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HOSPITAL SECURITY. A VISION OF MULTIDIMENSIONAL SECURITY

SEGURIDAD HOSPITALARIA, UNA VISIÓN DE SEGURIDAD MULTIDIMENSIONAL

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ABSTRACT

The risks during the performance of work is an inherent situation to any human activity. Hospital Safety is defined as: “the condition that guarantees that the workers, patients, visitors, infrastructure and equipment within a health care center are free of risk or danger of accidents”. The construction of the prevention culture starts from the knowledge of the risks, the safety culture is directly related to the quality of care of the service provided, which is why these terms are of special interest in health institutions. Talking about comprehensive risk management, either, involves determining all the risks that could cause considerable damage to these systems, given by the interaction of three factors, the presence of a threat, the existence of vulnerabilities and the time they are exposed to. Thus we can distinguish that hospital safety must be an internal policy of every health institution and that it can be divided into three main axes: 1. Patient safety, 2. Comprehensive risk management for major emergencies and disasters, 3. Internal safety and external to violence.

Key words: Security; Risk; Disasters; Patient; Violence (source: MeSH NLM).

RESUMEN

Los riesgos durante el desempeño del trabajo es una situación inherente a cualquier actividad humana. La Seguridad Hospitalaria se define como: “la condición que garantiza que los trabajadores, pacientes, visitantes, infraestructura y equipos dentro de un centro de atención en salud, estén libres de riesgo o peligro de accidentes”. La construcción de la cultura de prevención parte del conocimiento de los riesgos, la cultura de la seguridad se encuentra directamente relacionada con la calidad de atención del servicio que se otorga, por lo cual en las instituciones de salud estos términos son de especial interés. Hablar de gestión integral de riesgos implica determinar todos los riesgos que pudieran provocar un daño considerable a estos sistemas, dado por la interacción de tres factores, la presencia de una amenaza, la existencia de vulnerabilidades y el tiempo a exposición a estos. Así podemos distinguir que la seguridad hospitalaria debe ser una política interna de toda institución de salud y que se puede dividir en tres grandes ejes: 1. Seguridad del paciente, 2. Gestión integral de riesgos de emergencias mayores y desastres, 3. Seguridad interna y externa ante violencia.

Palabras clave: Seguridad; Riesgo; Desastres; Paciente; Violencia (fuente: DeCS BIREME).

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INTRODUCTION

Risks during the performance of work is an inherent situation in any human activity. The health institutions of any of the three levels of attention in our country, provide more than any activity, the highest indices of vulnerability, since they operate 24 hours a day, 365 days a year, attending to particularly vulnerable groups[1]. Health institutions have structural and functional characteristics that other places and activities do not have. Due to these characteristics and the importance of their activity within the work of the state and based on the law of public security Article 146 "For the purposes of this law, strategic facilities are considered to be real estate, constructions, equipment... intended for the functioning, maintenance and operation of activities considered strategic by the Political Constitution of the United Mexican States, as well as those that tend to maintain the integrity, stability and permanence of the Mexican state in terms of the Law of National Security"[2], must be considered strategic facilities within the state's security institutions. For this reason, risk management in hospitals is the fundamental pillar for safeguarding the integrity of their workers and their clients.

HOSPITAL SECURITY

Hospital Security is defined as: "the condition that guarantees that the workers, patients, visitors, infrastructure and equipment within a health care center, are free of risk or danger of accidents". The construction of the culture of prevention starts with the knowledge of the risks. The culture of the security is directly related to the quality of attention of the service that is granted, for which in the institutions of health these terms are of special interest[3].

Talking about integral risk management, be it business, financial, health, or disaster, implies determining all the risks that could cause considerable damage to these systems. The risk, which is the probability that damage will occur, is generally determined by the interaction of three factors: the presence of a threat or a danger; one or more vulnerabilities that depend directly on the individual, the system, society or organization, which may be political, economic, social, organizational, etc., and/or a mixture of all of these, which is the most common, and the time or exposure to these, the longer the exposure and the failure to address the vulnerabilities to confront the threat, the greater the risk that damage will occur[4].

There are many ways to measure the risks of a system, but in general two factors are measured: the probability of occurrence and the impact on the system if it occurs. Therefore, the intervention on vulnerabilities is prevention, and even with prevention there can often be damage, but the degree of impact is reduced, and if the impact does occur, the measures taken to reduce the damage or loss caused by it is called mitigation. Risk analysis serves this purpose eso N.d.T, reducing the impact in the face of prospective scenarios from a positive one to a catastrophic one, generally by taking the latter, if one is prepared for the latter for the others as well[5].

A "Safe Hospital" is defined according to PAHO (Pan American Health Organization) as a health facility whose services remain accessible and operating at their maximum installed capacity and in their same infrastructure, immediately after a destructive phenomenon of natural or anthropic origin[6]. Two relevant elements are found in the issue of patient safety: first, how the organization identifies that something negative happened with the patient's health status or what may have affected it; and second, to identify and understand what or what were the causes that originated the previous situations.

Thus we can distinguish that hospital security should be an internal policy of the entire health institution and can be divided into three main areas:

- Patient safety
- Comprehensive risk management for major emergencies and disasters
- Internal and external security in the face of violence.

PATIENT SECURITY

Unexpected patient deaths in U.S. hospitals in the mid-1990s led to the creation of a committee to investigate the quality of medical care. In early 2000, this committee published the results of an investigation into medical errors in the care of hospitalized patients. N.d.TThe report, entitled Erring is Human, concluded that between 44,000 and 98,000 people die each year in the country's hospitals as a result of errors in the care process. These figures put mortality from medical errors in the United States at the top of the list, even higher than mortality from traffic accidents or AIDS. We should not forget that, although healthcare errors have a very important personal cost, they erode patients' trust in the system and harm institutions and physicians who are, without a doubt, their second victim[7].

Organizational patient safety programs should focus on preventing the risk of care processes and not focus on waiting for the adverse event to occur to manage it and make it the focus of the entire organization's care. In other words, while adverse events may never be eliminated and must continue to be identified and managed, the organization's focus should be on the relentless pursuit of the small, but almost always numerous causes that end up generating an adverse event.

Today, in most of the country's institutions, the programs are based on the Essential Actions for Patient Safety (Acciones Esenciales de Seguridad del Paciente better known by its acronym AESP)[8], which have to do with:

1. Identification of the patient. Use at least two different pieces of identification information, for example, the patient's full name and date of birth; never the bed number or hours of operation. In health institutions, there should be an established procedure for patients who are admitted as strangers. The health personnel should corroborate the patient's identification data before performing procedures[8].
2. Effective communication. Improve communication between health professionals, patients and families, with the objective of obtaining correct, timely and complete information during the care process, and thus reduce errors related to the process of listening-reading-transcribing-confirming and verifying[8].
3. Safety in the medication process. Strengthen actions related to the storage, prescription, transcription, dispensation and administration of medications, to prevent errors that may harm patients, derived from the medication process in the National Health System facilities[8].
4. Safety in procedures. Strengthen safety practices and reduce adverse events to avoid the presence of sentinel events derived from surgical practice and high-risk procedures outside the operating room by applying the universal protocol in the National Health System facilities[8].
5. Reduce the risk of healthcare-associated infections (HCAIs) Reduce infections through implementation of a comprehensive hand hygiene program during the care process and handwashing during the 5 moments proposed by the World Health Organization (WHO)[8].
    a. Before touching the patient
    b. Before performing an aseptic task
    c. After the risk of exposure to body fluids
    d. After touching the patient
    e. After contact with the patient's environment
6. Reduced risk of patient injury from falls. To prevent patient harm associated with falls in National Health System health care facilities by assessing and reducing the risk of falls to reduce the risk of injury and complications[8].
7. Registry of analysis of sentinel events, adverse events and near misses. Generate information about any event, by means of a registration tool that allows the analysis and favors the decision making so that at a local level its occurrence is prevented, which in turn at a national level allows the emission of alerts to avoid the occurrence of sentinel events in healthcare facilities, considering a priority of the National Health System, with the objective of developing a quality and safety culture that allows the organizations to learn from their mistakes and to implement improvements to prevent their occurrence[8].
8. Patient safety culture. To measure the safety culture in the hospital environment, with the purpose of favoring the decision making to establish actions in a continuous way of the safety climate in the hospitals. Through the participation of medical and nursing staff from all shifts in the hospital and who are in direct contact with the patient, the participation in the measurement of events will be anonymous, with the purpose of identifying areas of opportunity for improvement[8].

INTEGRATED RISK MANAGEMENT OF MAJOR EMERGENCIES AND DISASTERS

Disasters are a complex mixture of natural hazards and human actions. Traditionally, there has been a mistaken belief that all disasters are different, especially those committed to terrorism and health. So far, one of the most significant problems in managing mass casualties is that we are not prepared to face disasters, we only respond to them[9].

In fact, all disasters, regardless of their etiology, have similar political, economic, social and public health consequences. Disasters differ in the degree

to which these consequences occur and break down the infrastructure[6,9]. We start from the current equation given by the United Nations office of risk reduction that says that the sum of all the risks that exceed the response capacity of the place, originates a disaster which its mathematical expression is: $D=\sum (R_1+R_2.....R_n)$[6].

Health facilities and hospitals represent a huge investment for any country, their destruction, as well as the cost of reconstruction and recovery, imposes a considerable economic burden. Although not all indirect costs of damaged health structures are usually accounted for, they can be higher than the direct costs of replacement and reconstruction. Indirect costs measured in various studies have included:

- A loss of efficiency due to the disruption of services in hospital networks, such as laboratories or blood banks[10].
- An increase in the cost of providing emergency health and shelter services.
- The cost to the individual in terms of lost opportunities, income, time and productivity.
- Other types of indirect costs that are more difficult to measure However, they produce a significant impact These include[10].
    - » Longer-term damage to public health, welfare and productivity.
    - » A setback to overall national economic development and business confidence.
    - » A disincentive to future foreign investment.

The 168 countries that adopted the Hyogo Framework for Action in 2005 recognize the importance of making hospitals "safe from disasters by ensuring that new hospitals are built with a degree of resilience that strengthens their ability to continue to function in disaster situations and to implement mitigation measures to strengthen existing health facilities, particularly those that provide primary health care"[11]. But despite the significant progress made in recognizing and correcting the problem, in some parts of the world, an alarming number of medical facilities-from large, complex hospitals in large cities to small, rural clinics that may be the only source of health services-are being built in highly disaster-prone areas. In other regions, emergencies and crises continue to take health facilities out of service, depriving communities of the care they need[6].

Health facilities and hospitals should continue to operate during disasters. The human cost if a hospital fails during a disaster is great, as immediate attention is focused on victims, search and rescue activities, and the need to care for the injured. When hospitals cannot fulfill their emergency function at the time when it is most needed, the most critical services are compromised and lives are unnecessarily lost[10].

The social repercussions of hospital failure can lead to immense risks. Hospitals, health facilities and medical services have a unique symbolic value as benchmarks of public trust in government and society. They are sanctuaries for the most vulnerable people in the community, which means that there is a moral obligation to have hospitals and health facilities with adequate protection[6]. The death of the sick, elderly, and children in hospitals during a disaster, as well as the failure of emergency services when they are most needed, can have a devastating effect on public morale and can represent the beginning of political dissatisfaction[10].

For this purpose, the UN, together with the Office of Disaster Risk Reduction (UNISDR), developed the Safe Hospital Program, which proposes three axes of intervention in hospitals in order to identify risks and consequently vulnerabilities[6].

- Structural component. The hospital's structure works in this component and complies with all the building regulations of the place, in order to respond adequately to destructive disturbing phenomena[6].
- Non-structural components. Here, the non-structural components are evaluated, such as vital power lines, medical gases, water, furniture, cancellations, and vital devices such as attached computers[6].
- Functional component. This item evaluates the existence of internal civil protection committees and the medical response committee in case of emergencies and disasters. The former will be in charge of the implementation of protocols to protect the lives of workers and the infrastructure of the site, and the latter will be in charge of the implementation of protocols for hospital reconversion, continuity of operations and specific care processes during the impact phase of the disruptive phenomenon of natural origin (earthquakes, epidemics, etc.) and/or human origin (social, insecurity, chemical, etc.)[6]. It is recommended to have these protocols aligned with national emergency codes. (Table 1).

INTERNAL AND EXTERNAL SECURITY IN THE FACE OF VIOLENCE

Workplace violence affects virtually all sectors and occupations. The International Labor Organization considers that professions related to the service sector, because of the close contact they have with users and clients, are at greater risk of suffering aggression. The European Observatory of Labor Risks includes violence in the workplace in the list of emerging risks in health care in all the countries around us, since, although it is not a new risk, it generates great concern in the health sector[12].

At present there is no universally accepted definition of the term workplace violence. The World Health Organization defines violence in the workplace as any incident in which a person is subject to mistreatment, threats or attacks in circumstances related to their work, including the journey between home and work, and which endangers, explicitly or implicitly, their safety, well-being or health[13].

In the European Union, the health sector is at the forefront of exposure to violence. In Spain, 5% of staff working in the health sector report having suffered a physical attack at work during the last year. In the United States, it has been estimated that the rate of violence with time off work is four times higher among health service personnel than in other professions[12]. In Mexico, there are no reliable statistics on aggression in the health sector, but it is known that aggression occurs daily in the health services.

In view of this, civil protection protocols should always include processes for responding to situations of both internal and external violence, whether by unarmed or armed persons (code purple and/or silver). Therefore, every health institution should elaborate an Integral Plan for the Prevention of Aggressions that should be part of the hospital's priority programs and should be included in the internal civil protection program, the safe hospital program and the health and safety commission[14].

Table 1. Homologation of Color Codes, Secretary of Health of Queretaro 2018, National System of Civil Protection.

Code	Meaning
Yellow	Hazardous material spill
Blue	Cardiorespiratory failure
Brown	Natural Disasters
Purple	Unarmed violent person
Black	Black Bomb Threat
Silver	Armed Violence
Amber	Child Theft
Pink	Obstetrics Emergency
White	Patient Drop Assistance
Orange	Mass arrival of patients
Gold	Patient Lost
Red	Fire Alert
Green	Facility Evacuation

The plan shall be governed by the following guiding principles:

- Institutional commitment to generate work environments free of violence and zero tolerance for aggression.
- Incorporation of the principles of occupational risk prevention.
- Comprehensive approach, combining preventive actions with support measures, advice and assistance to the staff attacked.
- Participatory approach, encouraging the involvement of the entire organization and the participation of employees.
- Gender-sensitive, gender mainstreaming.
- Based on scientific evidence, in order to provide the highest quality in all the actions it develops.
- Promotion of intersectoriality, promoting coordinated action with other sectors such as the security forces and social services.
- Respect for the rights of patients and health personnel (nurses and doctors), combining in their actions the preservation of these rights with the right to health protection(15).

It should be divided into the following lines of action:

Line 1. Work environments free of workplace violence(15).

- Implement effective and appropriate preventive measures for each environment.
- Identify services and situations of greater risk, in order to prioritize and reinforce preventive actions.
- Establish agile communication channels and effective coordination mechanisms with public safety.
- Declaration and dissemination of the commitment of zero tolerance towards aggressions to health personnel. Development of an information and awareness campaign on "Violence-free work environments" aimed at professionals and clients. This campaign will include the development of posters to be placed in high-risk areas and information brochures for staff.
- Assessment of the level of risk of aggression in the hospital .
- Adoption of preventive measures adapted to each environment, from a comprehensive viewpoint, combining safety measures with actions on those factors related to the organization of work, which can act as enablers or triggers of aggression.
- Inclusion of preventive environmental safety criteria in the design of facilities and work processes will avoid risks at source, with the consequent reduction in the number and severity of attacks resulting from inadequate designs.
- Reinforcement of communication and information procedures for users in aspects related to health services, trying to adapt their expectations of supply and access.
- Periodic verification (drills) of the correct functioning of the application of the purple and silver codes.

Line 2. Awareness raising, training in code purple (unarmed violence) and code silver (armed violence) and skills development(15).

The conflict has a dynamic that is partly predictable and follows a characteristic process of escalating tension or firing), a culminating point (stagnation or slowing down) and détente (de-escalation or normalization), if the conflict situation cannot be dealt with, it is important to ask for help and shout Code Purple or Silver as the case may be.

Code purple(15)

- The purple code will be applied in those situations in which a health or administrative staff of the hospital is verbally attacked by a user.
- This code is part of the ten national hospital safety codes approved for emergency situations.
- The objective is to have a process or procedure, that at the moment a violent person appears within the hospital unit, proceed with it to manage the situation in attachment to the personal and psychological protection of the health personnel and the other users and to give an adequate term according to law.
- Process:
  1. A user is introduced by verbally assaulting one or more health care personnel and/or users.
  2. Staff who detect such aggression call out: "Code purple at ....., Code purple at .... Code Purple at......"
  3. Upon hearing the purple code call, the assistant medical and administrative director, chiefs of service, security personnel will go to

the service where the code call was made.

4. From the support staff one will stand between the aggressor and the assaulted, greeting the aggressor and saying in a friendly way: "Hello good afternoon I am...., I am going to solve your problem, come with me". At the same time another person removes the aggressor from view, removing the objective of the aggression.

- In general, this process has worked due to reports from other national hospitals and is mainly a deterrent, trying to mitigate the aggression by seeing more personnel in the organization, trying to solve the problem of the dissatisfied person on the other hand and removing the attacked person.
- The process will be informed to the staff based on training talks and leaflets given by the committee of safe hospital and civil protection.
- Security personnel will be periodically trained for immediate intervention in these situations.

Code Silver

- Recent events of armed groups entering hospitals, not only in countries in conflict but also in national territory, such as the events that took place in Monterrey (Mexico) which is an active shooter and from different parts of the same country, make us think that we must adapt to a new growing and global threat and, therefore, to a new change in the healthcare paradigm.
- To address these types of incidents at the care and operational levels, on April 2, 2013 representatives from a select group of public safety institutions including police, firefighters, pre-hospital care, trauma care and military professionals met in Hartford, Connecticut, to develop a consensus on strategies to improve survival in multi-victim firearms incidents. This meeting resulted in a document known as the Hartford Consensus[16].
- This code is intended to preserve the physical integrity of hospital staff and users.
- It is hoped that the following recommendations will serve as a guide for anyone who may be involved in intentional incidents with multiple victims and active shooters, in dealing with the major causes of preventable death that occur in these types of circumstances.

PCT (Protect, Communicate and Treat) Process[14]

When you are involved in an incident with multiple victims with intent to use explosives and/or with persons armed with firearms or other weapons, the following should be attempted:

- See Code Silver at .... Code Silver at .... Code Silver at...
- P. Protect Yourself
  1. Protect yourself and the victims, if possible, locate the evacuation routes and leave the building, leaving your belongings and inviting others to evacuate, if they do not want to leave, continue to evacuate the place ("Run, hide and ultimately fight"). By being outside the building, prevent others from entering the site.

     If there is no time to evacuate, hide, close doors and place heavy objects. Turn off lights, mute cell phones and lower the screen intensity as much as possible and send three messages to friends and three to family members saying, "I am in the Hospital .... There are armed people... we don't know the number.... Notify 911 of this situation ...... When you do, send me an email.
  2. If the abuser tries to enter the place where you are hiding take heavy objects and fight (last option)
- C. Communicate
  1. Call 9-1-1. Follow the protocol for reporting what happened by providing the following data:
     a. Location (main streets with landmarks to reach the site).
     b. What happened?
  2. How many people are involved? (mention if there are any injured people and description of the offenders IF YOU HAVE OBSERVED THEM)
  3. What is being done to contain what happened?
  4. Identify yourself
  5. If possible, share in social networks what happened with family and friends.
- T. Treat
  1. If there is no longer a threat and the intervention group says it is safe or someone with you is injured to help you, in the following

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order of MAC priorities:

2. M. Massive visible bleeding: compress with a cloth or place a tourniquet to stop the bleeding.
3. A. Air. If you do not breathe, open the airway.
4. C. Compressions. If the patient does not move, does not cough, or is cyanotic, begin continuous chest compressions at a rate of 100 to 120 per minute. Hands-only CPR is recommended.
5. In the case of children, early temperature control should be considered because of their ability to become hypothermic.

Line 3. Advice, support and assistance to the victim

- Establish clear and effective guidelines for action facing violent incidents and aggressions, protecting potential victims.
- To ensure the medical, psychological and legal assistance required by those professionals who were the object of aggression.
- Crisis intervention, in order to detect possible disorders derived from the aggression, such as stress, anxiety or depression.

ANALYSIS

The current globalization has generated radical changes that have significantly impacted the international order. These impacts have not only been in the economic, commercial or productive areas, but have also affected social relations, culture, national politics, health and international relations, because of the transnational space that has been constituted in the framework of globalization.

In the modern world, the traditional concept of security has changed into multidimensional security, due to the diversity of phenomena that affect the security of the individual. Hospital security is so complex that it includes several axes, from the medical management, the attention in disasters to the security of the establishment and the patients before events of social violence; the hospital institution must take decisions after an analysis of the local risks. At the moment, the hospital security is seen like a multidimensional problem including the three axes raised.

The security issue is relevant, taking into account that we talk about a diagnosis of a catastrophic situation in terms of the frequency of errors produced to hospitalized patients.

The sanitary, social and economic consequences of the insecurity inside a hospital institution is due to the errors in the assistance, to the lack of preparation in emergency situations and disasters or the lack of protocols of protection to violent actions scratched or not armed to personnel of health and / or users, reveals that inside the strategic plantation of every hospital institution there are these three axes, looking for the risks, managing them and doing a prospective plan of the management of prevention and mitigation of the possibility of presentation or in his case a suitable mitigation of the impact of the risk.

With these actions carried out by the organization of the institution will offer, both higher quality of care, assertiveness, efficiency, effectiveness and most importantly, the worker confidence to their authorities and patient confidence to the hospital institution.

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http://www.scielo.org.pe/scielo.php?script=sci_serial&pid=2308-0531&lng=es&nrm=iso

https://network.bepress.com/

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