Policy:

HR 043 - Central Alerting System (CAS)

Executive or Associate Director lead	Director of Human Resources and Associate Director of the Board
Policy author/ lead	Health Safety/Risk Adviser
Feedback on implementation to	Health Safety/Risk Adviser

Document type	Policy
Document version number	V3
Date of approval	20/02/2020
Approved by	Executive Directors Group
Date of issue	21/02/2020
Date for review	28/02/2023 (PGG approved extension to April 23 at PGG meeting on 27/02/2023)

Summary of policy

The changes to this version of the policy are summarized on page 3 (Amendment Log)

Target audience	All Trust staff
Keywords	Central, alert, system, response, safety,

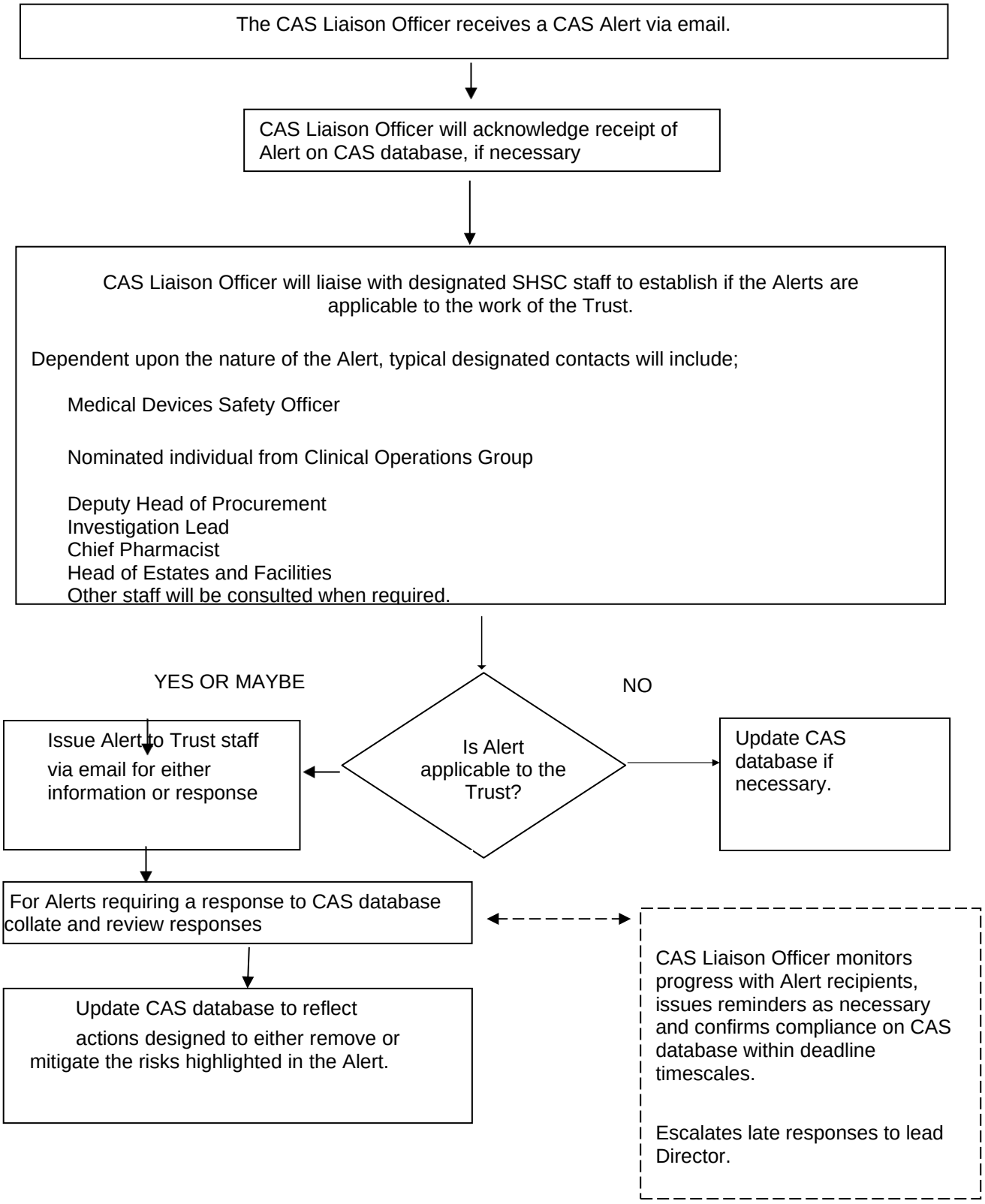
Storage
This is Version 3 and is stored and available through the SHSC Intranet/Internet. This version supersedes the previous Version 2 (October 2016).

Contents

Version Control and Amendment Log

Version No.	Type of Change	Date	Description of change(s)
V2 D0.1	Revised draft policy creation	August 2016	Previous Policy re-written to reflect changes in national Central Alerting System and to reflect changes in layout of SHSC Policy documents.
V2	Ratification and issue	October 2016	
V3	Review	August 2019	References to 'Health and Safety Committee' changed to 'Health and Safety Group'. The new post of Medical Devices Officer is referred to. Additional clinical contact nominated to help determine relevance of Alert to Trust if necessary. Revised audit, monitoring and review reporting relationships are referred to.
V3	Review	December 2019	Additions suggested by 360 Internal Audit have been written into the policy and an escalation route to the 'Director of HR' in the event of slow responses to a Central Alert.

Pathway for the CAS Liaison Officer



Pathway for Recipients of Alerts

Departmental/Service Managers

Alert received from the CAS Liaison Officer.

- Implement actions necessary to remove or mitigate risks highlighted in the Alert
- Complete and return the CAS Alert Response to the CAS Liaison Officer within the required timeframe – if required
- Address any risks which may remain following this action

If further work/time is required to be compliant with the Alert please notify the CAS Liaison Officer of this and of the expected completion date.

If this delay poses a significant risk, then this should be highlighted as a risk to your department/directorate and you should follow your local risk management processes.

You must also inform the CAS Liaison Officer as soon as possible and keep them up to date with progress.

1. Introduction

Sheffield Health and Social Care Trust is committed to the continuous improvement of service user, staff and visitor safety through the reduction of risk and it thus acknowledges the importance of the CAS system in the risk management processes of the Trust.

1.1 What is the Central Alerting System?

The Central Alerting System (CAS) is a web-based system for issuing safety related information, in the form of 'Alerts'. These Alerts and other notices cover a range of safety related issues.

Some Alerts require a formal response from NHS organisations to confirm that the risks identified within the Alerts are removed or mitigated to an acceptable level, within a given timeframe, whilst others are issued for information, and require no such response.

The alerting system is managed by the Department of Health in conjunction with the Medicines and Healthcare Products Regulatory Agency (MHRA), DH Estates and Facilities and the NHS Commissioning Board National Reporting and Learning System (NRLS).

1.2 Care Quality Commission (CQC) and Health and Safety Executive (HSE) Requirements

Several of the "Health and Social Care Act 2008 (Regulated Activities) Regulations 2014" enforced by the Care Quality Commission (CQC) can apply to maintaining a safe care environment and can thus apply to CAS Safety Alerts.
For example;

Regulation 12 Safe Care and Treatment
Regulation 15 Premises and Equipment
Regulation 17 Good Governance

In addition, the "Health and Safety at Work (etc) Act 1974" and several sets of Regulations made under it, which are enforced by the Health and Safety Executive (HSE), apply to the safe delivery of health care and can therefore apply to many Safety Alerts.
For example;

Provision and Use of Work Equipment Regulations 1998
Lifting Equipment and Lifting Operations Regulations 1998

2. Scope of This Policy

This policy outlines the processes required for the receipt, distribution and where necessary the confirmation of actions taken by the Trust in response to Alerts issued by the Central Alerting System.

It is a Trust-wide policy which applies to all staff working in Sheffield Health and Social Care Trust.

3. Purpose

The Policy outlines a systematic and auditable approach to the receipt, distribution and completion of Alerts, especially those which require notification to CAS of a Trust response and it thus provides assurance that the safety issues raised within the Alerts have been addressed**,** in a way which suitably mitigates the risks to people's safety.

4. Definitions

The Medicines and Healthcare Products Regulatory Agency (MHRA) - an executive agency of the Department of Health charged with protecting and promoting public health and patient safety by ensuring that medicines, healthcare products and medical equipment meet appropriate standards of safety, quality, performance and effectiveness, and that they are used safely.

CAS Liaison Officer (CASLO) - a Trust member of staff who receives and disseminates CAS Alerts within the Trust and enters responses to these alerts into the national CAS database.

Medical Devices Safety Officer (MDSO) - a Trust member of staff who organises appropriate responses to applicable Alerts within the Trust.

Medical Device Alerts (MDAs) – communicate safety information to medical device users in health and social care.

Medical devices and equipment are items used for the diagnosis and/or treatment of disease, for monitoring patients, and as assistive technology. Examples of medical devices can be found in the MHRA's webpages.

Patient Safety Alerts (PSAs) - address high risk safety problems.

DH Estates and Facilities Alerts (EFAs) – communicate safety information relating to non-medical equipment, engineering plant, installed services and building fabric.

5. Detail of the Policy

The broad overview of this policy is as described in the introduction.

6. Duties

Trust Board

The Trust Board has ultimate responsibility for ensuring that practices which maintain the health and the safety of staff, service users and visitors are implemented within the Trust and ensuring that they remain effective.

Executive Director

The Director of Human Resources has lead responsibility for risk management in the Trust. This will include making sure that appropriate systems are in place to enable the effective management of CAS Alerts.

Heads of Department/Service

Will ensure that systems are in place to identify the right people to lead on any required action and that a response is made to the Trusts CAS Liaison Officer about the actions taken, within the timescales required.

If any risks cannot be removed or mitigated to an acceptable level within the deadlines specified by the Alert a Risk Assessment must be completed and the Trust's risk management procedures (as detailed in the Trust's Risk Management Policy) must be followed.

CAS Liaison Officer (CASLO)
Will receive and disseminate CAS Alerts within the Trust and when necessary will enter responses to these Alerts into the national CAS database.

Medical Devices Safety Officer (MDSO)
Will help to organise appropriate responses to applicable Alerts within the Trust.

7. Procedure

The CAS Process Step by Step Following the Receipt of An Alert

The **CAS Liaison Officer** will

- acknowledge receipt of the Alert on the CAS database on behalf of the Trust, for those Alerts requiring such a response
- seek advice from designated staff on whether the Alert is/or may be applicable to the Trust
- distribute Alerts identified as applicable/possibly applicable within the Trust
- coordinate responses, to any distributed Alerts which require a response from the Trust, and monitor those responses to ensure that they are received within the appropriate timescales
- escalate to the Director lead if responses to Alerts are not received within the specified timeframes
- for those Alerts requiring a response, provide a response to the CAS database which summarises the Trust's actions
- advise on appropriate risk management processes to address residual identified risks, if requested.

The CAS Liaison Officer will on occasion produce audits of responses to CAS Alerts for the Health and Safety Group, for example identifying the level of compliance with actions required by the Alerts and on any operational issues which cause difficulty in complying.

The Recipient of the Alert will

- Ensure that any actions required by the Alert are completed within the deadlines specified in that Alert.

If the recipient of the Alert further disseminates it, they must still manage the completion of the alert requirements.

- For Alerts requiring a response from the Trust, notify the CAS Liaison Officer by e mail that any required actions have been completed, or that such actions are unnecessary.

If further work/time is required to be compliant with the Alert please notify the CAS Liaison Officer of this and of the expected completion date.

8. Development Consultation And Approval

The policy has been placed into the latest format as set out in the Policy on Policies.

The policy has followed the HR Policy Consultation and Governance Process.

The draft policy was verified by the Health and Safety Group on 18th November 2019 and noted in the minutes of that meeting.

It will be reviewed by Policy Governance Group of 10 February 2020.

It will be reviewed by Executive Directors Group of 20 February 2020

The Equality Impact Assessment will be undertaken and stored separately in conjunction with Corporate Governance and the Head of Equality and Inclusion.

9. Audit, Monitoring and Review

Monitoring Compliance Template

Minimum Requirement	Process for Monitoring	Responsible Individual/ group/committee	Frequency of Monitoring	Review of Results process (e.g. who does this?)	Responsible Individual/group/ committee for action plan development	Responsible Individual/group/ committee for action monitoring and implementation
Total number of Alerts received by the Trust	Review	CASLO	Bi monthly	Trust Health and Safety Group	Trust Health and Safety Group	Quality Assurance Committee
The number of Alerts applicable to the Trust	Review	CASLO	Bi monthly	Trust Health and Safety Group	Trust Health and Safety Group	Quality Assurance Committee
The progress made in addressing the requirements of the applicable Alerts	Review	CASLO	Bi Monthly	Trust Health and Safety Group	Trust Health and Safety Group	Quality Assurance Committee
The total number of action completed, action ongoing responses made to Alerts needing a response to the Central Alert System database	Review	CASLO	Bi monthly	Trust Health and Safety Group	Trust Health and Safety Group	Quality Assurance Committee

This Policy will be reviewed by November 2023, or earlier if needed due to changes in national guidance, or local practices.

10. Implementation Plan

Action / Task	Responsible Person	Deadline	Progress update
Put revised policy onto intranet and remove and archive old version	Director of Corporate Governance	≤ 5 working days following ratification	
Inform all Trust staff of the revised policy via Trust-wide communication	Director of Corporate Governance	≤ 10 working days following ratification	Update for inclusion in the next issue of the Communications Digest following issue.
Reference revised policy in training which includes an element of 'risk management'	Training and Development Department	Immediately following publication	

11. Dissemination, Storage And Archiving (version control)

Version	Date on website (intranet and internet)	Date of entry in Connect	Any other promotion/dissemination (include dates)
1.0	January 2011	-	-
2.0	October 2016	-	-
3.0	February 2020	27/02/2020	-

This is version 3 and is stored and available through the SHSC intranet/Internet.
This version supersedes the previous version 2 (October 2016).
Any copies of the previous policy held separately should be destroyed and replaced with this version.

All versions of HE policies are stored on the HR Shared Drive by the policy author and the PA to the Director of Human Resources.

Word copies of final versions of policies can be obtained from Policy Governance via the PA to the Director of Human Resources.

12. Training and Other Resource Implications

A newly agreed post of 'Medical Devices Safety Officer' is included within this policy.

13. Links to other policies, standards, references, legislation (associated documents) and national guidance.

Health and Social Care Act 2008 (Regulated Activities)
Regulations 2014
Health and Safety at Work (etc) Act 1974
Incident Management Policy and
Procedure
Medical Devices Policy
Medicine Management Policy
Managing Medical Devices. Guidance for healthcare and social services organisations. (April 2015)
MHRA website (Medical Devices Regulation and Safety page)
Central Alerting System website

14. Contact Details

Title	*Name*	*Phone*	*Email*
Health and Safety / Risk Adviser	Charlie Stephenson	16208	Charlie.Stephenson@SHSC.nhs.uk
CAS Helpdesk		020 7972 1500	safetyalerts@dh.gsi.gov.uk

Appendix A - Equality Impact Assessment Process and Record for Written Policies

Stage 1 – **Relevance** - Is the policy potentially relevant to equality i.e. will this policy potentially impact on staff, patients or the public? This should be considered as part of the Case of Need for new policies.

NO – No further action is required – please sign and date the following statement.
I confirm that this policy does not impact on staff, patients or the public.

I confirm that this policy does not impact on staff, patients or the public – in terms of any 'protected characteristics'.
Name/Date: C. Stephenson. 12/02/20.

YES, Go to **Stage 2**

Stage 2 Policy Screening and Drafting Policy - Public authorities are legally required to have 'due regard' to eliminating discrimination, advancing equal opportunity and fostering good relations in relation to people who share certain 'protected characteristics' and those that do not. The following table should be used to consider this and inform changes to the policy (indicate yes/no/ don't know and note reasons). Please see the SHSC Guidance and Flow Chart.

Stage 3 – **Policy Revision** - Make amendments to the policy or identify any remedial action required and record any action planned in the policy implementation plan section

SCREENING RECORD	Does any aspect of this policy or potentially discriminate against this group?	Can equality of opportunity for this group be improved through this policy or changes to this policy?	Can this policy be amended so that it works to enhance relations between people in this group and people not in this group?
Age	.NO	**NO**	**NO**
Disability	NO	**NO**	**NO**
Gender Reassignment	NO	**NO**	**NO**
Pregnancy and Maternity	**NO**	**NO**	**NO**
Race	**NO**	**NO**	**NO**
Religion or Belief	**NO**	**NO**	**NO**
Sex	**NO**	**NO**	**NO**
Sexual Orientation	**NO**	**NO**	**NO**
Marriage or Civil Partnership	**NO**	**NO**	**NO**

No changes made.

Impact Assessment Completed by:
Name /Date: C. Stephenson. 12/02/20.

NHS Improvement

Patient Safety Alert

Risk of death and severe harm from failure to obtain and continue flow from oxygen cylinders

9 January 2018

Alert reference number: NHS/PSA/W/2018/001

Warning Alert

Some patients need to be given additional oxygen[1] as part of their treatment. Where there is no access to piped or concentrated oxygen, it is provided in cylinders, the design of which has changed over recent years. Cylinders with integral valves are now in common use and require several steps (typically removing a plastic cap, turning a valve and adjusting a dial) before oxygen starts to flow. To reduce the risk of fire[2] valves must be closed when cylinders are not in use, and cylinders carried in special holders that can be out of the direct line of sight and hearing of staff caring for the patient.

An unintended consequence of these changes is that staff may believe oxygen is flowing when it is not, and/or may be unable to turn the oxygen flow on in an emergency.

In a recent three-year period, over 400 incidents involving incorrect operation of oxygen cylinder controls were reported to the National Reporting and Learning System (NRLS). Six patients died, although most were already critically ill and may not have survived even if their oxygen supply had been maintained. Five patients had a respiratory and/or a cardiac arrest but were resuscitated, and four became unconscious. Other incident reports described patients experiencing difficulty breathing and low oxygen saturations that required urgent medical attention. Incidents involved portable oxygen cylinders of all sizes on trolleys, wheelchairs, resuscitation trolleys and neonatal resuscitaires, and larger cylinders in hospital areas without piped oxygen.

A typical incident report reads: "Patient arrived on coronary care unit with oxygen saturations of 72%. Oxygen in situ and set to correct rate on the flow dial but unfortunately [the valve] was not opened and the patient was not therefore receiving oxygen. Peri-arrest on arrival, [crash team] called …..condition improved …..registered nurse continued to check cylinder was not running out but failed to notice not turned on as indicator green."

Insights from local investigations include:

- prioritising training for staff groups and clinical areas where the risk is high
- reinforcing theoretical training with regular opportunities to practise operating the cylinder controls
- linking safe operation of cylinder controls with other key safety issues, including fire hazards and how long a full cylinder will last on various flow rates
- placing laminated guides close to the point of use.

Actions

Who: All organisations providing NHS funded-care where oxygen cylinders are used, including hospitals, GP practices, ambulance services and mental health units.*

When: To commence immediately and be completed no later than 20 February 2018.

1. Identify if oxygen cylinders are used in your organisation, even if only in emergencies
2. Bring this alert to the attention of all those with a leadership role in ensuring clinical staff understand how to operate oxygen cylinders safely
3. Consider if immediate local action is needed and ensure that an action plan is underway to reduce the risk of incorrect use of oxygen cylinders
4. Communicate the key messages in this alert and your local action plan to all relevant medical, nursing, therapy, pharmacy and support

*While this alert is directed at improving safe use by clinical staff, home oxygen services may also be able to use these findings to improve training and support for people using oxygen at home and their family/carers.

Sharing resources and examples of work

If there are any resources or examples of work developed in relation to this alert you think would be useful to others, please share them with us by emailing patientsafety.enquiries@nhs.net

See page three for technical notes, stakeholder engagement and advice on who this alert should be directed to.

NHS Improvement and the Medicines and Healthcare products Regulatory Agency (MHRA) are supporting the distribution of training materials and resources for different manufacturers' designs of oxygen cylinder via the Medication Safety Officer (MSO) and Medical Device Safety Officer (MDSO) networks.[3] The MHRA will continue to work with industry partners to improve oxygen cylinder design. The Healthcare Safety Investigation Branch (HSIB) is also currently conducting an investigation into this safety issue.

Alert reference number: NHS/PSA/W/2018/001

Technical notes

Patient safety incident reporting

We searched the NRLS for incidents occurring between 1 January 2015 and 29 October 2017, reported by 29 October 2017, and containing the keywords [oxygen or O2 or valve] + cylinder (NRLS search reference 3980). All deaths and severe and moderate harm incidents were reviewed and 24 incidents related to failure to operate the oxygen cylinder controls to obtain a flow of oxygen were identified. A coroner notified us of a further death where this may have been a contributory factor. Review of a sample of low and no harm incidents indicated we would have found around 400 further relevant incidents if all incidents with these keywords had been reviewed.

Most staff reporting incidents believed the cylinder was faulty or empty, and only after local investigation was incorrect operation of the cylinder controls (typically failure to open the valve) recognised. Staff appeared to assume the same single step to start piped oxygen flowing (turning the flowmeter dial) also applies to cylinders. They also appeared confused by aspects of the cylinder's design: no clear indicator on the valve showing the open and closed positions, and the plastic cap hiding controls. The green indicator showing a full cylinder appeared to be misinterpreted as an indicator of active flow. When the flow rate dial is operated on cylinders that have previously been used, but not vented before next use, a 'hiss' of flowing oxygen can be heard for a few seconds even with the valve closed. This can reinforce a member of staff's belief that they have turned the flow on. Reinforcement of the need for oxygen to be considered a prescribed medication[1] seemed in some cases to have been misinterpreted as meaning only clinical professionals could check or prepare cylinders for use.

All the identified incidents occurred in hospitals, but similar issues could arise in mental health units, general practices, care homes, ambulances or patients' own homes, particularly when oxygen cylinders are used in an emergency. They could also occur with other medical gas cylinders that have an integral valve.

In addition to the incidents above related to cylinder control operation, we identified incidents suggesting staff found it difficult to estimate how long a cylinder would last, risking smaller cylinders on high flow rates running out in ward-to-ward transfers, and even larger cylinders on slow flow rates while care home residents are on outings or attending outpatient appointments.

References

1. British Thoracic Society - Guideline for oxygen use in healthcare and emergency settings (2017) https://www. brit-thoracic.org.uk/standards-of-care/guidelines/bts-guideline-for-emergency-oxygen-use-in-adult-patients/ (scroll down page for additional resources relevant to primary care and ambulance services)
2. Royal College of Anaesthetists - Fire safety on intensive care and in theatre (June 2013) https://www.rcoa.ac.uk/news-and-bulletin/rcoa-news-and-statements/fire-safety-intensive-care-and-theatre
3. NHS England press release on launch of MSO and MDSO networks (March 2014) https://www.england.nhs.uk/2014/03/med-devices/
4. HSIB updates on investigations https://www.hsib.org.uk/investigations-cases/design-and-safe-use-portable-oxygen-systems

Stakeholder engagement

- Association of Respiratory Nurse Specialists
- National Patient Safety Response Advisory Panel (for a list of members and organisations represented on the panel, see improvement.nhs.uk/resources/patient-safety-alerts/)

Advice for Central Alerting System officers and risk managers

This alert asks all organisations to adopt a systematic approach to ensuring all their staff using oxygen cylinders can safely operate them. This needs co-ordinated implementation rather than separate action by individual teams or departments. For hospital trusts, if you are unsure who will co-ordinate implementation of this alert, seek advice from any member of your local medical gases committee. They will be able to identify the key individuals needed to lead and co-ordinate implementation. For mental health services, community hospitals, ambulance services and other care settings, resuscitation trainers are likely to be a good initial contact point.