc) in parking areas during the previous 12 months? Source: Security Department/Administration/Staff	0=20, 1-3=10, >3=0	>3=0	1-3=10
Do you routinely have vandalism, car thefts, or thefts from cars? Source: Security Department/Administration/Staff	Y=0, N=20 Occasional=10	Occasional=10	Occasional=10
Do patients, visitors, or staff feel safe in parking lots or garages?* Source: Patients/Attendants/Staff Description:_____	Y=20, N=0, P=10	P=10	P=10
		33%	50%
Internal Security (Wards and OPD's)			
During the past 12 months have there been any robberies or assaults within the hospital? How many? Source: Security Department/Administration/Staff. Description:_____	0=20, 1-3=10, >3=0	>3=0	1-3=10
Overall, are security systems including video, access control, and alarms maintained and fully operable? Source: Security Department/Administration/Staff. Description:_____	Y=20, N=0, S=10	S=10	Yes=20
When security technologies need to be repaired, is this done on a timely basis and documented? Source: Security Department/Administration. Description:_____	Y=20, N=0, S=10	S=10	Yes=20

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		Public Sector	Private Sector
Do patients, visitors, or staff feel safe in parking lots or garages?* Source: Patients/Attendants/Staff Description:_____	Y=20, N=0, P=10	P=10	P=10
		33%	50%
Internal Security (Wards and OPD's)			
During the past 12 months have there been any robberies or assaults within the hospital? How many? Source: Security Department/Administration/Staff. Description:_____	0=20, 1-3=10, >3=0	>3=0	1-3=10
Overall, are security systems including video, access control, and alarms maintained and fully operable? Source: Security Department/Administration/Staff. Description:_____	Y=20, N=0, S=10	S=10	Yes=20
When security technologies need to be repaired, is this done on a timely basis and documented? Source: Security Department/Administration. Description:_____	Y=20, N=0, S=10	S=10	Yes=20
Are security sensitive areas such as the Labor/Delivery, Nursery, Pharmacy, Human Resources, Behavioral Health, Medical Records and others adequately separated from the public? Source: Security Department/Staff Description:_____	Y=20, N=0, Most=10	Most=10	Y=20
Do staff members working in security sensitive areas receive specific training designed to enhance patient, staff, and visitor security? Source: Staff/Administration. Description:_____	Y=20, N=0, Most=10	N=0	N=0
Is there any designated space for counseling attendants? Respondents: Staff/Observation	Y=10, N=0	N=0	N=0
Are patient waiting areas comfortable with proper seating arrangements? Respondents: Observation	Y=10, N=0	N=0	Y=10
Are the chairs in the waiting area fixed so that they are not used as weapons? Respondents: Observation	Y=10, N=0	Y=10	Y=10
Are lockers available to staff? Respondents: Staff/Observation	Y=10, N=0	Y=10	Y=10
31.5% 56.25%		31.5%	56.25%
4. Internal Security at Emergency Department (ED)			
Is there a single dedicated public entrance to the ED? Source: Observation. Description:_____	Y=10, N=0	Y=10	N=0
If there is a separate ambulance entrance, does it have a gate that can be navigated easily? Source: Observation Description:_____	Y=10, N=0	N=0	N=0
Is there video system coverage at security sensitive areas such as the lobby, triage desk, reception, ambulance entrance, etc.? Source: Observation. Description:_____	Y=10, N=0	Y=10	Y=10
As required by the nature and activity in the Emergency Department, does security have a 24/7 presence in this area? Source: Observation/Security Department. Description:_____	Y=10, N=0	Y=10	Y=10
Is metal detection technology in use to screen all individuals who enter? Source: Observation/Security Department Description:_____	Y=10, N=0	N=0	N=0
Are there duress/panic alarms at registration, triage, etc.? Source: Observation/Security Department Description:_____	Y=10, N=0	N=0	N=0
Is the emergency staff trained in management of violence? Source: Security Department Description:_____	Y=10, N=0	N=0	N=0
Is there a defined visitor policy that addresses access control and identification requirements for anyone visiting the ED? Source: Administration/Security Department. Description:_____	Y=10, N=0, P=5	P=5	Y=10
Is there any emergency exit for staff?	Y=10, N=0	Y=10	N=0
Is the receptionist desk protected with any barrier (glass cover)?	Y=10, N=0	N=0	Y=10
Is there any designated space for counseling attendants ?	Y=10, N=0	N=0	N=0
Are lockers available to staff?	Y=10, N=0	Y=10	Y=10

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		Public Sector	Private Sector
		50%	46.1%
5. PHARMACY			
Are all pharmacy perimeter doors managed and monitored by the access control? Source: Administration/Observation. Description:_____	Y=20, N=0	N=0	NA
Is there video coverage at doors, exchange windows, receiving areas, etc.? Source: Administration/Observation/Security Deptt. Description:_____	Y=20, N=0	N=0	NA
Are there duress/panic alarms at walk up customer service areas? Source: Observation Description:_____	Y=20, N=0	N=0	NA
Are service windows designed to and fabricated with bullet resistant glazing, frames and walls as appropriate for your specific environment? Source: Observation/Administration. Description:_____	Y=20, N=0	N=0	NA
		50%	NA
6. Materials Management			
Are high value deliveries immediately accounted for and secured upon receipt? Source: Administration/Observation Description:_____	Y=20, N=0	Y=20	Y=20
Does the hospital have an effective asset identification program that uses bar code or other technologies to manage property? Source: Administration. Description:_____	Y=20, N=0	Y=20	Y=20
Are storerooms/supply rooms effectively restricted to authorized personnel? Source: Administration/Observation Description:_____	Y=20, N=0	P=10	Y=20
Does the hospital routinely experience the loss of high value items such as computers, medical equipment, or bulk supplies? Source: Administration/Observation. Description:_____	Y=0, N=20	N=20	N=20
Are receiving and mailroom staff trained in identifying packages and mail that have been tampered with or appear suspicious and knowing what action(s) to take if this is discovered? Source: Administration/Mailroom staff Description:_____	Y=20, N=0	Y=20	Y=20
		90%	100%
Medicolegal Department			
Has your hospital developed and implemented a training program for forensic personnel? Source: Administration/Forensic Staff. Description:_____	Y=20, N=0	N=0	NA
Do forensic officers have direct communication with security staff in the event of an emergency? Source: Security Department/Forensic Staff. Description:_____	Y=20, N=0	N=0	NA
Has the forensic policy been audited within the past 12 months? Source: Administration/Forensic Staff. Description:_____	Y=20, N=0	N=0	NA
		0%	NA
8. Cash Handling Areas			
Are security technologies including video and duress alarms used in cash handling areas at risk of robbery? Source: Observation. Description:_____	Y=20, N=0	N=0	NA
Is the receptionist desk protected with any barrier (glass cover)? Observation	Y=10, N=0	N=0	NA
Is there a process of maintaining cash records? Source: Administration. Description:_____	Y=20, N=0	Y=20	NA
Is there a deposit or cash transfer procedure in place designed to safely move deposits from the hospital? Source: Administration. Description:_____	Y=20, N=0	Y=20	NA
Is there a safe place to store cash/ deposits? Source: Administration/Observation Description:_____	Y=20, N=0	Y=20	NA
		60%	NA

Y=Yes, N=No, P=Partial, S=Sometimes

Discussion

This is the first study in Pakistan on assessment of security in hospitals of Karachi based on three main components: adequacy of workforce, existing institutional mechanisms and campus security. However, it must be remembered that both hospitals are different in area and scale of services, and have different modes of financing and administrative structures. Therefore, explanation of the findings will be more contextual than what actually exists in a particular setting. Maintaining adequate volumes of healthcare staff is key to ensuring quality consultation time which reduces aggression of patients and their attendants. Both hospitals showed similar patient burden of almost 20 patients per doctor and 12-14 patients per nurse in an ED shift. While there must be variations in the flow of patients and availability of doctors and nurses during different timings, an average burden for a minimum of 6-hour duty is not too high. To accommodate for sudden inflow of multiple patients, processes for triage and early essential care protocols help in providing prompt attention to the most needy[12] Computerised system of triage was available in the private-sector hospital while there was no such system at the public-sector hospital. Similarly at OPDs, there may be variations in different departments with higher volumes in medicine and allied departments compared to surgery and allied. However, overall picture was suggestive of good enough resources. The key is to organise services and reduce absenteeism so that minimum essential consultation time could be ensured. Literature suggests that physicians with a patient volume under 70 visits per week have a favourable decision-making style.[13] Another study reports that patients who spent less than 10 minutes with the doctor had low satisfaction.[14] Therefore, hospitals must have a mechanism of assessing work burden of HCWs and quality of consultation provided to patients.

Regarding institutional mechanisms of security, the private-sector hospital did meet many criteria with written standard operating procedures (SOPs) on security reporting in ED, restricted access of visitors in the hospital and inventory management. No drafted security management plan with SOPs was present at the public-sector hospital. No weapons policy was in place at both hospitals, however, none of the hospitals had any warning signs for visitors for zero tolerance to violence. Procedures for reporting and responding to violence were available at both hospitals. However, reporting systems were not owned by staff who felt that no action is taken.

Satisfaction with security was partial at both hospitals. While processes for recruitment and orientation existed, training gaps were marked and professionalism of security guards was negatively perceived. Guards themselves expressed their helplessness in stopping powerful groups and considered it beyond their capability. HCWs and staff also complained that security was not as alert at night time and on weekly holidays as in the morning time due to the absence of administration and security supervisor at night time and weekly holidays. These findings raise doubts in transparency in recruitment of guards on merit. Poor perception of security staff is consistent with the findings of a survey in India which found the technical and soft skills of security guards to be low.[15] Furthermore, while orientation mechanisms like familiarising staff with important locations and code of conduct existed, there was lack of formal trainings and refresher trainings on critical areas like preventing violence and communication skills. Apart for training on triage given to staff of private-sector hospital, employees neither were trained on prevention and management of violence in any of the hospitals nor were their training needs periodically assessed. This is in sharp contrast to a study in New Zealand that reported 95% of staff trained in communication and violence management skills[16].

Visitor and vendor management policies were better in the private-sector hospital where attendants of admitted patients had an attendant card and one attendant was allowed with each patient. No outside vendors were allowed and the hospital ran its own food services. While similar policies existed in the public-sector hospital, none of these policies were being enforced. It was observed that boundaries of the hospital were not fenced and there were too many entry points to take care of. Moreover, unregistered vendors gained access inside the hospital by paying money. Vendors were seen moving freely on the hospital premises and inside the wards. Major shift in access management of visitors and vendors is required, especially in the public-sector hospital.

Regarding campus security at critical points, parking space was found to be insufficient in the public-sector hospital, while the private-sector hospital had ample space for parking. Security in wards and ED was also better in the private-sector hospital with the presence of security with 24/7 video monitoring, good maintenance of waiting areas and availability of lockers for staff. Protective glass barrier was present for the receptionist. Weaker areas included

common entrance to ED that overcrowded the point of entry, lack of emergency exit and no assigned area for patient counselling. In the public-sector hospital, there was great variability between different wards and settings. Coverage of 24/7 video monitoring was limited to a few wards. There was a single dedicated entrance to ED. Emergency exit was also available for staff. Lockers were also available for staff to keep their personal belongings safe. Weaker areas included no protective barrier for receptionists, lack of proper triage system, no designated place for attendant counselling and poor maintenance of patient waiting areas. The hospital had no training programme for medico-legal staff and there were complaints about lack of coordination with security and police in case of emergency. Use of technology at both hospitals was limited to video monitoring as there was lack of metal detection technology and panic alarms.

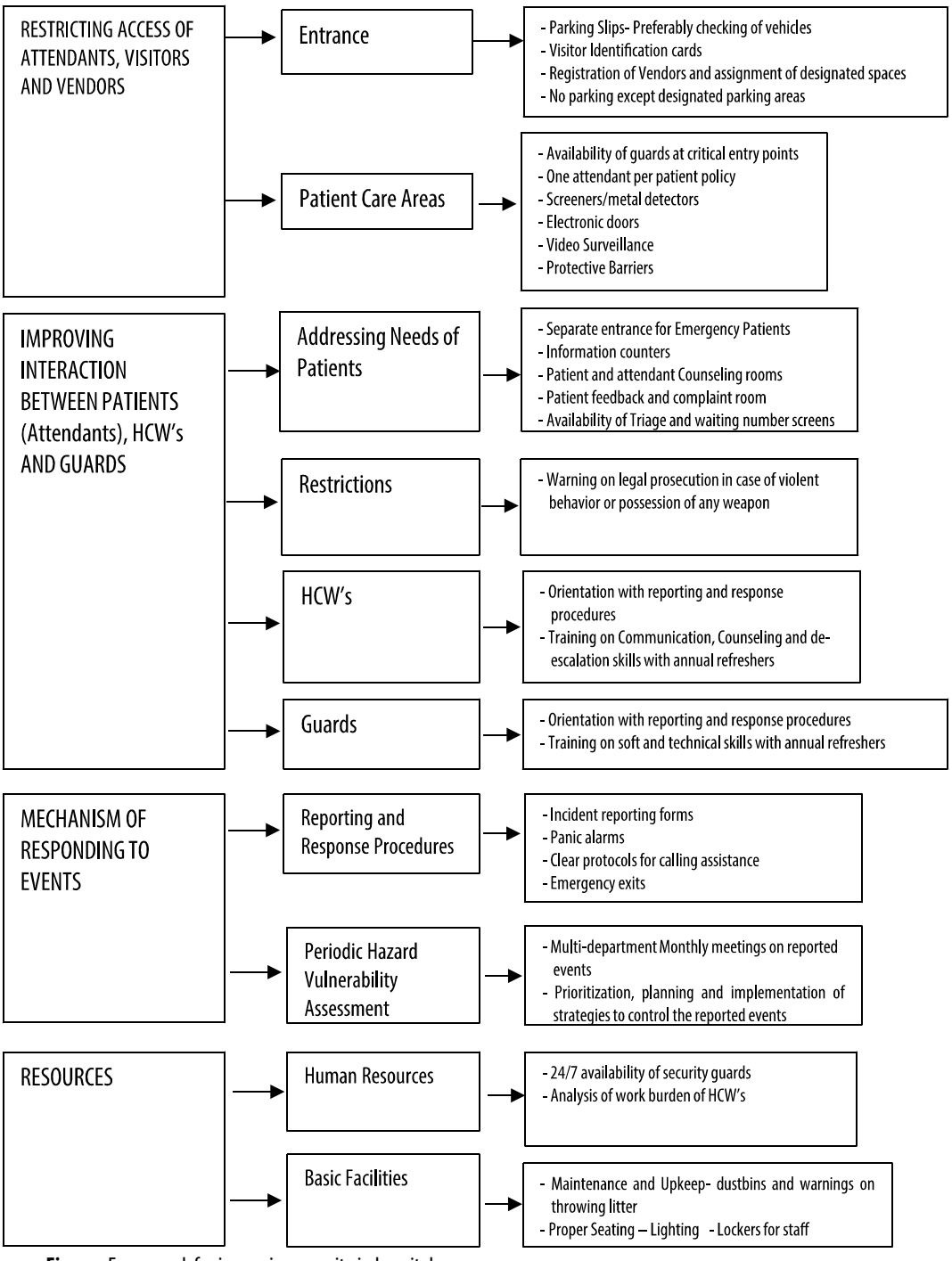

Figure: Framework for improving security in hospitals.

Based on the findings, a four-pronged strategic framework (Figure) in recommended: restricting access of attendants/visitors/vendors; improving interaction between patients/HCWs/guards; mechanisms of reporting and responding to violent events; and maintaining sufficient resources for ensuring security in hospitals. This framework can not only be used to assess the security of multiple hospitals, but can also be helpful in periodic monitoring of security.

Conclusion

Gaps in security were more prominent in the public-sector hospital compared to the private-sector hospital. However, all hospitals should develop comprehensive policies to maximise the security of HCWs.

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