NHS
Blood and Transplant

Fire & Evacuation
Getting it Right First Time!

Presenter:

Technical Author: Catherine Smith, H&S Department

Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

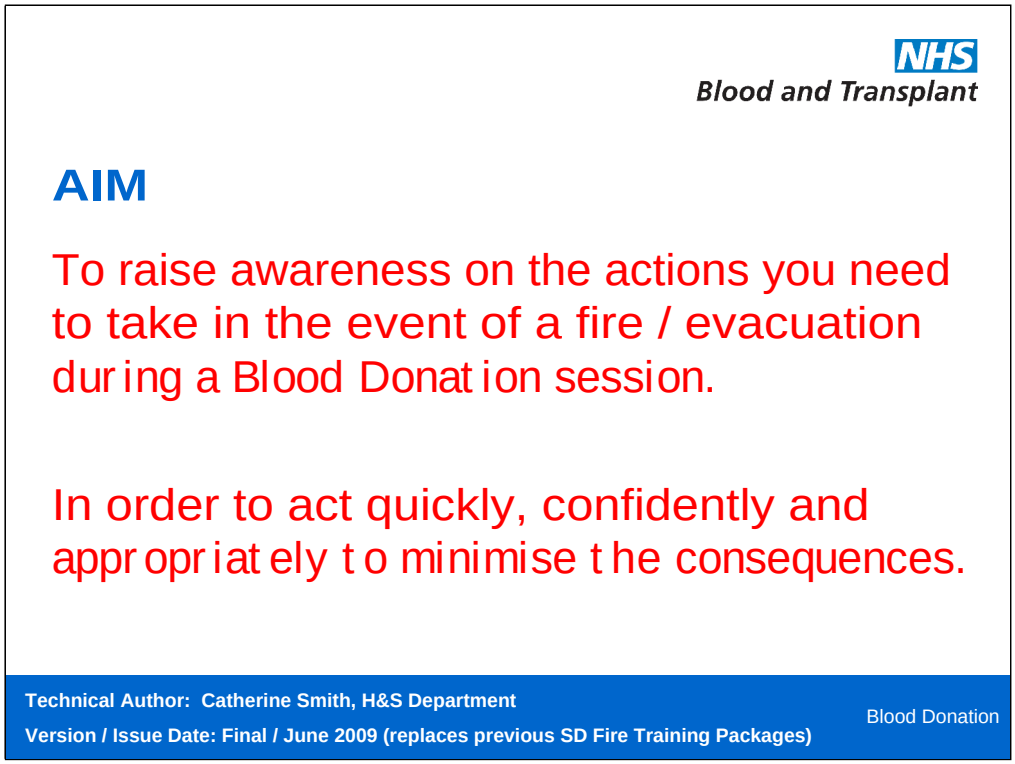
Introduce yourself and that this continues on from previous fire training which has been developed and rolled out in Blood Donation.

This package is focussing more on the implementation aspects – the bit that can make a difference between life and death !

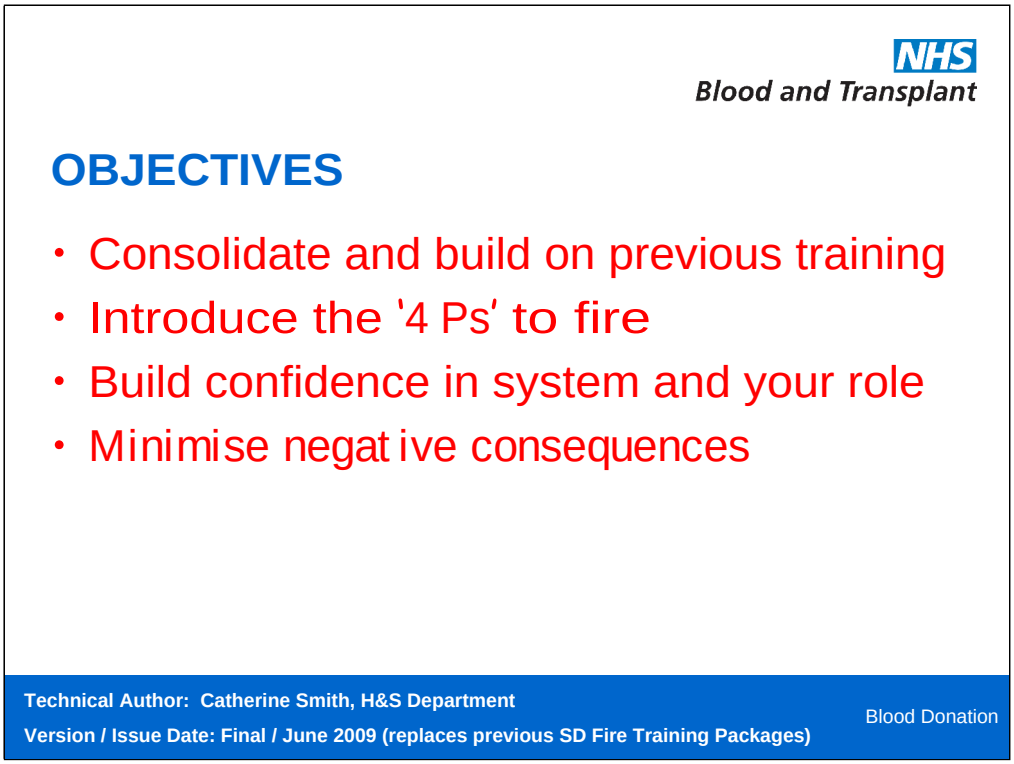
It builds on feedback provided by the H&S Union Reps at the Blood Donation Conference in Tamworth on 10th March 2009, stating the 'good bits', 'bad bits' and 'missing bits' to try and ensure it meets its needs of being engaging and effective.

The training will be a combination of formal presentation and group workshops, tailored to meet the needs of the audience, there is a separate 'hands on' bit which will be covered at a session within the next week or so (this must be recorded !). For that part of the exercise everyone will need to bring in a teddy (or equivalent) from home as a 'donor' – who says health and safety can't be fun ! Using teddy bears should help make it memorable which is important if a fire or other evacuation were to happen, it will all make sense as we go on.....

At this point go over housekeeping (as appropriate) as may have been covered earlier in the day if being delivered on a team training day. Might be useful to recap whatever the situation – this is at the discretion of the trainer.



Self explanatory and leads nicely on from previous slide and notes page.



Everyone will have had some form of previous fire training within NHSBT, part of this will be reflecting / checking what they remember from those courses (this will be covered in the prevention part, where there will be group exercises to complete).

Ask the group what they think the 4 Ps could be .... Put ideas on a flip chart at the front of the classroom and then circle or add ? The following in this order and elaborate slightly as to why ?

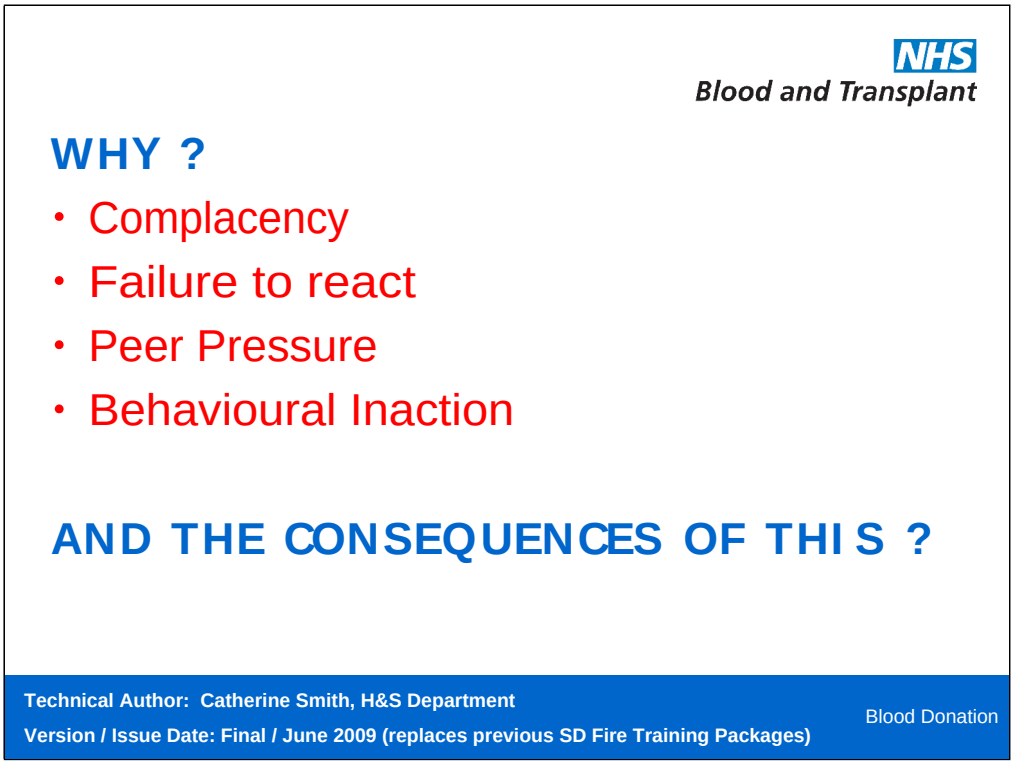
1) Prevention – stopping fires occurring in the first place is our best line of defence

2) Process – this is about procedures these help guide all the other 3 P's although there main focus is on dealing with the fire if it happens.

3) Preparation – this is very much about knowing and being aware of what the process requires (and expects) in terms of implementation and that they as individuals understand what this is and how to actually do this in terms of every day requirements etc.

4) Practice – this is about making sure they know how to do this in a 'real life' situation rather than in training room, essentially we are talking about 'mock' drills for this. The time to practice is not when its for real ! That's too late.

We will be looking very closely at our documentation and practices / implementation in this training to build confidence as this has been indicated as an area of concern by staff within Blood Donation. Hopefully this should remove the process 'barriers' so that everyone is fully prepared and ready for any eventuality.



There is good scientific evidence to support these different bullet points:

Complacency – we all tend to think it won't happen to me but to someone else, just like other things we all do e.g. drive. The low overall risk doesn't mean it won't happen, but possibly the chances are slim. But if it does happen you need to react otherwise your could be a statistic particularly for 'fires'. As they say – EVERY SECOND COUNTS AND CAN MEAN THE DIFFERENCE BETWEEN LIFE AND DEATH !

Failure to React –

People assume more time than they actually have the 'Friendly Fire' syndrome, some examples are:

Bradford Stadium Fire – clearly on fire but people still stayed to watch the football even when they were on fire themselves !

Woolworths Fire in Manchester in 1979 – 10 people died 9 of them in the cafeteria the theory being that they stayed to finish their meal (based on evidence found after the fact) thinking it would not develop that quickly – but the situation can change from benign to life threatening in seconds !

World Trade Centre on 9/11 - it took between 5 – 8 minutes for a lot of individuals to react (some even longer – 20 minutes or so). Delays related to making phone calls, tidying office, finishing e-mails and not knowing what to do.

Peer Pressure

Is important as an influencer of behaviour – the classic 'smoking room' experiment of the 1960s shows this vividly.

When in a room on their own 75% of participants got up and did something when smoke started entering the room but when other people were around (peers) they waited for them to react before they did anything, only 10% actively did anything !

Behaviour Inaction

Sometimes response can be affected by doubt – the 'I can't see anything' so everything is okay and also risk based on memories (traces) hence those who have been really involved in a fire or mock scenario will act differently to those never exposed to this as they know what can happen.

Self confidence can also be important and in extreme situations e.g. terrorist attacks or fire can make the difference between death and survival instincts.

Ultimately prevention is key – you need to be able to do things right first time hence all individuals who fly on the oil rig helicopters receive extensive training on evacuating a helicopter in water in a safe 'stress free and non-danger environment' so that they behave correctly without thinking if it does happen.

Show the next slide to answer the Consequences question you 'pose'

NHS
Blood and Transplant

A REAL LIFE EXAMPLE FROM NHSBT

Technical Author: Catherine Smith, H&S Department

Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

Consequences can be varied. Don't elaborate too much as there is a group exercise in a moment on the hazards.

The photos are real photos from a fire which did happen in NHSBT and it is not the only one !

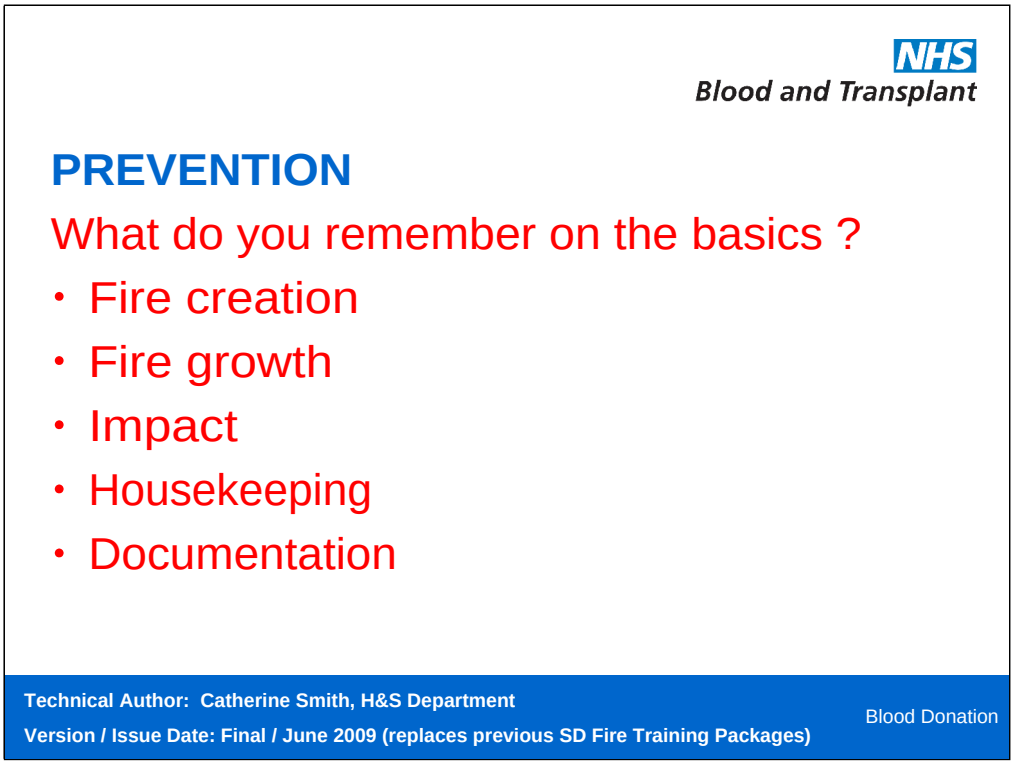
They can and do happen...

We had a mini bloodmobile session going on in the car park of the pub on the first slide when the pub caught fire !

There has been at least one fire at a Team Base in the Midlands.

We will be subject to evacuations due to host organisation's practices / building issues (these could be real or 'drills')

We can be subject to other evacuations e.g. bomb / terrorist threats (these are infrequent and should be led, in terms of action required from us, by the emergency services who will be in charge of the overall incident.



Break the group into 5 smaller groups to look at these and feedback to the whole group.

Give them flip chart paper and pen to record key points, they will need a spokesperson.

This group work needs to be 'focussed' give them 5-10 minutes to do this as overall feedback will take 10 minutes or so.

Activity details (for additional guidance)

Fire creation – this is about what you need to make a fire, if they have time some examples would be good for the different 'elements'.

Fire growth – this is focussing on how the fire will develop once started (this is possibly the most difficult one, so you might want to choose the group carefully so they don't feel overwhelmed or provide some additional support / guidance at the beginning, they can describe 'how', exact words aren't essential, its the understanding bit that matters).

Impact – these are hazards to individuals, businesses, reputation etc.

Housekeeping – what good practices should and can they adopt to minimise a fire and a fire then spreading..

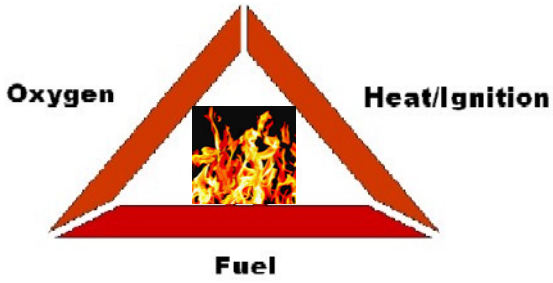
Documentation – main focus is on NHSBT documentation (particularly Blood Donation) they are aware of and maybe what they think it covers. Extra points if they know anything about the legislation aspect....

NHS
Blood and Transplant

FIRE CREATION

The 'Fire Triangle'

- Fuel source
- Oxygen
- Heat



Technical Author: Catherine Smith, H&S Department
Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)
Blood Donation

The group should feedback first their results on flip chart then show the slide to reinforce / cover anything which might be missing.

Fuel could include paper, wood , fabric, furniture, building structure

Oxygen – bit of a difficult one other than 'in the atmosphere' as we need it too !, some chemicals can also give off oxygen and of course oxygen / air cylinders can provide this too.

Heat / ignition – heaters, naked flame, faulty electrical equipment, excessive 'hot' weather, smokers

Understanding how a fire starts and continues is important for extinguishing a fire, as what you need to do is remove one of the sides of the triangle. These are also the principles for using extinguishers which usually remove oxygen or heat. Fuel can only be 'physically' removed.

Reiterate that fire extinguishers should only be used if absolutely necessary – fire very small (size of a waste bin) or their exit is blocked.

Show actual fire extinguishers in room and how to distinguish types and 'hold' / use (pull pin, stand approx 8 feet away, sweep contents aiming at the base of the fire, dampen down the surrounding area if there is sufficient contents left to prevent re-ignition), just in case and that there is always information on them to help the user (explaining type of extinguisher, what to use it on, how to use it and any safety hazards).

Get them to try picking them up and then hopefully they will understand why we don't actively encourage this.

Some fires are started deliberately (arson) so awareness / paying attention is vital along with reporting any suspicious individuals or activities.

NHS
Blood and Transplant

FIRE GROWTH

- Direct Burning
- Convection
- Conduction
- Radiation

Technical Author: Catherine Smith, H&S Department
Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

The group should feedback their results first on flip chart then show the slide to reinforce / cover anything which might be missing.

Direct Burning essentially this is adding more 'fuel' to the fire.

Convection hot air travels and expands upwards and outwards and items (fuel) close by can then 'catch fire' as the fire triangle is created. Closed doors and windows helps to impede this as does compartmentalisation of buildings.

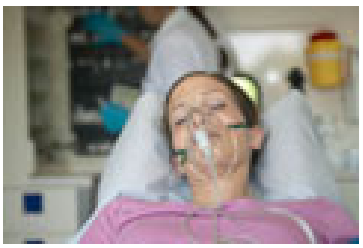
Conduction 'heat' travels in / through material especially those that are good conductors as metal pipes and ductwork even integral parts of a structure can promote this like walls and doors. Good insulation and construction materials are essential to help protect against this.

Radiation excessive and high temperatures (which can quickly occur in fire situations) result in heat radiating out such that the intensity of this is sufficient for fuels to combust even if they seem to be a distance away.

It should be noted that usually fire growth acts in a combination of the ways described above.

NHS
Blood and Transplant

I MPACT



- Smoke
- Panic
- Toxic fumes
- Oxygen Depletion
- Flame / Heat (burning the body)
- Structural failure / loss of the building
- Loss of business / reputational damage

Technical Author: Catherine Smith, H&S Department

Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

The group should feedback first their results on flip chart then show the slide to reinforce / cover anything which might be missing.

Extra information includes:

Smoke. This is intensely black and highly toxic. The smoke is so black that it would be almost impossible to see the flames let alone anything else. **If you are in a smoke filled area you need to get out quickly before you are overcome. You should get on your knees, orientate your self against a wall, breathing through a handkerchief or nose. Before opening a door check it with the back of your hand (if the door is hot a grip reaction would occur and at least this way it will be away from the door not on to it).**

Panic This does not in itself kill you but can reduce the likelihood of survival by succumbing to some of the other hazards by not acting quickly and appropriately.

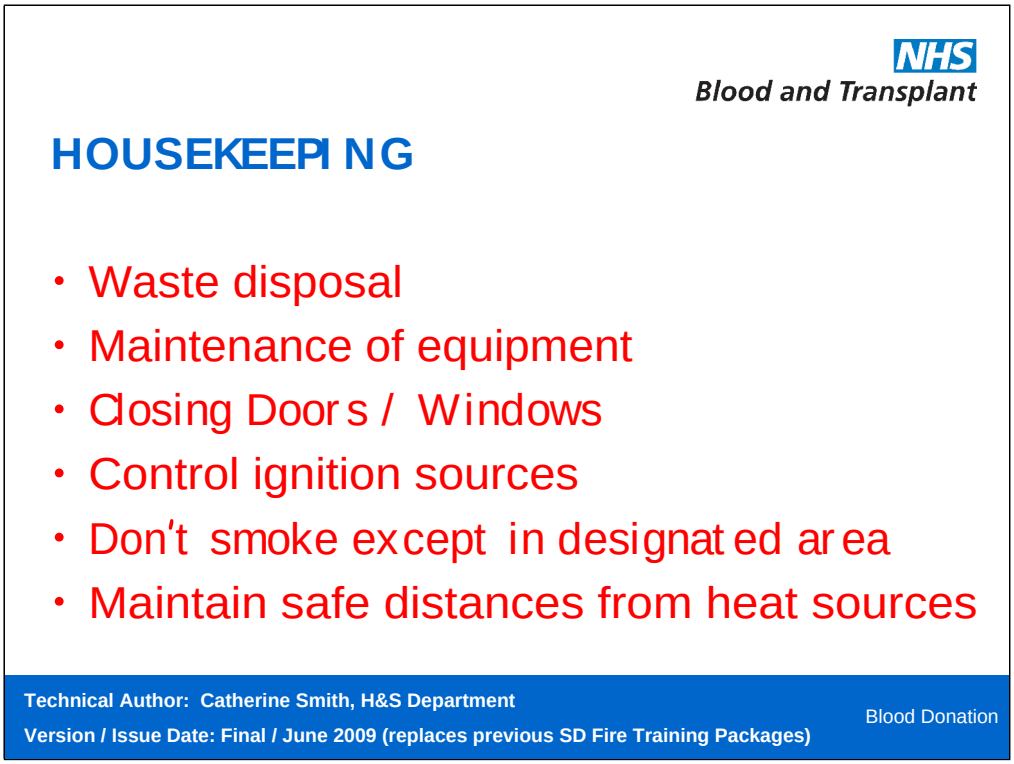
Toxic Fumes / gaseous combustion products. Objects will get hotter and hotter start to smoulder and produce toxic smoke and eventually burst into flame.

Oxygen depletion - Many deaths are caused by this, especially in the home where people are asleep. Often they are found by the fire brigade with a thin layer of shoot on there faces. Oxygen levels decrease as carbon monoxide levels increase. The body will always absorb carbon monoxide in preference to oxygen. The victim does not wake up but falls into a deeper and deeper sleep.

Flame/ Heat. Temperatures can rise in excess of 1000oC. One in take of breath at this temperature can vaporise the lungs. It can also burn / melt skin etc. (which are usually the pictures that are used in new papers because of the image they bring home).

Structural failure. As the fire consumes everything in its path at some point the structure of the building will fail.

Many businesses fail after a major fire due to insurance cost, loss of equipment / resources etc.

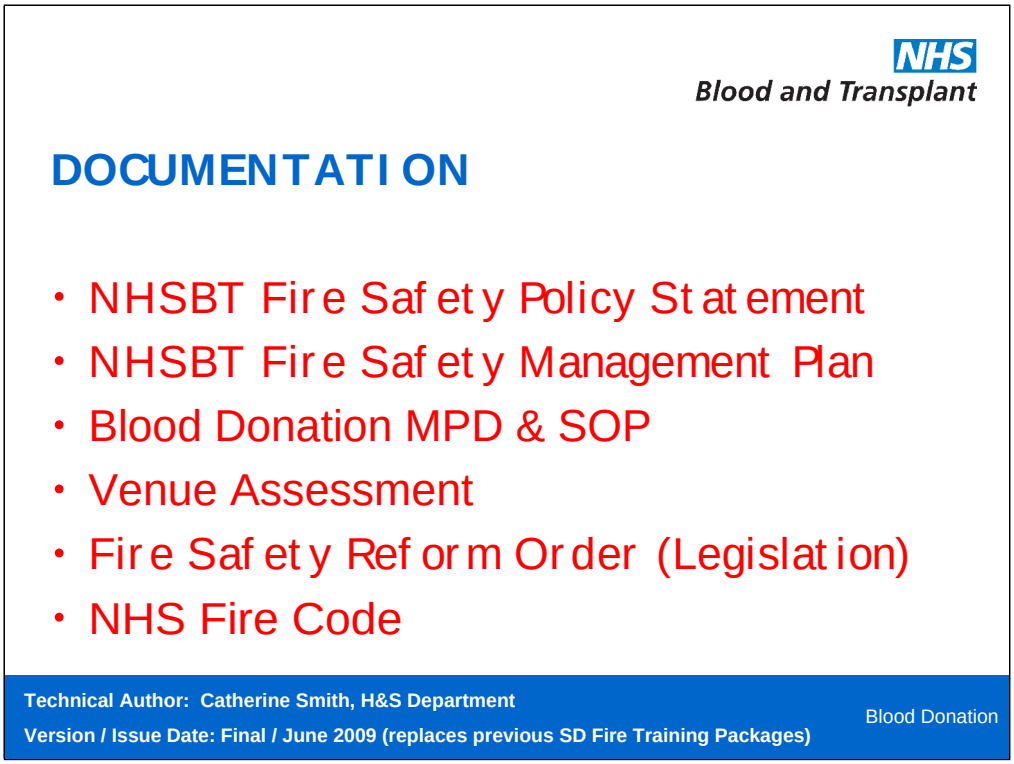


The group should feedback first their results on flip chart then show the slide to reinforce / cover anything which might be missing.

Key area for them to think about is heating and also cables / chairs which could become a trip hazard during an evacuation !

Venue / session layout is important.

If there are doors which are locked when not in use (for fire safety) these must be unlocked BEFORE we start the unload.



The group should feedback first their results on flip chart then show the slide to reinforce / cover anything which might be missing.

There is no need to explain our documents here (as next slide focuses on Blood Donation processes).

You can however elaborate on the legislation:

Fire Safety Reform Order 2005 – this replaced the old system which included 'fire certificates' now everyone has to complete fire risk assessments and manage fire safety (from prevention to emergency) themselves. There are standing requirements for risk assessment too under the Management of Health and Safety at Work Regulations.

NHS Fire Code – this is an additional code of practice which we (NHSBT, as part of the NHS) have to comply with although our requirements are slightly lower in certain areas as its primary focus is hospitals with patients.

NHS
Blood and Transplant

PROCESS – BLOOD DONATION

- Fire & Emergency Evacuation (MPD101)
- Fire & Emergency Evacuation (SOP3026)
- Assessment and Use of Blood Collection Venues (MPD102)
- Venue Assessment (FRM437)

Technical Author: Catherine Smith, H&S Department

Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

Here you will be providing more detail on how these fit in with the fire requirements – preventing and planning.

Do no just read the documents to the group or even provide, just summarise key aspects...

Fire & Emergency Evacuation (MPD101):

This sets out the policy within Blood Donation for fire and how it will be managed.

There are key requirements in this to help ensure this is achieved:

Yearly refresher for fire training

Venue assessment covers 'fire risk assessment' requirements by incorporating specific questions. These must be answered fully in the assessment so that any specific arrangements are picked up from this.

One fire drill per year on each team.

Ensure Blood Donation electrical equipment is maintained with Portable Appliance Testing (PAT) carried out on all this equipment annually.

Blood Donation staff are responsible for following the fire evacuation procedure, keeping fire exits clear and reporting any potential fire hazards to the Person in Charge (so that they can be dealt with).

All risks must be communication to staff.

All staff must be made aware of the evacuation procedures for each venue, how to raise the alarm and the location of the fire assembly point. This must be communicated before the session commences.

There must be 'in date' extinguishers on session (inspected within the last 12 months). Where not in place team should take out a Foam rated 13 A (this links to efficiency) 6 or 9 L capacity fire extinguisher transported in its original box, but taken out of this during the session. Full details in the training copy of the MPD.

Fire & Emergency Evacuation SOP3026

ON ARRIVAL – checks to be made to the standard fire requirements – means for raising the alarm, location of fire exits, the fire assembly point and fire extinguishers. The venue assessment should assist with this. A pre-session briefing is then required ('team brief') on fire details and attendance sheet completed (SSR) for checks / accounting for staff in the event of an evacuation.

IN AN EMERGENCY – raise the alarm via the identified means. Person in Charge to call emergency services, team manager and venue contact (in that order). Then evacuate the building. 'Fire marshal' roles are assigned to their duties / tasks as follows – see training copy for details.

Standard practice applies – do not use lifts, do not take personal belongings. We do not expect or encourage staff or donors to fight the fire.

Assessment and Use of Blood Collection Venues MPD102

This covers the minimum requirements for the venue and is also the 'fire risk assessment' for our purposes. It requires good signage and access, adequate means to escape, fire extinguishers. These are carried out by trained Venue Assessors

Venue Assessment FRM437

This is ESSENTIAL for any session as it contains VITAL fire safety information in the following areas:

1.4 – what the venue itself has in place

2ia – good phone lines (although phones will find emergency services even if no or poor network coverage). Good to have fixed and mobile phone in case one fails (e.g. mobiles went down during 7/7)

2ii – information in boxes here is essential so that people know what to do.

2iiih – width of doors are important as this is what allows easy egress / access.

2iva – lighting is important to assist with evacuation (unless it fails due to electrical fire)

2ivm – designated smoking area (and compliance) are essential

3 – a good plan and markings are essential. These should not just focus on the room layout !

There may be additional controls required and these would be recorded in and the supporting control measures form.

(next stage preparing will look at this in more detail).

There may be additional local procedures – if so obtain and go through now.

NHS
Blood and Transplant

PREPARE

Group Workshops

Technical Author: Catherine Smith, H&S Department
Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Explain that you will now introduce the workshops / activities for the next part of the training (to reinforce and learn from ‘doing’).

The exact nature of the activity (from the support pack) will depend on whether the team work on a Blood Mobile, in a hall, or in a static clinic (note there may even be differences here between whole blood only clinics and apheresis).

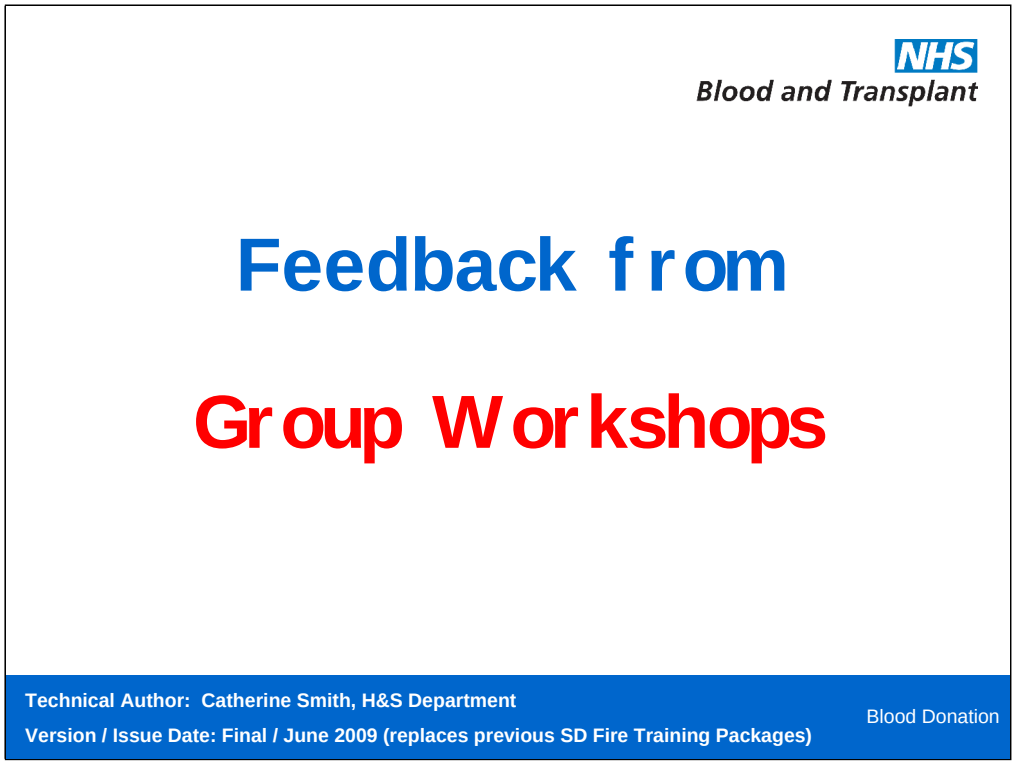
Split the group into manageable sized groups no more than 6 per group so that they can look at what they do. For all the situations there will be a pack to provide to the group – venue assessment (includes layout) and some photos (these are based around really venues although there will be some poetic license !). They need to go through the 4 Ps to decide on what they can do and when in the process to do these e.g. arrival on session etc. to prevent repetition and help flow consider the different phases. PLAN TO SURVIVE

They need to think about what they need to do during each of these phases to comply with the requirements for ‘Prevention’ and what is required in terms of our documentation requirements and how this will effect evacuation at the different phases

They should also try and identify possible improvements they could make.

To assist with the work shops, there will be some photos / layout and a ‘venue assessment’.

Depending on group size it may be useful to give a ‘phase’ to a group as could be overwhelming to do all.



Get the groups to present back their findings on this.
Should take about 20 minutes.

NHS
Blood and Transplant

Group Discussion

Questions and Answers

Technical Author: Catherine Smith, H&S Department
Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Based on documents and what has been discussed so far, this is an open section in order to thrash any final queries. Allocate 5 -10 minutes for this a Q&A document will be produced to help support this part of the session along with the support pack / answers.

If there are no questions (then success) and take the time to go back over how the evacuation occurs when session in progress so that everyone is comfortable particularly regarding who they deal with and the situation with ‘fainted or unwell donors’.

NHS
Blood and Transplant

PRACTICE

Drill on Session xxxx

Technical Author: Catherine Smith, H&S Department
Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

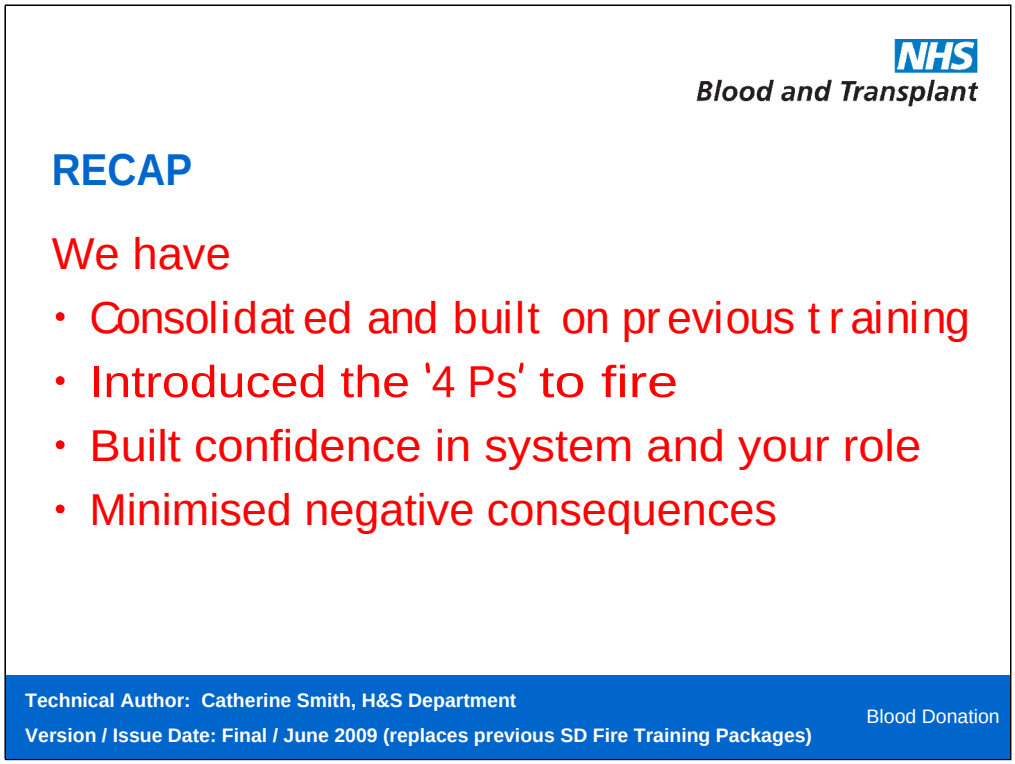
Specify that they have gone through everything but putting it into full practice which is essential.

As the training environment does not lend itself to this, it will be planned into a session within the next few weeks (date / location needs to have been agreed before the training along with extra time allocated).

To help 'reflect' reality rather than make some staff donors, either everyone will need to bring teddies (to make fun) OR numbers / cards put around to act as donors along with their 'triage' status.

This drill must be observed by the Session Manager or ADSM and recorded with feedback provided to the team.

Feedback should be fairly mixed between 'positives' and 'areas for improvement' (if required).



Now its time for a quick recap against the objectives of the training session.

Check everyone knows the 4 Ps and what these essentially mean for them by asking the group as a whole and getting feedback. The real proof will be the fire drill (and maybe 'quick quiz' for this afterwards which is distributed) ?

1) Prevention – stopping fires occurring in the first place is our best line of defence

2) Process – this is about procedures these help guide all the other 3 P's although there main focus is on dealing with the fire if it happens.

3) Preparation – this is very much about understanding what the process requires in terms of implementation and that they understand what this is and how to actually do this in terms of every day requirements etc.

4) Practice – this is about making sure they know how to do this, essentially we are talking about 'mock' drills for this. The time to practice is not when its for real ! That's too late.

NHS
Blood and Transplant

AWAY FROM WORK

- Fires / Evacuations still happen
- Think about and apply the '4 Ps'
- Remain calm
- Stay confident

Technical Author: Catherine Smith, H&S Department

Version / Issue Date: Final / June 2009 (replaces previous SD Fire Training Packages)

Blood Donation

The principles we have looked at and discussed apply in all situations – fire safety at home and other causes of evacuation.

Remind them that for those, they may be lead by others (emergency services) and they should follow the advice they provide.

They should make themselves familiar with their surroundings (be observant) so if something does happen they can act without too much thinking.

Relate this to travelling on aircraft (as pictured), safety on trains, safety in their own home and other accommodation e.g. hotels.