University Hospitals of Derby and Burton NHS Foundation Trust

PATIENT GROUP DIRECTION (PGD)

Administration of Oxygen in Medical Emergencies By Registered UHDB Staff in Adult UHDB services

Documentation details

Reference no:	UHD035
Version no:	1
Valid from:	10/06/2022
Review date:	10/12/2024
Expiry date:	09/06/2025

Change history

Version number	Change details	Date
1	New template – Extended for all UHDB staff on any site	

Glossary

Abbreviation	Definition

1. PGD template development (PGD Working Group)

PGD Working Group Membership (minimum requirement of consultant, pharmacist and a registered professional who can work under a PGD (or manages the staff who do). If this is a review of existing PGD, replace previous names with the individuals involved for this version

Name	Designation
James Hooley	Medicines Safety Officer (Pharmacist)
Dr Aklak Choudhury	Respiratory Consultant (+ Oxygen Safety Group)

Where an antimicrobial is included, confirm the name, designation and date of the antimicrobial pharmacist who has reviewed this version

Name of antimicrobial pharmacist	Designation	Date Reviewed
N/A	-	-

2. Organisational authorisations

The PGD is not legally valid until it has had the relevant organisational authorisation.

University Hospitals of Derby & Burton NHS Foundation Trust authorises this PGD for use by the services or providers listed below:

Authorised for use by the following organisation and/or services
All UHDB staff providing UHDB services (includes UHDB staff/services undertaken on non-UHDB premises) This is a core PGD and can be implemented in all adult services where training and resources have been allocated by senior staff to do so (see policy and limitations below if in doubt).
Limitations to authorisation
It is the responsibility of the practitioner working under this PGD to ensure that this PGD is in place in the area they are practising at the time of use. In most cases, this is implicit when a senior manager requests the staff to undertake training and then authorises them in section 7 of this document. However, when working in alternative areas (e.g. internal bank or redeployment) it is important that the practitioner confirms with a departmental manager in the new department that the core PGDs are in-use in their area.

Organisational Authorisation (legal requirement).			
Role	**Name**	**Sign**	**Date**
Chief Pharmacist or deputy	Clive Newman	**Signed copy held by Pharmacy**	**10/06/2022**

Additional signatories (required as per legislation and locally agreed policy)			
Role	**Name**	**Sign**	**Date**
Medicines Safety Officer (pharmacist) *Clinical Pharmacist from PGD working group*	**James Hooley**	**Signed copy held by Pharmacy**	**06/06/2022**
Interim Medical Director or Deputy	**Dr James Crampton**	**Signed copy held by Pharmacy**	**25/05/2022**
Chief Nurse or Deputy	**Phil Bolton**	**Signed copy held by Pharmacy**	**16/05/2022**

Local enquiries regarding the use of this PGD may be directed to UHDB.PGDgovernance@nhs.net

Section 7 provides a registered health professional authorisation sheet. Individual professionals must be authorised by name to work to this PGD.

3. Characteristics of staff

Qualifications and professional registration	All Divisions, Adult Areas, registered professional with current professional registration operating within their usual scope of practice. Must be a profession permitted by current legislation to practice under a patient group direction.
Initial training	- Completion of all Essential-to-role training as outlined in the UHDB PGD policy. - Individual has read and understood full content of this PGD and signed authorisation (section 7) - Completion of Medicines Management Drug Assessment
Competency assessment	Staff operating under this PGD are encouraged to review their competency using the NICE Competency Framework for health professionals using patient group directions Individuals operating under this PGD are personally responsible for ensuring they remain up to date with the use of all medicines included in the PGD - if any training needs are identified these should be discussed with either the authorising manager (section 7) or the manager within the PGD working group (section 1) so that further training can be provided as required.
Ongoing training and competency	Annual Medicines Safety Training (essential to role) Review/repeat initial training above when this PGD is revised
The decision to supply any medication rests with the individual registered health professional who must abide by the PGD and any associated organisation policies.	

4. Clinical condition or situation to which this PGD applies

Clinical condition or situation to which this PGD applies	**Oxygenation & correction of Hypoxia in <u>Emergency situations</u>:** In an acute emergency situation such as peri-arrest and/or critically ill patients, an Oxygen prescription is not required. Oxygen should be delivered to these patients immediately; initially in the form of high concentration Oxygen via an Oxygen reservoir (non-rebreathe mask) or bag/valve/mask manual ventilation circuit, then titrated to target SpO2 as appropriate (Resus Council UK). Once the emergency situation has been managed, an Oxygen prescription defining target SpO2 saturations should be obtained from a prescriber at the very earliest opportunity.

Criteria for inclusion	• Patients 16 years age or above
	• Cardiac arrest **<u>or</u>** critically ill patients with Hypoxia defined by SpO2:
	  • <94% SpO2 in majority of patients
	  • <92% SpO2 in Covid **pneumonia**
	  • <88% SpO2 in patients at risk of hypercapnic respiratory failure – see cautions below

Criteria for exclusion	• Patients under 16 years of age • When a prescriber is available to complete a prescription (or verbally confirm an appropriate target range in an emergency situation)
Cautions including any relevant action to be taken	**Patients who are at risk of hypercapnic respiratory failure (pCO2 > 6.1).** A target SpO2 88-92% should be prescribed. Those at risk include: • chronic lung disease e.g. COPD • chest wall deformity • morbid obesity due to possibility of hypoventilation syndrome • neuro-muscular disorders • Suspected COPD in patients over 50 years old with a long history of smoking and chronic breathlessness on minor exertion such as walking on level ground
Action to be taken if the patient is excluded	• Record reasons for exclusion in patient notes • Advise patient on alternative treatment • Refer to medical staff or prescriber for review and prescribing of alternative agent if appropriate.
Action to be taken if the patient or carer declines treatment	• Document advice given • Advise patient on alternative treatment • Refer to medical staff if appropriate.
Arrangements for referral for medical advice	**ALWAYS refer to a prescriber immediately when initiating oxygen for medical emergency in the absence of a prescribed target. In most emergency cases this will be covered by putting out emergency/arrest calls**

	Contact your ward or clinic medical team in the first instance except in the event of anaphylaxis/peri- arrest when you should follow your local medical emergency procedures (e.g. 2222 / 3333 / 999 procedures)

5. Description of treatment

Name, strength & formulation of drug	Oxygen
Legal category	POM
Route / method of administration	**Initial emergency treatment via Inhalation:** 15litres/min via oxygen reservoir (non-rebreathe mask) or bag/valve/mask manual ventilation circuit **Stabilisation until a prescription and target SpO2 has been obtained:** Follow the devices and rates included in the titration algorithm of the *Clinical Guideline: Oxygen Use for Adult Patients* and use this to maintain the most appropriate target below: **Acutely ill patients with known COPD, chest wall deformity, morbid obesity or neuromuscular syndromes:** Aim for target SpO2 of 88-92% **Acutely ill patients with Covid pneumonia:** Aim for target SpO2 of 92-94% **All other Acutely ill patients:** Aim for target SpO2 of 94-98%
Indicate any off-label use (if relevant)	n/a
Dose and frequency of administration	See route / method of administration above
Duration of treatment	Continuously during resuscitation. Then once stabilised: Continuously or as required to maintain saturation until a prescriber is available to reassess and define the target range. Oxygen should be reduced when the set target SpO2 is exceeded. SpO2 should be monitored for 5-10 minutes after Oxygen is reduced to ensure they do not drop SpO2 to below target. Oxygen is considered to have been fully weaned when the patient target SpO2 is maintained on air and other vital signs are not altered after one hour. If a patient is found to be severely hypercapnic (raised CO2 on arterial blood gas) it is important not to stop the Oxygen abruptly as this may cause the patient to become acutely hypoxic on withdrawal of Oxygen (Rebound hypoxaemia). A slow, controlled and carefully monitored weaning of Oxygen is recommended in this scenario.

Quantity to be supplied (leave blank if PGD is administration ONLY)	n/a
Storage	Piped oxygen available in most areas. Oxygen cylinders, where required must be stored in accordance with medical gases SOPs. Cylinders should be secured in cradles, bed holders or secured by other means to prevent injury to patients and operators.
Drug interactions	Nil interactions. Remove topical medicinal products from the immediate patient area where possible (many contain accelerants; additional risk of ignition source during resuscitation and defibrillation). During defibrillation itself: minimise the risk of fire by taking off any oxygen mask or nasal cannulae and place them at least 1 metre away from the patient's chest. Ventilator circuits should remain attached. Return oxygen as soon as shock administered. The drug history alongside medical/social history may prompt or support decision around risk of hypercapnic respiratory failure (do not delay initial emergency initiation).
Identification & management of adverse reactions	Side-effects of short-term emergency use of oxygen are uncommon. They could include: • Drying mucosa, particularly nasal • Rebound Hypoxaemia may occur if removed suddenly from treatment at levels higher than 4L/min. • Type 2 Respiratory Failure – presenting with headaches, drowsiness, flapping tremor and increased confusion.
Management of and reporting procedure for adverse reactions	• Healthcare professionals and patients/carers are encouraged to report suspected adverse reactions to the Medicines and Healthcare products Regulatory Agency (MHRA) using the Yellow Card reporting scheme on: https://yellowcard.mhra.gov.uk • Record all adverse drug reactions (ADRs) in the patient's medical record. Serious adverse reactions (moderate harm or above as per NRLS definition) should be reported via trust incident management system (e.g. Datix) to ensure duty of candour and learning from harm during clinical use.
Written information to be given to patient or carer	Give marketing authorisation holder's patient information leaflet (PIL) provided with the product.
Patient advice / follow up treatment	Nil
Records	For inpatients, the record of administration must be documented in the ePMA system or medicines chart used in your area or during resuscitation. For other areas, an ePMA system should be used if in-use in your area as this will ensure all legal criteria are fulfilled and auditable. Otherwise, records can be made in the medical notes or within the patient pathway (e.g. in daycase or triage where a pathway booklet is in use) but must include the legal requirements below.

	Either the system holding the record, or the healthcare practitioner working under the PGD, must capture/document all of the following: • name of individual, address, date of birth and GP with whom the individual is registered (if relevant) • name of registered health professional • name of medication supplied/administered • date of supply/administration • dose, form and route of supply/administration • quantity supplied/administered • batch number and expiry date (if applicable e.g. injections and implants) • advice given, including advice given if excluded or declines treatment • details of any adverse drug reactions and actions taken • Confirm whether supplied and/or administered via Patient Group Direction (PGD) Records should be signed and dated (or a password controlled e-records). All records should be clear, legible and contemporaneous. If you are not recording in ePMA (or other electronic system which has ability to generate audit reports) then a record of all individuals receiving treatment under this PGD should also be in the clinical area for audit purposes as per UHDB PGD policy.

6. Key references

Key references	• *Electronic BNF https://bnf.nice.org.uk/* • *UHDB. Oxygen Use for Adult Patients - UHDB Full Clinical Guideline. June 2019. Accessed 15/2/22 via Koha.* • *UHDB: Oxygen use during the COVID-19 Pandemic – Adults. April 2020. Accessed 15/2/22 via Koha.*

7. Registered health professional authorisation sheet

PGD Name [version]: Adult Core - Oxygen in Medical Emergencies [v1.0]
PGD ref: UHDB035

Valid from: 10/06/2022 Expiry date: 09/06/2025

Before signing check that the document you have read is published on Koha or is an in-date hard-copy with all necessary authorisations signed in section 2. The Name/Version/Ref of the document you have read MUST match this authorisation form.

Registered health professional
By signing this patient group direction you are indicating that

a) You agree to and understand all content and commit to only work within this framework.
b) You have completed any core PGD e-Learning or training records on My Learning Passport or within your department.
c) You meet the staff characteristics and have completed any additional learning/competency outlined in Section 3 of this PGD.

Patient group directions do not remove inherent professional obligations or accountability.
It is the responsibility of each professional to practise only within the bounds of their own competence and professional code of conduct.

I confirm that I have read and understood the content of this Patient Group Direction and that I am willing and competent to work to it within my professional code of conduct.			
Name	**Designation**	**Signature**	**Date**

Authorising manager / Assessor

I confirm that the registered health professionals named above have declared themselves suitably trained and competent to work under this PGD. I give authorisation on behalf of University Hospitals of Derby & Burton NHS Foundation Trust for the above named health care professionals who have signed the PGD to work under it.			
Name	**Designation**	**Signature**	**Date**

Note to authorising manager

Score through unused rows in the list of registered health professionals to prevent additions post managerial authorisation.

This authorisation sheet must be retained by a manager in the clinical department where the PGD is in-use to serve as a record of those registered health professionals authorised to work under this PGD.