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Health and Safety Standards for Irish Emergency Departments – *providing an optimum environment for both patients and staff*.

1. Introduction

The provision of optimum care to patients with acute illness and injury is inextricably dependent on maintaining high health and safety standards in Emergency Departments (EDs). The Department of Health and Children (DoHC) and the Health Service Executive (HSE) each have a duty of care to ensure that there is an appropriate standard of health and safety provision for both patients and staff in EDs. This duty of care is set out in the DoHC's *Quality and Fairness, a health system for you* 2001[1] and more recently in the HSE's *Corporate Safety Statement*, October 2006[2].

The persistent overcrowding in Irish EDs fundamentally contravenes this duty of care and as a result both patients and staff are exposed to significant risk on a daily basis. There is overwhelming evidence from other better-resourced healthcare systems that prolonged waits in EDs result in prolonged hospital stay, poor clinical outcomes and increased mortality [3].

Irish EDs are generally poorly designed and have poor risk control standards with regard to fire, infection control, violence & aggression and manual handling.

The Health and Safety Authority undertook a risk assessment of all EDs in Ireland in March/April 2005 [4] with reference to the *Safety, Health and Welfare at Work Act 1989* [5]. The subsequent report highlighted serious deficiencies, outdated facilities and made far-reaching recommendations that have yet to be acted upon in many departments. The remit of the inspections was targeted primarily at *staff* health and safety issues and was not designed to address the serious threats to patient welfare.

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In view of the inertia of the HSE and DoHC in acting on the recommendations of the Health and Safety Authority, the IAEM proposes National *Health and Safety Standards for Irish Emergency Departments* based on international best practice. These incorporate both national and international statutory codes of Health and Safety pertaining to health facilities, buildings of public assembly, disabled persons and patients with psychiatric illness:-

- Irish Statutory Building Regulations 1991 & 1997 [6]
- Fire Services Act 1981 [7]
- Health (Nursing Homes) Act 1990 [8]
- Disability Act 2005 [9]
- Royal College of Psychiatrists Council Report 2004 [10].

The IAEM Health and Safety Standards focus on:-

- Infection Control
- Fire Safety
- Aggression and Violence
- Manual Handling

Issues of minimum medical staffing levels and training are dealt with in the IAEM position paper on *Staffing Needs for Emergency Departments in Ireland*. [11]

2. Infection Control

2.1 Overview

The transmission of infectious diseases is well described where there is close human proximity and habitation.

Overcrowding is a well-recognised prerequisite for transmission of lethal viruses between patients and staff – the extent of the SARS outbreak in Toronto was a manifestation of ED overcrowding and most deaths occurred amongst staff [12].

The transmission of other viruses, such as Winter Vomiting Bug (Norovirus) [13] and of virulent bacteria such as MRSA and *Clostridium Difficile* is also more likely in overcrowded health facilities [14].

Currently Ireland has the highest incidence of Tuberculosis in the industrialised world and close interpersonal proximity facilitates transfer [15].

2.2 The Health and Safety Authority Report 2006

The Health and Safety Authority report *inter alia* identified the following deficiencies in Irish EDs:

- Excessive patient load –
  - patients sharing cubicles,
  - patients with infectious diseases awaiting hospital admission sitting/lying next to each other for prolonged periods,
  - inability of cleaning staff to clean overcrowded areas.
- Lack of Isolation Rooms (particularly with negative pressure ventilation systems) that can prevent virulent pathogen cross-infection between patient and staff and patient and patients.
- Inadequate water supplies with risk of Legionnaires disease.
- Lack of hand washing facilities and inadequate numbers and quality of toilets.
- Lack of Personal Protective Equipment (PPE).
- Increased risk of needle-stick injuries due to taking blood from patients on the floor and in chairs.

2.3 The IAEM view

The IAEM endorses the statement in the HSE's 2*nd National Acute Hospitals Hygiene Audit 2006* [16] where the National Director of the National Hospitals Office states '*A clean, safe and hygienic environment of the highest standard should be available to all patients in Ireland.'* The following standards are based on the World Health Organisation *Hospital Infection and Hygiene Control* [17] guidelines. Emergency Departments that consistently fail to meet the standards should be reported to the Health and Safety Authority for consideration of a prohibition order.

2.4 Standards for Infection Control

1. All EDs should have at least **1 isolation room** with negative pressure ventilation or the ability to transfer patients with active tuberculosis (TB) to such a facility elsewhere within 1 hour of a presumed diagnosis being made. EDs that have more than 20,000 new attendances a year should have 1-2 additional **isolation rooms** pro rata.
2. All patients with suspected infectious diarrhoeal illness should be transferred to a **side room** (with private isolated toilet) and barrier nursed as soon as possible after the risk has been identified at triage. Each ED should have 1 such **side room** with EDs that have more than 20,000 new attendances a year having 1-2 additional **side rooms** pro rata.
3. All departments should be resourced with **Personal Protective Equipment** (PPE) that conforms to international standards.

4. All EDs should have individual fit-testing of barrier masks and staff training in the use of PPE.
5. All patient cubicles should have individual **hand-washing facilities** and alcohol gel dispensers.
6. There should be at least **1 toilet per 10 patients** within the department. This is in addition to and separate from waiting room provision. Toilet facilities should be of an appropriate specification to maximise patient safety and deter misuse of toilet areas.
7. ED water supplies should be regularly treated to prevent Legionnella.
8. Patients should **never share** the same cubicle space.
9. All patients awaiting in-patient admission should be managed on a trolley.
10. EDs should have safety systems in place to minimise the risk of needle-stick injuries:
    a. safety intravenous cannulae
    b. safe venesection systems
    c. safe intramuscular injection needles
    d. all cubicles should have **dedicated sharps' bins**.
11. Taking blood for tests should only be undertaken on a trolley or bed.
12. Twice daily full **cleaning** of the Emergency Department should take place, unimpeded by overcrowding. All EDs should have dedicated cleaning staff to provide an immediate response in case of spillages or soiling.
13. Food preparation or distribution facilities should be equipped to conform to Food Safety Standards.

Only when a Major Incident has been declared and the Major Incident Plan activated may there be a temporary and short lived (12 hours) exemption from these standards.

2.5 Caveat

The provision of adequate isolation and side room facilities in Emergency Departments does not absolve an individual hospital of the responsibility to ensure that there are adequate isolation facilities (with negative pressure ventilation) and side rooms elsewhere in the hospital. ED isolation and side room facilities are specifically intended for the initial management of appropriate patients not their ongoing definitive hospital care.

3. Fire Safety

Patients and staff should not be placed at risk due to poorly designed EDs with inadequate fire exit egress or excessive occupant load.

International fire safety bodies [18, 19] recognise that excessive occupant load i.e. the number of people in a restricted space is directly related to increased unnecessary burns and death in the event of fire.

3.1 Legislation

All Hospitals shall comply with the *Fire Services Act 1981*[7] as amended by the *Licensing of Indoor Events Act 2003*[23].

In addition, the design of new hospitals/departments shall comply with 1991 and 1997 Building Regulations. (The Building Regulations 1991 came into effect on 1st June 1992). The Building Regulations must also apply to the alteration of existing buildings. Furthermore the *Disability Act 2005* [9] recognises that citizens with physical and mental impairment (which includes many ED patients) have basic human rights in relation to public building design and function.

3.2 High Risk

The 1991 Building Regulations describe a hospital as *Purpose group 2(a) Residential Institutional* and regard it as a high-risk building primarily because of the occupation of the premises by persons that may not be capable of escaping unaided and are reliant on trained and experienced hospital staff using an efficient evacuation plan for their safety.

3.3 Means of escape - general considerations

- A door, providing exit from individual areas, must open in the direction of travel to the exit.
- A room that has one means of escape shall have a maximum occupancy of no more than 20 persons & travel distances within the room shall not exceed 10 metres.
- All other areas shall have a minimum of two means of escape in opposite directions with travel distances not exceeding 20 metres.
- Exit doors from areas where there is an occupancy of more than 50 persons shall be fitted with panic bolts complying with *BS EN 1125: 1997 'Building Hardware – Panic exit devices operated by a horizontal bar – Requirements and test methods'*, or shall be free from fastenings. Fire exit doors must be clearly signed, unobstructed, unlocked and allow egress for all persons into a safe area
- Storage is not permitted on escape routes.

3.4 Older Hospitals

Older Hospitals (i.e. those built prior to 1st June 1992) are excluded from the 1991 Building Regulations, however a competent person should carry out a

full risk assessment and means-of-escape analysis on a department /area /room /building case-by-case scenario to ensure compliance with the Fire Services Act 1981 as amended by the Licensing of Indoor Events Act 2003. Where an older ED has been refurbished, any alterations made should comply with these fire regulations and a valid Fire Safety Certificate be obtained.

3.5 New Hospitals

New hospitals, and those built since the introduction of the Building Regulations should have a current valid Fire Safety Certificate and thus be adequately designed from a fire safety perspective. This necessitates *inter alia*:

- Adequate exit widths and numbers of exits.
- The carrying out of a full means-of-escape analysis examining worst-case scenarios. As a result, adequate means of escape/exits should have been provided for.
- The analysis and provision of progressive horizontal evacuation in a hospital/department, depending on each individual hospital.

It should be noted that the grant of a Fire Safety Certificate is not retrospective. Works may only commence after the grant of a Fire Safety Certificate and it is an offence to do otherwise.

3.6 Major Emergencies

The activation of the Major Incident Plan does not exempt premises from fire safety legislation and regulations. The Major Incident Plan should include and identify adequate resources and back up systems to ensure that facilities are capable of an effective response to a major emergency so that relevant legislation is complied with at all times.

3.7 Fire Training

All EDs should have a current **Fire Plan** and **ongoing Fire Training**

4. Aggression and Violence

4.1 Overview

EDs can be violent places. Contributory causes include:-

- Overcrowding and understaffing.
- Inadequate passive and active security.
- Long waiting times

- Medical conditions which lead to a confusional state
- Misuse of alcohol and drugs
- Rowdy or over-anxious groups of people who accompany patients.
- An apparently uncaring attitude on the part of staff.
- Lack of privacy and interview rooms.
- Lack of training for staff in subduing aggression

The staff of many EDs regularly face unacceptable psychological and physical violence in their workplace [20, 21]. Other patients, especially the vulnerable and elderly are also exposed to this aggression.

4.2 The Royal College of Psychiatrists and the Health and Safety Authority Reports

The Royal College of Psychiatrists have made several recommendations in their report on violence within EDs, as has the Health and Safety Authority [10]. These include:-

- Improved ED design so that staff and patient safety is a prime consideration.
- Interview rooms for potentially violent patients that have standard safety features (panic button, 2 exit routes, furniture and fittings that cannot be used as weapons). Such rooms should be a minimum of $12m^2$ in area. The room should be decorated in calm colours and well lit. The room should have an observation window and be viewable from outside.
- Safety training for all staff at least every 3 years.
- Swift access to hospital records to ensure forewarning of violence.
- CCTV recording within EDs.
- Dedicated, visible 24-hour security within EDs.
- Collation and audit of all episodes of violent conduct
- Ready access to counselling for staff.

The IAEM supports a zero tolerance policy towards violence and aggression and believes that whilst all patients have a right to services within EDs, staff members also have a right not to be assaulted or intimidated.

Furthermore the HSE has a duty of care to both ED patients and staff in providing the basic tools to avoid aggression and violence. Emergency Departments that consistently fail to meet the Aggression and Violence safety standards should be reported to the Health and Safety Authority for consideration of a prohibition order.

4.3 Security Standards

1. Every ED should have **24-hour dedicated visible security personnel** within the department, present at all times.
2. Every ED should have continuous recordable **CCTV and panic alarm systems**.
3. Every hospital should comply fully with the Royal College of Psychiatrists recommendations with regard to resources to counter violence within its ED.
4. Each hospital must adopt a culture of '**zero-tolerance to violence**' within the ED and facilitate the prosecution of perpetrators of violence.
5. All hospitals must provide **training and counselling** in dealing with violence and aggression to all ED staff.

5. Manual Handling

5.1 Overview

The IAEM agrees with the Health and Safety Authority that all EDs must comply with the Manual Handling Regulations in Part VI of the *Safety, Health and Welfare at Work (General Application) Regulations 1993* [22]. Manual Handling involves the lifting, putting down, pushing, pulling, carrying or moving of a load, where there is a risk particularly of back injury. Injuries due to manual handling are common where unfavourable ergonomic conditions exist (as in overcrowded EDs). Injury due to Manual Handling is the most common cause of workplace injury in Ireland (1/3 of all non-fatal injuries).

5.2 The Health and Safety Authority Report 2006

The Health and Safety Authority identified that serious Manual Handling deficiencies exist in Irish EDs. These include:-

- Lack of training in Manual Handling
- Inadequate staffing levels to implement safe Manual Handling ('2 person lifts').
- Lack of mechanical lifting aids (hoists, maxi slides etc) or inability to utilise these due to overcrowding in EDs
- Congested lifting areas such as toilets and bathrooms.
- Excess ergonomic hazards in the form of pushing patients in Buxton chairs and trolleys.

5.3 Manual Handling standards

1. All ED Staff should be required to attend appropriate **Manual Handling training**.

2. All EDs to have appropriate **mechanical lifting aids** to lift patients in an **uncongested environment**
3. All EDs to be **adequately staffed** to allow '2 person' lifting techniques if a mechanical aid is unsuitable.
4. All EDs should have sufficient **Porters** (trained in Manual Handling) to facilitate the safe transfer of patients on trolleys.

Emergency Departments that consistently fail to meet these Manual Handling safety standards should be reported to the Health and Safety Authority for consideration of a prohibition order.

The only exemption from these standards is when a Major Incident has been declared and the hospital Major Incident Plan activated.

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