G28	Standard	The moving & handling (M&H) in emergency evacuation from a building

Systems are in place to cover **emergency evacuation from a building**

Justification

Rationale

Normally patients, service users and residents (persons) will be moved to relative safety according to the standard progressive horizontal evacuation procedures. On occasion persons may need to be removed from their beds or chairs, and taken down/up stairs out of the building, in which case special procedures, equipment and training will be needed. Members of staff with certain disabilities may require rescue from clinical or office areas.

Authorising Evidence

HSWA (1974); BS9999 (2008); Fire Precautions (workplace) Regulations (1997); HMGov (2006); HMGov (2007); MHSWR (2000); MHOR (2004); NHSLA (2013/14); PUWER (1998); RR (Fire Safety) Order (2005) No 1541

Links to other published standards & guidance

Betts M & Mowbray C (2005); Fire safety risk assessment healthcare premises (2006); NHS London (2009); NPSA (2008); Ruszala et al (2010)); TSO (2007)

Cross reference to other standards in this document

A1,4,11-16; B1,3-6,9,12,13; C1-4,10-12; D1-7, E5; G15,18-20; I1,3,5-7; K1

Appendices

1,3-7,9,10,16,17,19,21,22,25,27

Verification evidence - requirements for compliance

(to achieve and maintain this standard)

- An agreed approach, informed by evidence-based best practice, described in policies, disseminated to all staff and embedded within the organisation
- Risk assessments that are "suitable and sufficient", robust and balanced
- Departmental and personal emergency evacuation plans (PEEPs)
- Safe systems of work and standard operating procedures (SOPs)
- Information and communication systems – including documentation
- Competent, healthy staff in sufficient numbers
- Training and supervision
- An environment conducive to good care, designed for easy egress
- Handling equipment – for emergency evacuation
- Other equipment and furniture – beds, couches, commodes, wheelchairs, assistive technology, etc. that supports emergency evacuation
- Investigation of and learning from adverse events, with de-briefing
- Monitoring, audit and review of verification evidence
- Reporting the status (compliance) to the organisation
- Action plans to correct any lack of compliance

G28 Protocol – Emergency evacuation from a building (M&H)

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Except where otherwise appropriate, the term 'person' is used to denote the person being rescued; be they a patient, service user, resident, child, or visitor, etc. Where necessary, the person is designated as male.

The terms moving & handling practitioner (MHP) and fire officer will be used in this document to denote the 'competent persons' in their respective fields, although it is recognised that several variations on this nomenclature are in usage. To avoid confusion, in the context of the Benner scale, the competent persons referred to above are actually 'experts' (see Section 4).

1. Introduction

This protocol covers the emergency evacuation of all persons from health, social care and education settings. Premises include: - hospitals, nursing and residential care homes, hospices, mental health and learning disabilities (MH/LD) facilities, clinics and health centres, as well as schools and colleges. Members of staff with certain disabilities may require rescue.

Emergency evacuation may be necessary for various reasons other than in the case of fire, such as gas leaks, floods, bomb scares.

In many cases persons can be allowed or encouraged to remove themselves under supervision from dangerous areas, but a significant number will need varying degrees of assistance. For example: - patients in hospital settings may be unconscious or paralysed; service users in MH/LD units may be confused or unco-operative; residents of care homes may be frightened as well as having limited mobility.

The worst case scenarios will need to be considered and catered for. Fires at night, when staffing levels tend to be low and levels of cognitive ability may be affected by the time of day and tiredness, will increase difficulties. Added to this, persons are likely to be in their beds and any confusion or disorientation is likely to be greater.

Plans and procedures must be in place and all staff will need to be familiar with them and the part they are to play. Practice drills will need to be realistic and frequent enough to ensure that staff will be able to respond automatically. Such practice must include the moving & handling elements.

In the Royal Marsden Hospital in London patients had to be evacuated from the building in 2008 (NHS London, 2009). Nurses were evacuated from the building at the Royal Victoria Hospital in Belfast in 2009 (Staines, 2009). In 2008

patients and staff were evacuated from Great Ormond Street Hospital in London (Belle-Fortune, 2008; NHS London, 2009). No lives were lost but there were costs to all organisations in terms of replacing damaged equipment and temporary breaks in infrastructure whilst investigations and repair work or rebuilding was carried out (NHS London, 2009).

Many fire alarms that go off in hospital turn out to be false alarms but a small percentage are real and all hospital workers must be on the alert to evacuate the building if necessary. Terrorist activity also means that in some parts of the country staff must be prepared for a major incident which could involve the safety of staff and patients.

2. Management, organisation, supervision and support

Emergency evacuation should be seen as an activity that has relevance to the organisation's manual handling advisors as well as the officers responsible for fire safety. Therefore management, organisation, supervision and support must be planned and carried out as a joint activity, with each advisor providing their specialist input.

Other emergency services such as the police and ambulance service will also be involved during a building evacuation, particularly in the case of arson or terrorist activity. All these considerations will take place during major incident planning. The manual handling practitioner should be involved in all major incident planning as this will involve moving people and equipment.

Every department/unit/ward should have: -

- An emergency evacuation plan
- Generic evacuation plans for groups of persons; e.g. grouped according to dependency/ mobility (HMGov, 2006)
- Personal emergency evacuation plans (PEEPs) where required, for each patient/ service user, etc. and in some cases for members of staff who require help to leave the building (BS 9999:2008)
- A designated fire warden to cover each shift who will be responsible (with the unit's manager/ supervisor on duty) for initiating and managing fire evacuation procedures
- Training for the above

3. Staffing levels

When assessing the requirements of departmental staffing levels the number of dependent persons, their level of dependency, and the type of evacuation equipment available should be taken into account. There must always be enough staff available to facilitate the movement of persons to a place of safety within the determined safe rescue time (TSO, 2007). During times when there are fewer staff available, such as at night or weekends, consideration should be given to contingency planning, which may involve bringing in staff from other areas.

As identified by each department, the number of staff required to undertake each evacuation task should be related to each of the persons concerned (BS 9999:2008). Those requiring assistance will require a PEEP. Further consideration must be given to the need for a member of staff in the place of refuge to stop persons wandering off into further danger (TSO, 2007).

Please note that the role of the Fire and Rescue Service is to ensure that the means of escape is viable. The responsibility for the evacuation of persons is the responsibility of the organisation occupying the building (BS9999:2008; HMGov, 2007).

4. **Staffing competences** (after Benner, as cited in Ruszala et al, 2010)

Emergency evacuation from a building will put everyone involved under stress and moving people could result in having to apply high forces pulling/ pushing and possibly lifting, in stressful postures. Correct use of low friction sliding equipment by competent/proficient staff will reduce the risk of injury.

A programme should be put into place to bring all members of staff up to at least the level of competence with regard to M&H in emergency situations, including evacuation. Competence or capability must also take into account the individual's health and fitness status (see below).

Inevitably 100% compliance with this objective cannot be achieved, because some staff will be new, they may be temporary (bank or agency), peripatetic (visiting therapists, etc.), or on placement as students. Such staff should be regarded as novices or advanced beginners for this purpose.

If it is appropriate for them to assist in an evacuation, visitors and contract staff should be regarded as novices, because they may not be familiar with the environment or evacuation procedures. If used, they should be directed by an experienced member of staff. It should be remembered that everybody will also be under stress, therefore reassurance and a brief explanation/ instruction must be given.

Once staff have reached the level of competence, certain individuals may be considered for further training as fire wardens. In this context they would then be regarded as 'proficient'. Assessment can take place during training with encouragement given to members of staff who could "step up" during an emergency. Some organisations however, to ensure 24/7 fire cover, advocate training all senior staff to this level.

A relatively small number of the organisation's staff may develop further to become experts in the M&H of emergency evacuation. Most obviously these would be the MHPs and fire officers. An expert handler will not need to think about safeguarding posture and reducing forces required to move a person because it will be "second nature".

Planning is essential. There should be regular staff fire and evacuation training using the unit's equipment, e.g. ski pads and evacuation chairs ideally six

monthly. Any changes in evacuation plans must be included in the staff training (NHS London, 2009).

To summarise: -

Novice
Someone with little or no experience and/or unfamiliar with the building
These individuals can still be made use of in emergency situations but will require close supervision.
Examples: new staff, visiting staff, students, visitors.

Advanced beginner
A handler who has undertaken basic M&H and fire training and can work under supervision.
Examples: nursing, care staff and therapists with some training.

Competent
A handler who has undertaken M&H and fire training and been assessed as 'competent' in both aspects. They must be good communicators, decisive and capable of acting on their own initiative and taking a lead.
Examples: fire wardens.

Proficient
A handler who has undertaken further M&H and fire training and been assessed as 'proficient' in both aspects, reached a higher level of expertise and is able to check the competence of others.
Examples: experienced fire wardens.

Expert
Practitioners who have undergone advanced training and can demonstrate expertise in both areas. They will take the lead in training and policy development in this context.
Examples: MHPs and fire officers who meet the above criteria.

When the fire and rescue service arrives all staff must take orders from the fire crew who are the experts in dealing with fire.

It is not possible to assess how members of staff will react in a real emergency and there will rarely be an opportunity to gain experience of what to do when a room is filled with smoke and overheated.

When considering competence or capability, the individual's health and fitness status should be taken into account. This status should be regularly reviewed and kept up to date and should be borne in mind when determining staffing levels.

5. Environment

The provision of clinical and working environments should take into account the requirements for emergency evacuation. Such environments should be 'fit for purpose'.

When planning or commissioning new builds, refurbishments/ upgrades and changes of use, consideration should be given to emergency evacuation from all floors: e.g. door widths to allow for bed movement (including bariatric), opening mechanisms and means for holding them open; corridors wide enough for beds to be turned out of doorways, turning circles for wheelchairs and beds; design of stairs to include mattress evacuation plus allow for ambulant passing (HBN, 2013; TSO, 2007).

During emergency evacuation hazards, such as equipment that is blocking fire exits, poor housekeeping, poorly maintained wheelchairs, trolleys and beds, etc. can make the difference between life and death; therefore all fire exits must be kept clear at all times (RR 2005 No 1541) and all equipment kept serviceable.

Managers must monitor the environment to ensure there is minimal risk. In healthcare settings patient environment assessment teams (PEAT) are responsible for monitoring the environment and should be aware of the needs of staff whilst evacuating persons, e.g. clear exits, suitable fire doors and building structures. Consideration must also be given to the space available in the refuges/ safe havens, to include the footprint of beds and wheelchairs.

It is essential to ensure that all doorways are wide enough and turning circles sufficient to allow the passage of all beds, including special beds (which may be larger). Failure to achieve this will mean that progressive horizontal evacuation will be considerably slower for persons occupying these beds if they are 'bedfast', because they will need to be moved out of bed by some means and evacuated on sliding equipment or by wheelchair. The type of person using special beds will usually have limited mobility, so the means of transfer from bed must be carefully considered as part of their PEEP.

6. Communication and information

Successful management of an evacuation event relies on good communication (HMG, 2007). At the time of an emergency this will be vital to ensure the safety of everyone in the building. If the emergency is caused by fire the first thing staff need to know is where it is, when to evacuate and where to evacuate to. It is important that everyone, including visitors to the building, knows where the nearest fire escapes are and where they lead to. In the case of a person being evacuated on a large piece of equipment the width of doorways and stairs should be known by all staff. The emergency service responders (Fire and Rescue Service) will need information about the building and whether there are people still inside, e.g. in a toilet or side room. They will also need to know, in the event of a fire, what materials are burning (NHS London, 2009).

It should be recognised that some persons and members of staff may not be able to communicate with the level of facility necessary in emergency situations. This may be because English is not their first language, or they may have impairments of hearing or vision, or medical problems.

Consideration should be given to the following: -

- Documentation – signing in and out sheets; staff records (including those for training and competency); patient/ person records including assessments and PEEPs; unit evacuation and major incident plans and policies; permits to work for contractors (all of this to be accessible)
- Robust systems for raising alarms and communicating with the emergency services
- Clear identification of persons in charge in emergency situations
- Clear channels of communication with clear commands
- Signage
- Telecom systems, including 'walkie-talkies'
- Smoke detectors
- Alarms that link automatically to fire stations and central points and display information regarding the areas affected
- Passing on of verbal information generally
- Information, instruction, training and supervision
- Other information systems (posters and leaflets)
- High visibility jackets and perhaps arm bands for fire wardens, etc.
- The maintenance of the security of persons once evacuated

7. Treatment planning

The M&H involved in emergency evacuation does not constitute treatment; however, the principles of good handling should be applied wherever this is possible, in order to reassure and promote an appropriate contribution from the person being rescued.

Consideration must be given to the positioning of drips, oxygen and case notes with the person, whilst they are being moved. Advice on this must be given to staff during evacuation training.

8. Moving & handling tasks

During an emergency evacuation from a building everyone capable of walking will be asked to evacuate via the nearest exit. Some may need assistance and/or walking aids.

Bed-fast or chair-fast persons should be moved in their beds or wheelchairs where this is possible. In some cases it will be necessary to transfer persons onto sliding equipment. This will be mainly when evacuation via stairs is required, but may also be necessary where beds are too wide to pass through doorways.

Most modern buildings have fire doors which will afford at least ½ hour protection if they are closed, in which case persons are moved to a refuge (place of relative safety) away from the fire. The fire warden must ascertain how many persons can be accommodated in the refuge at any one time. If the building is designed in compartments then beds and wheelchairs can be pushed away from the source of the fire. The most mobile will be the first to be moved, along with those closest to the fire.

Only if absolutely necessary (if the fire cannot be contained) will persons be moved downstairs/outside the building to a place of safety. High dependence patients such as those in intensive care units, theatres etc., will only be moved as a last resort, because this could result in serious harm or their death.

The M&H tasks that will need to be addressed are: -

- Pushing/ pulling beds, trolleys and wheelchairs
- Transferring from bed to wheelchair/ evacuation chair
- Transferring from static chair to floor
- (Locating and) inserting sliding equipment
- Transferring from bed to floor
- Moving person down (or up) stairs (if premises are on more than one level)
- Moving a seated person downstairs on an evacuation chair

Some fires are caused by arson and this may happen at night or start in disused areas where there are not many people around. Moving people away from the danger areas will require a lot of manpower so it is advisable all staff are trained in what action to take, including hospital porters, doctors and all "frontline staff".

If the reason for evacuation involves bio-chemicals then any personal protective clothing worn may impinge on handling activities.

9. Moving & handling assessment

Referral to emergency planning procedures will help staff to make quick decisions during an emergency; therefore staff should regularly update their skills and knowledge of the techniques used and systems in place for when the alarm goes (HMGov, 2007).

The M&H tasks that will need to be assessed are those set out above in Section 8: -

- Pushing/ pulling beds, trolleys and wheelchairs
- Transferring from bed to wheelchair/ evacuation chair
- Transferring from static chair to floor
- (Locating and) inserting sliding equipment
- Transferring from bed to floor
- Moving person down (or up) stairs
- Moving a seated person downstairs on an evacuation chair

M&H assessments and PEEPs should describe the method and equipment to be used and the number of handlers required. SOPs, based on generic assessments can be used, but the handling plan should be individualised, especially if the person varies in any significant way from the 'normal' population of persons/ patients, etc.

Risk assessment of all environments must include consideration of how people will be evacuated in an emergency. Risk ratings will depend on the size and co-

morbidities of the patient, environment and capabilities of the staff (see Section 13).

Risk assessment of fire extinguishers; their weight and positioning (wall/ floor) must also be considered.

10. Methods, techniques and approaches

All staff should be aware of evacuation equipment available and where it is located, and be trained in how to use it. The likelihood of having to evacuate a person in bed or in a wheelchair is low and therefore the frequency with which staff would normally encounter such situations is rare, so employees should be given regular updates in fire procedures and the opportunity to practice fire evacuation. As technology changes (for example air mattresses, specialist beds, life support equipment) fire evacuation procedures and equipment must keep up with these changes and be compatible.

As part of the planning process, the safest and most effective ways of carrying out the M&H tasks identified will need to be selected. The best methods and techniques for the following situations will include the judicious use of equipment: -

- Pushing/ pulling beds, trolleys and wheelchairs
- Transferring from bed to wheelchair/ evacuation chair
- Transferring from static chair to floor
- (Locating and) inserting sliding equipment
- Transferring from bed to floor
- Moving person down (or up) stairs (if premises are on more than one level)
- Moving a seated person downstairs on an evacuation chair

Pushing/ pulling beds, trolleys and wheelchairs
Consideration must be given as to whether beds will pass through doorways and can be manoeuvred/ turned in corridors. Also, the amount of space available in the place of relative safety/ refuge needs to be considered, and similarly, the amount of space for wheelchairs.

Transferring from bed to wheelchair/ evacuation chair
This will be as for any bed to wheelchair transfer, possibly avoiding the use of a hoist due to time constraints. Hoisting may be the preferred option in certain cases, if for example - the hoist is nearby, the sling already in situ, an in-bed slide sheet system in situ, the person is heavy. Small sliding boards and slide sheets may be a more viable alternative.

Transferring from static chair to floor
The seated person is moved from chair to floor using emergency handling technique. (See G26 – Moving and handling of the collapsed person with a cardiac/respiratory arrest).

When the person is lying flat on the floor, he is rolled into the middle of an evacuation mat or ski pad and strapped in using the same technique as if they were in a bed (see below). He can then be evacuated in the same way.

(Locating and) inserting sliding equipment

NB: A number of sliding equipment products can be used; some of these are listed in Section 11 Handling equipment. The Albac Evacuation Mat is one example and its use is illustrated below. This does not imply a recommendation that it is superior in anyway. Other products are available and organisations should evaluate them and select those most appropriate to their particular circumstances. Although the principles of handling will be similar, techniques and procedures will differ according to the equipment being used.

There are two main types of sliding equipment: -

- Ski sheets. These have a strap/ straps that fit under the mattress (a potential infection risk). They are already in situ. All that is required is that the straps are buckled and secured around the person, and an explanation given.
- Ski pads. These are wall hung and require insertion under the person. Local policy will determine the system to be used. It is imperative that the manufacturer's instructions are followed. The following is an example of a procedure using a ski pad.

Transferring from bed to floor and Moving person down (or up) stairs (if premises are on more than one level)

These two tasks are described below (pp 13-15).

Inserting ski pad

Practical points
A dynamic mattress should be "P" maxed (or equivalent for other manufacturer's equipment) before the handlers turn the person. Handlers should stand to the side of the person on either side of the bed. The ski pad – Albac Evacuation Mat -is then placed on one side of the person with the side of the mat folded over.

It is important to explain to the person what will happen and to tell them it is a precautionary measure.

If possible the handler should encourage the person to help whilst the mat is placed underneath them. Once on it, the handlers must stress the importance of keeping still.

The person is turned onto their side and the mat is slid towards the person so that the rolled edge is under the person's side.

The person is rolled over and onto their other side to enable the mat to be opened out fully, the person is then turned back so they are lying flat, and central, with their feet in the foot protector.

Then proceed as follows:

- The hands should be tucked in to the person's side
- The below knee straps are fastened
- The two trunk straps are fastened diagonally across the chest – a pillow may be placed between the chest and straps for comfort
- All straps should be comfortably secured, but not too tight!

EVACUATION OF A PERSON ON AN EVACUATION MAT

If evacuation is unnecessary the mat may be removed by reversing the process.

If the instruction "Evacuate" is heard, wherever possible the first move should be horizontally to an adjacent compartment (place of relative safety), using the person's bed.

Transferring from bed to floor
Whilst the person is moved off the bed head first, using the Albac mat, other manufacturers recommend taking the person off feet first. This highlights the importance of following the manufacturer's instructions.

- If further instruction is given to "Evacuate Level", proceed as follows:
- All cot sides are removed by one set of staff
- Drips, drains and loose clothing are tucked in
- The CPR lever is pulled/the CPR button is pressed on a dynamic mattress (depends on the age/ type of the mattress)
- The bed is lowered
- The bed is reverse Trendelenburged by one/ two handlers
- The foot end of the bed is removed
- The person is pivoted so that they will come off the bed head first, either over the side, or as the diagrams below
- The yellow strap of the evacuation mat is held and the person is slid off the bed
- To create a softer landing on the floor for the person, the person's mattress may be swivelled sideways across the bed giving the person a softer slide down the mattress to the floor, or judicious use of pillows may be used
- The yellow strap at the head of the person is used to slide the mat out of the danger area
- To ensure a clear route if pulling backwards, check behind constantly

Moving a person down stairs on a ski pad – using the Albac mat

CAUTION	Whilst evacuating a person the handler is at risk of stooping and twisting. There may be a risk of musculoskeletal injury if the egress is not clear. Warning – when pulling the person backwards it is easy to fall over objects. For this reason there should not be anything stored in the way of a fire exit.
BENEFITS	Persons may be moved to a place of safety away from a fire.
DESCRIPTION	The person is placed on a fire evacuation mat and securely strapped in. The mat is slid off the bed and handlers use straps to pull the person away to a place of safety.
VARIATIONS	Persons following amputation of both legs, children and people who are very short should use a mat that can be adjusted to the person's height. If a person is too tall, it is important to care for the head, rather than the feet. If a person is too wide, bariatric equipment must be available or the person must be secured mattress.
SUCCESSFUL EVACUATION	The person is encouraged to remain as still as possible whilst being moved. The person is moved with the minimum of two handlers down stairs. Once outside the person may be slid to shelter whilst waiting further assistance.

- The person is taken to the head of the stairs head first
- The person is turned so that the heels are positioned over the top steps, so he goes down the stairs feet first
- The foot end of the mat is guided by using the foot strap
- The foot end of the evacuation mat is pulled out horizontally (rather than down the stairs) level with the landing until the point of balance is reached
- The head should be raised at the same time as the feet are lowered in unison, so the patient's body is kept straight
- The handler at the top end of the person should be aware that the mat can move very fast
- The handler at the head will need to brace him/herself to control the descent , by keeping the mat as flat as possible and in contact with the stairs
- The feet must be raised if the mat descends too quickly
- As all environments vary, local policy must be followed for which side of the stairs to use when going down. As a general rule, persons are taken down the outside (wider side) of the stairs to allow the Fire Service to go up using the inner side.

Larger persons may require more than one handler at the head and foot end of the person to assist the descent.

There should only be one person on an evacuation mat at a time on each flight of stairs and corresponding landing.

Comment: It is not always the case that the heavier the person, the quicker they descend. A lighter person will sometimes offer less resistance on the stair treads, so they may move quicker than expected.

Moving a seated person downstairs on an evacuation chair

This equipment requires specialised training by an authorised trainer. Training courses are provided by a number of companies, some of which are listed in Section 11. The use of these chairs requires *regular* practice.

11. Handling equipment

Evacuation equipment will vary and the user should always refer to the manufacturer's instructions before use.

The main items that can be used for emergency evacuation can be grouped as follows: -

- Evacuation chairs
- Ski sheets SWL 160kg
- Ski pads/ Evacuation mats – sufficient for the number of persons requiring them. When deciding this, allowance must be made for the time taken to insert the mat, move the person, possibly along a corridor, down stairs and to a designated place of safety, place the person safely, remove the

mat and return with it to evacuate the next person. This cycle is likely to take 10-15 minutes

- Inflatable devices – e.g. a Mangar Camel, may be used to good effect with bariatrics in combination with the Evac mat to enable easier egress from bed to floor and greater comfort for the person (Wanless & Hayward, 2013).

Evacuation chairs

Several types are available. No one type of chair will suit all parts of the hospital environment. Due consideration should be given to matching the evacuation chair to the type of patient who will use it, e.g. a standard evacuation chair would not be suitable if located near a bariatric unit.

Sliding equipment

It is recommended that the sum of the weight of the rescuers is equal/ more than the weight of the person being moved.

There are a number of different ski pads/ evacuation mats available, including those for bariatrics.

Suppliers and training providers include:

http://www.albacmat.com/

http://www.baronmead.com/

http://www.evac-chair.co.uk/

http://www.evacusafe.net/

http://www.ferno.co.uk

http://www.mangarinternational.co.uk/professional/

http://www.marsden-fire-safety.co.uk/evacuation_chairs.htm

http://www.sure-line.co.uk

http://spectrumhealthcare.co.uk/evacuation

12. Other equipment and furniture

Sufficient supplies of other suitable equipment must also be provided, such as trolleys, beds, wheelchairs and walking aids.

For babies and small children there are baby ski pads. There are also baby carry cases available e.g. for SCBU.

13. Risk rating for each task

To carry out a 'suitable and sufficient' assessment, each task should be evaluated as part of the assessment process, so that the level of risk is quantified. Such assessments should be used, wherever possible, in the design of a safe system of work, and in highlighting any residual risks.

Various systems exist, but it is suggested that the NHS risk management 5x5 matrix, with 0-25 scale, is used for an overall evaluation of risk (N P S A, 2008) (see CD1, appendix 9 in folder 5). It is in common use, simple to use with 5 levels of risk, determined by a calculation of the likelihood or probability of an adverse event occurring multiplied by the severity of consequences or impact should it occur.

Likelihood/Probability (0-5) x Severity of Consequences or Impact (0-5) = 0-25

The values below are based on this system. Calculations lead to the following possible scores or ratings: -

1 – 6 = Low; 8 – 12 = Medium; 15 – 16 = High; 20 = Very High; 25 = Extreme

These ratings can then be used to alert staff, to prioritise action and justify any necessary expenditure to make the situation safer, on the basis of reasonable practicability. Options can be evaluated by considering risks, costs, and actions planned or taken, to reduce the level of risk to the lowest level that is reasonably practicable, which can thus be demonstrated.

Risks in these emergency situations will tend to be high and some may be in the range Very High – Extreme.

14. Alerting the moving & handling team

The M&H team should play a key role in planning and implementing evacuation systems, including the writing of policies and procedures and the selection of handling/ evacuation equipment.

All premises should be surveyed to ensure that are fit for purpose. Ergonomics assessment of new buildings/ pre-existing buildings requiring refurbishment, renovation and restoration will be required to ensure structural systems are taken into account for evacuations (NHS London, 2009). NHS London (2009) has a questionnaire (their Appendix 1) that could be useful when checking safe systems of work are in place in the event of an evacuation being required.

The M&H team should give advice regarding equipment and the necessary training required to ensure that all staff are familiar with it, and are competent in its use in an emergency.

The M&H team should also assist in the development of PEEPS. These may be generic or specific to each person.

15. Referral to and involvement of other specialists

In these aspects of emergency and major incident planning, all departments should work closely together, such as the fire prevention and management team, the M&H team, the estates and facilities staff and the health and safety team, alongside ward and departmental staff. During an actual evacuation event, health and social care staff will also work closely with the emergency service responders.

16. Transport (internal and external)

Transport within the department, clinic, hospital, other health and social care facilities, must be catered for, with variable height trolleys, wheelchairs, wheeled armchairs, etc.

If the person cannot be returned to the building because of fire/ flood damage, transfer to another part of the building or to another hospital/ facility will be required.

Transport to other units may require vehicles and these should be suitable and sufficient.

17. Discharge and transfer planning

It may not be possible to transfer patient records with the person in the case of an emergency, especially fire. If patient notes are burned this information may be lost; however, with careful planning and training this should not happen.

18. References

HSWA (1974) Health and Safety at Work etc Act (1974) Reprinted 1994 London: TSO Ch37 Sec 2(1) & (2), 7

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Benner P (1984) *From novice to expert: Excellence and power in clinical nursing practice* Boston: Addison-Wesley pp13-34 as cited in Ruszala S, Hall J and Alexander P (2010) 3rd ed Standards in Manual Handling Towcester: NBE

BS9999:2008 *Code of practice for fire safety in the design, management and use of buildings* www.law.resource.org/pub/uk/ibr/bs.9999.2008.pdf Retrieved 16.09.13

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Example of a **Competency Form**

Evacuation Mats During this training you will take part in a practical demonstration. Please take care and do not put yourself at risk of injury. It is your responsibility to stop immediately if you feel discomfort. Do not role play unless you are invited to do so. Footwear should be flat, closed and properly fastened.		
Print Name		**Location**
Designation		**Date**
Criteria	Evidence	Signature/ initial
Know where mats are kept.		
Identify when to place the person on the mat.		
Tell person this is a precautionary measure.		
Place the person on the mat and fasten the straps. Tuck in drips and drains.		
Lower the bed.		
Listen for instructions to move patient.		
On command "Evacuate Level", explain to the person and warn them to keep still, hands close to the body.		
Place pillows on the floor at the foot end of the bed.		
Reverse Trendelenburg with two handlers.		
Remove the foot board.		
Pivot the person so he comes off over the side or foot end of the bed		
Grasp the straps at the head of the person bed and slide him off the bed, head first.		
Slide the person away.		
Answer question: When sliding a person down the stairs, how many handlers are required and how does the person travel down the stairs "Feet First" or "Head First"?		
I have taken part in this practical demonstration and understand how to use it. Signed Print Name Trainer comments/signature.		

Summary/ Key Messages

- **The intention of the entire strategy and standards document is to contribute to the improvement of: -**
  - The quality of care - 'patient experience' (dignity, privacy and choice)
    - clinical outcomes
  - Patient/ person safety
  - Staff health, safety and wellbeing
  - Organisational performance – cost effectiveness and reputation, etc.

- **The standard for G28 is:**

Systems are in place to cover emergency evacuation from a building.

- **Skilful M&H is key**

- **Special points for G28 are: -**
  - **Assessment and planning are essential, especially in the case of vulnerable adults, children and the critically ill**
  - **This assessment and planning should be led by the advisors responsible for fire safety *and* M&H in close co-operation**
  - **Departmental evacuation plans**
  - **Personal emergency evacuation plans (PEEPs)**
  - **Evacuation equipment – suitable and sufficient – must be readily available**
  - **Regular practice of the procedures is vital. Procedures are reviewed in the light of practice and any changes in conditions**