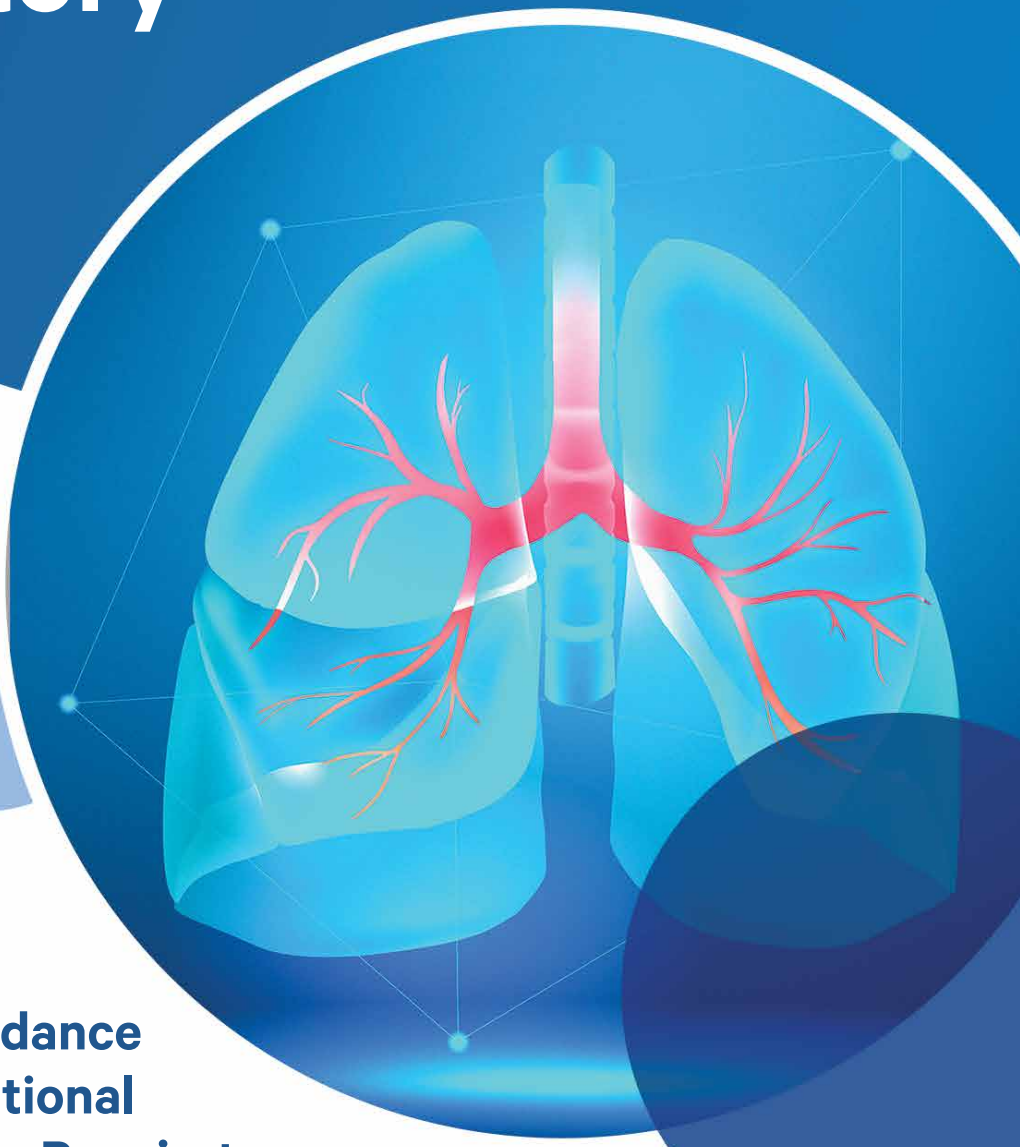
NCP Respiratory

NATIONAL CLINICAL PROGRAMME RESPIRATORY



An operational guidance document for a National Clinical Programme Respiratory pilot project to support and set up Oxygen Assessment and Review (OAR) Clinics for Respiratory Integrated care

January 2022

Integrated Care Programme for the Prevention and Management of Chronic Disease

National Clinical & Integrated Care Programmes
Person-centred, co-ordinated care

Irish Society of Chartered Physiotherapists
The Voice of Physiotherapy in Ireland

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Abbreviations

DPS	Drugs Payment Scheme
ESWT	Endurance Shuttle Walk Test
FEV1	Forced Expiratory Volume in one second
GP	General Practitioner
LTOT	Long Term Oxygen Therapy
HSCP	Health and Social Care Professional
ILD	Interstitial Lung Disease
kPa	Kilo Pascal (unit of measurement of pressure) 1kPa=7.5mmHg
L/Min	Litres per minute
mmHg	Millimetres of mercury (unit of measurement of pressure)
NIV	Non Invasive Ventilation
NOT	Nocturnal Oxygen Therapy
OAR	Oxygen Assessment and Review
O2	Oxygen
OSAHS	Obstructive Sleep Apnoea- Hypopnea Syndrome
PaO2	Arterial oxygen tension (partial pressure)
PaCO2	Arterial carbon dioxide tension (partial pressure)
pH	Unit of measurement for the acidity of the blood (normal range 7.35-7.45)
PHN	Public Health Nurse
POC	Portable Oxygen Concentrator
POT	Palliative Oxygen Therapy
RNP	Registered Nurse Prescriber
$Sp0_2$	Oxygen saturation level measured by pulse oximetry
TOSCA	Transcutaneous monitoring system for PCO_2 and SpO_2
VBG	Venous Blood Gas
6MWT	Six Minute Walk Test

Part 1

A operational guidance for supporting and setting up Oxygen Assessment and Review clinics in integrated care

NATIONAL CLINICAL PROGRAMME RESPIRATORY

1.0 Background and context

The purpose of this document is to support a pilot project on setting up Respiratory Integrated OAR clinics by the NCP Respiratory. This project will be reviewed in 12 months and is planned to be a stepping stone towards further development in the integrated OAR clinics in the future. This document is an operational document and is not an oxygen guideline. This document needs to be read in conjunction with other relevant Oxygen guidelines such as ITS and BTS documents.[1] This document also needs to be read in conjunction with the NCP Respiratory framework for competencies for Respiratory Oxygen Clinics document.

This project is supported by the NCP Respiratory and their Consultant Advisory Group (CAG) as a pilot project as part of the Enhanced Community Care (ECC) chronic disease hubs development. The project will be reviewed after 12 months and can be superseded by local arrangements in conjunction with the Consultant and the NCP Respiratory. The project aims to support and develop the implementation of integrated oxygen assessment and review clinics across the community and acute settings. This will be achieved through a respiratory oxygen clinic competency framework and strategy for local LTOT prescription in OAR clinics by suitably trained Respiratory Physiotherapists and Respiratory CNS's in collaboration with Respiratory Consultants in both existing acute settings and the new Chronic Disease Hubs.

Integrated OAR clinics under the governance and direction of the consultant will cater for patients' post-acute respiratory care including early supported discharge and patients living in the community. The service will reduce demands on hospital outpatient clinics and reduce patient travel time where possible providing care closer to home.

Integrated OAR clinics are currently provided in hospitals by respiratory physiotherapists and nurses under consultant governance. A key barrier at this time is that there is no guidance on how the Respiratory CNS and Senior/ Clinical Specialist Physiotherapists can order long-term oxygen therapy (LTOT) or ambulatory oxygen therapy (AOT). There is no current national agreement for physiotherapists or nurses to order home oxygen. Physiotherapists and CNS's with respiratory training are key decision makers in OAR clinics as they assess patients not only for LTOT and AOT prescription but also for the most appropriate oxygen modality taking co-morbidities, social circumstances, frailty, musculoskeletal and activity levels into consideration.

1. https://irishthoracicsociety.com/wp-content/uploads/2017/05/LTOT-guideline-2015-1.pdf & https://www.brit-thoracic.org.uk/quality-improvement/guidelines/home-oxygen/

The NCP Respiratory is piloting a change supported by a competency framework and Consultant governance by the newly appointed Integrated Respiratory Consultants in the hubs and Respiratory Consultants in acute settings in conjunction with the CNS's and Physiotherapists.

This will support a pathway to facilitate the ordering of home oxygen for review patients as appropriate by specifically trained (see competency framework) Respiratory Integrated CNS's and Physiotherapists. New prescriptions would continue to be performed in collaboration with the consultant as per current practice within the acute hospitals and community setting (local arrangements may be made around the procedure). This would improve the patient journey and also result in more efficient services as well as adhering to national and international guidance.

In hubs that do not have a new integrated consultant post the governance and direction for the OAR will be supported by agreement of local respiratory consultants.

The HSE 'National Framework for integrated prevention and management of chronic disease in Ireland 2020-2025' and the 'End to End Model of Care for COPD 2019' both support the implementation of services and care pathways that assist the development of integrated care programmes for patients with chronic lung disease. The focus is on community investment to reduce demand on acute services which aligns with Sláintecare goals of redirecting care to enhanced community based services. Patients with COPD are one of the most resource intensive diagnosis related groups in acute hospitals in Ireland (Sláintecare). The COPD Chronic Disease Model (Fig 1) supports the integration of acute and primary care services with an increasing focus on primary care investment ensuring that care is delivered closer to the patient's home.

One ambulatory care strategy to support this vision is the implementation of Oxygen Assessment and Review (OAR) clinics in specialist ambulatory hubs in the community. These clinics would work in tandem and integrate with OAR clinics already in existence in the acute setting. Oxygen therapy is an established treatment for patients with COPD and several other chronic respiratory diseases. Long term oxygen therapy (LTOT) improves survival and pulmonary haemodynamics in patients with stable COPD and severe hypoxaemia. In the short term, it may provide a clinically significant improvement in physical performance for some patients with hypoxia (Jarosh et al, 2017). Once patients meet the strict prescribing criteria, therapy is likely to be lifelong. In patients with COPD and hypoxia, provision of LTOT is associated with a reduction in hospital admission rates and hospital bed days (Ringbaek et al, 2002). Oxygen therapy is an expensive treatment with annual costs of approx. €10 million annually in Ireland (O'Donnell et al, IMJ 2019).A nationwide review of oxygen therapy in Ireland carried out in 2018 (O'Donnell et al, IMJ 2019) identified significant gaps in the provision of OAR clinics and regional variation.

In 2015 the British Thoracic Society (BTS) published updated guidelines and a structured framework for the assessment and follow up care of patients requiring home oxygen therapy. There is a strong recommendation in the guidelines that both LTOT and ambulatory oxygen therapy (AOT) should only be prescribed after detailed assessment by a respiratory specialist. Integrated OAR review clinics would support acute OAR clinics and provide primary care with an integrated model of care for the provision of specialist oxygen assessment and follow up based on clinical standards set out by the ITS (2015). These clinics complement community pulmonary rehabilitation services and COPD Outreach services by ensuring that patients have appropriate oxygen prescriptions and devices.

GPs are a key part of the early identification of hypoxaemia in patients with COPD; this integrated pathway would facilitate GP access by direct referrals through a Consultant clinic in the hubs. OAR clinic support will be essential in enabling rapid access to oxygen assessment for patients. Patients will have access to standardised clinical assessment, appropriate and safely prescribed oxygen therapy and structured follow–up care providing them with a better healthcare experience.

2.0 Chronic Disease Integrated Model

Community Healthcare Networks (CHN) will provide the foundation and organisation structure through which integrated care for COPD will be provided locally within the new Regional Health Areas (RHA). The CHN will support the GP- led chronic disease management framework and will be linked with an acute hospital at each site.

Each CHN will cover an average population of 50,000 people. The networks are the structures which will enable the multidisciplinary staff and teams to work together in a more coordinated and consistent way in a defined geographic local community based on the assessed needs of the local population providing integrated care across hospital and community services.

Three geographically adjoined CHNs will act as a point of access to specialist ambulatory care teams (Hubs) within the community. The three networks will total approximately 150,000 population. The three networks will have direct links to a local acute hospital service. The CHNs together with the Chronic Disease Management Community Specialist Ambulatory Teams (Hubs) will provide specialist support to the GP in managing COPD & asthma in the community, thus ultimately preventing unnecessary hospital admissions, supporting early discharge and bringing care closer to home. The full spectrum of services that should be available to patients with chronic disease in any given network is outlined in Figure 2.

This pilot supports OAR clinics integrated and developed/ expanded in both the acute and community settings where appropriate. This integration will facilitate access for the service user in the setting most appropriate to their condition and as close to home as possible. OAR clinics in the acute setting may be more suitable for complex patients and first time assessments for LTOT; however local collaboration between services in acute and the hubs will guide this process.

Community OAR clinics may cater for less complex patients and review assessments e.g. yearly review. This decision will be made at a local level under the governance and direction of the respiratory consultant based on resources and the availability of staff with appropriate training (see competency framework). In the event that only one location is possible due to resourcing, this clinic will provide services to their 3 mapped networks population. This will facilitate clear pathways to provide a continuum of care for patients with COPD in keeping with the HSE COPD End to End Model of Care (2019).

Integrated services also reflect the understanding that health and social care services are performed by co productive partnerships and interdisciplinary collaborations. Hospitals and community partners will need to work closely together to prevent avoidable hospital admissions and enable people to remain safe and healthy in their own homes.

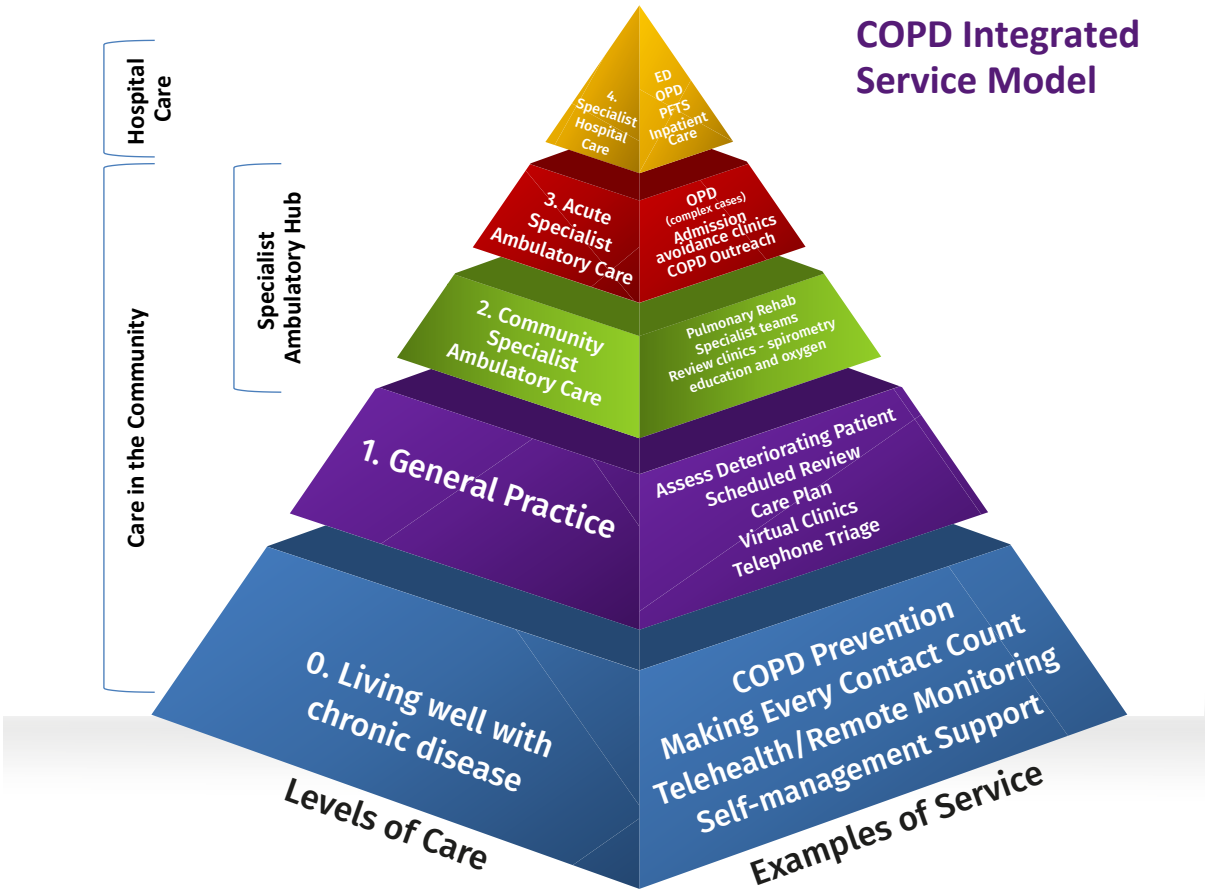

Figure1 COPD Model

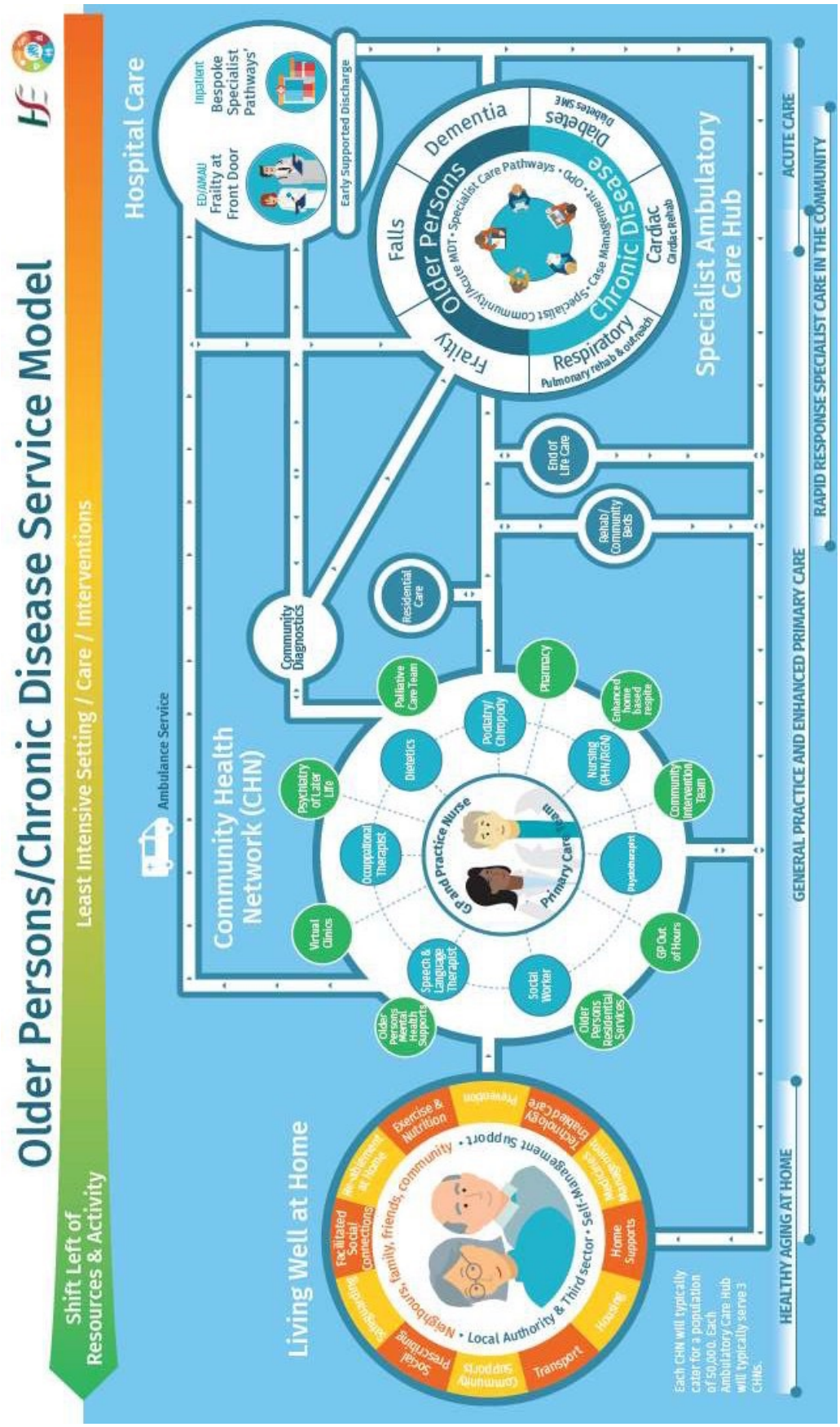
Older Persons/Chronic Disease Service Model
Shift Left of Resources & Activity
Least Intensive Setting / Care / Interventions
Hospital Care
Inpatient Bespoke Specialist Pathways'
ED/AMAU Frailty at Front Door
Early Supported Discharge
Specialist Ambulatory Care Hub
Older Persons
Dementia
Falls
Frailty
Chronic Disease
Diabetes
Diabetes SME
Cardiac
Cardiac Rehab
Respiratory
Pulmonary rehab & outreach
Community Health Network (CHN)
Ambulance Service
Community Diagnostics
Residential Care
End of Life Care
Rehab/ Community Beds
Palliative Care Team
Pharmacy
Podiatry/ Chiropody
Enhanced Home Based Respite
Psychiatry of Later Life
Dietetics
Nursing (CHN/RGN)
Community Intervention Team
Occupational Therapist
GP and Practice Nurse Primary Care Team
Physiotherapist
Virtual Clinics
GP Out of Hours
Speech & Language Therapist
Social Worker
Older Persons Mental Health Supports
Older Persons Residential Services
Living Well at Home
Prevention
Exercise & Nutrition
Rehabilitation/ Reablement at Home
Facilitated Social connections
Home Supports
Housing
Transport
Community Supports
Social Prescribing
Neighbours, family, friends, community • Self-Management Support • Local Authority & Third sector
Each CHN will typically cater for a population of 50,000. Each Ambulatory Care Hub will typically serve 3 CHNs.
HEALTHY AGING AT HOME
GENERAL PRACTICE AND ENHANCED PRIMARY CARE
ACUTE CARE
RAPID RESPONSE SPECIALIST CARE IN THE COMMUNITY

Figure 2

3.0 Acute & Community OAR teams

3.1 Design of teams

The design and implementation of an OAR clinic requires clear leadership, management, governance and accountability to ensure the quality and delivery of a safe, patient focused service (see competency framework). The Model of Care for Chronic Disease describes the delivery of services through an integrated service model, with services being provided in the community but governed as an integrated service between hospital and community teams. The National Clinical Programme for Respiratory "End to End Model of Care for COPD" combines these services under an integrated governance arrangement with common standards, improved access for patients and achievement of good clinical outcomes. All OAR clinics will be under the governance and direction of the respiratory consultant. Local pathways will be developed with the consultant to develop and progress the skills of the trained oxygen team over time. This will include supporting prescribing rights for both nurses and physiotherapists relevant to the OAR clinic.

3.2 Staffing

The OAR teams will consist of the respiratory consultant and suitably trained respiratory senior or clinical specialist physiotherapist and an Advanced Nurse Practitioner or Clinical Nurse Specialist.

All staff will need to complete the competency described in the NCP Competency framework for Respiratory Oxygen clinics and will be responsible for expanding clinical leadership and driving the vision of an integrated service. The team members will be autonomous practitioners in their speciality and will have a close working relationship with the respiratory consultant and the respiratory medical team. They will be a point of contact for oxygen referrals and the team will work across professional and organisational boundaries to expand and develop OAR clinics.

The clinics will be staffed by respiratory physiotherapists and nurses from the ambulatory care hubs for chronic disease and from acute settings with training specific to the OAR clinic (see competency framework). This will include ABG sampling, training and competency. Staff will also develop local policies for the clinic in conjunction with relevant stakeholders. This includes the local laboratory, local aids and appliance officers and oxygen providers.

3.3 Governance

The operational governance of each service lies with the Operational Lead / Network manager in the community and relevant head of discipline in acute services. The Operational Lead/Network Manager will coordinate the integration of community healthcare services within the Network in response to the needs and requirements of the population. Professional governance will be provided to team members from the associated managers for their individual discipline.

4.0 Purpose

This document supports the rollout of the NCP pilot project and also provides support and guidance to healthcare professionals to assist in setting up and developing operational standards for OAR clinics and to ensure a continuum of audit and improvement in the quality of services.

4.1 Aims of the service

- To provide an integrated oxygen assessment and review service.
- To improve access to oxygen services for patients closer to home.
- To provide a standardised and seamless patient journey between assessments and follow on care.
- To provide a safe and standardised approach to the provision of home oxygen therapy to patients that is in line with national and international guidelines.
- Ensure equity of services for patients in each CHN and acute setting.

4.2 Scope of the service

This guideline applies to all healthcare professionals involved in the NCP pilot project including the referral process and provision of OAR clinics in the acute setting and the chronic disease hubs.

4.3 Patient population

This pilot project is for adult patients >18 years with hypoxaemia and a confirmed diagnosis of respiratory disease such as COPD or severe chronic Asthma.

5.0 Referral pathway to OAR clinics

5.1 Referral criteria

In order for the referral to be accepted, patients must have inhaled therapies and techniques optimised and meet the inclusion exclusion criteria set out below.

Consideration of expansion of these inclusion criteria may be considered locally based on the governance and direction of the Respiratory Consultant and the training and experience of specialist staff in ambulatory care hubs.

Inclusion Criteria for Acute and Community	Exclusion Criteria
• Confirmed diagnosis of a chronic obstructive lung disease by spirometry. • A resting SpO_2 of ≤ 92% breathing air or a fall in SpO_2 of ≥ 4% to below 90% on exertion. • A resting SpO_2 of ≤ 94% with evidence of peripheral oedema, polycythaemia (haematocrit ≥55%) or pulmonary hypertension. • Optimal medical management and a period of stability for a recommended 8 weeks prior to the assessment (exceptions for patients unable to gain clinical stability, assessed on case-by-case basis). • Those patients with obstructive lung disease who currently receive oxygen therapy but do not require follow up in Secondary Care. • Be in receipt of oxygen therapy without ever having been formally or recently assessed (within last year).	• Patients without a confirmed clinical diagnosis. • Patients who are not pharmacologically optimised. • Patients who are not in a stable phase of their disease. • Patients receiving oxygen therapy for conditions other than COPD and severe chronic asthma (pathway to acute OAR only). • Palliative patients who are normoxic i.e. SpO_2 ≥93% on air.
Pulse Oximetry is probably less reliable in dark-skinned patients. Pulse oximeters tend to over- read in these patients, especially if the reading is below 94%. Consider ABG in dark skinned patients with oxygen saturations 93% or less where clinically appropriate to guide treatment. See ITS & BTS guidelines for further information.	

5.1.2 Pulmonary Rehabilitation Oxygen requirement

Patients needing rehabilitation support after discharge from the acute hospital or recovering at home are referred into an active recovery pathway. This service is collaborative with interdisciplinary referral and delivered by the pulmonary rehabilitation team or the relevant team member at home. The COPD Outreach team and the pulmonary rehabilitation team may refer or liaise with the OAR clinic if required for assessment for oxygen requirements identified during assessment or over the course of rehabilitation.

5.2 Referral pathway

Patients meeting the inclusion/exclusion criteria can be referred by the Consultant, other Physiotherapists or nursing staff from both Primary and Secondary Care and referred via a standardised referral form to the appropriate location via e-referral.

Following initial assessment, those patients who require LTOT and/or AOT may be referred to Secondary Care if complex needs are identified during assessment such as a potential requirement for non-invasive ventilation or sleep therapies. This cohort will be handed back to the Primary Care team for follow up once stabilised and/or jointly managed by the integrated services.

Referrals for patients who may require oxygen assessment but do not have COPD (e.g. Heart Failure, Pulmonary Fibrosis, cluster headaches) may be sent to Secondary Care teams for formal oxygen assessment.

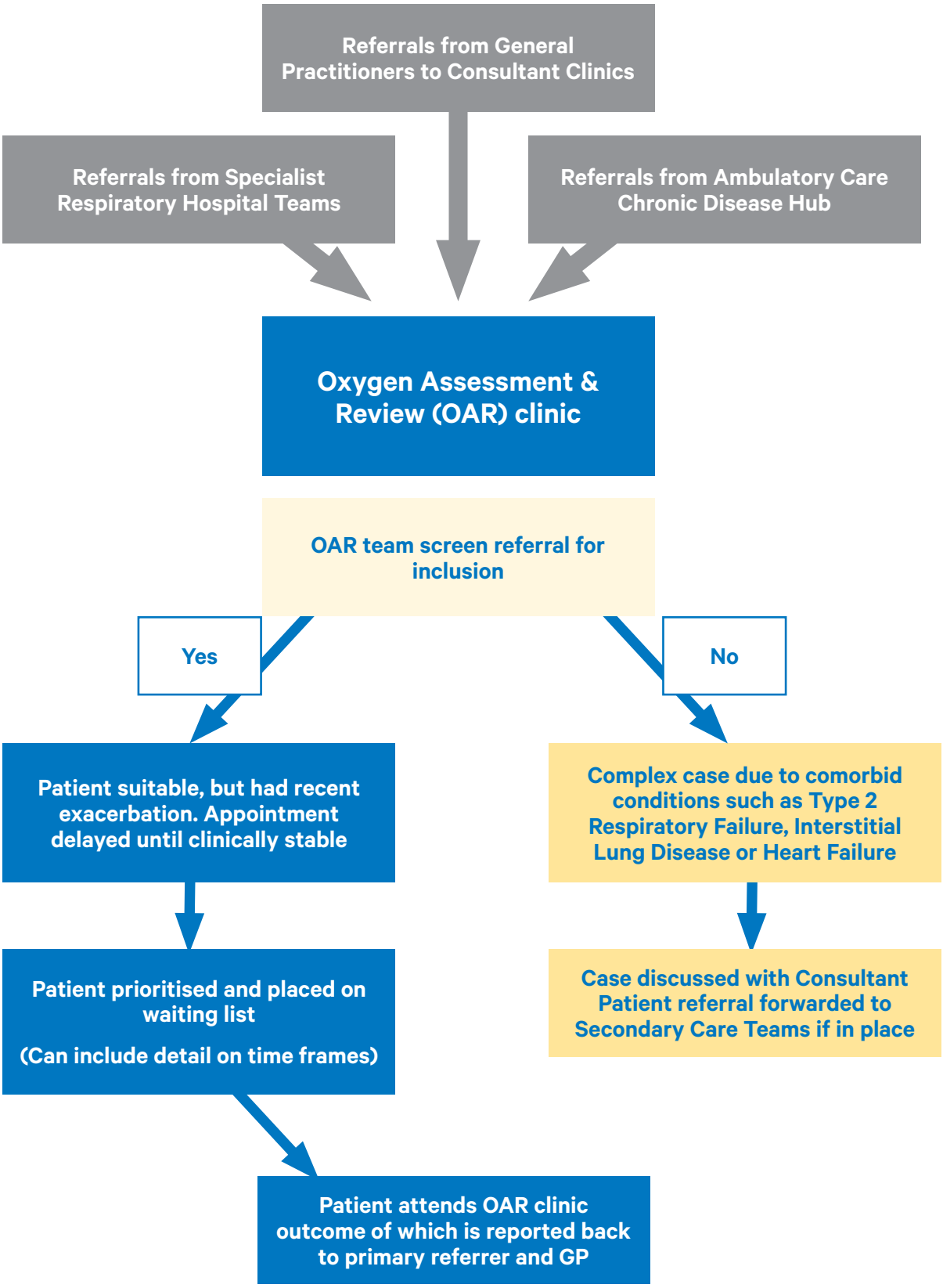

Figure 3. Referral Pathway to Oxygen Assessment & Review clinics

6.0 Oxygen assessment

All oxygen assessments are carried out in accordance with national and international guidelines and standards. The sample oxygen assessment pathway in figure 4 can be used as a guide for this pilot project and adapted locally. The protocol for oxygen titration and LTOT prescribing is advised to be utilised at initial and annual reviews and following national and international guidance (Hardinge et al, 2015).

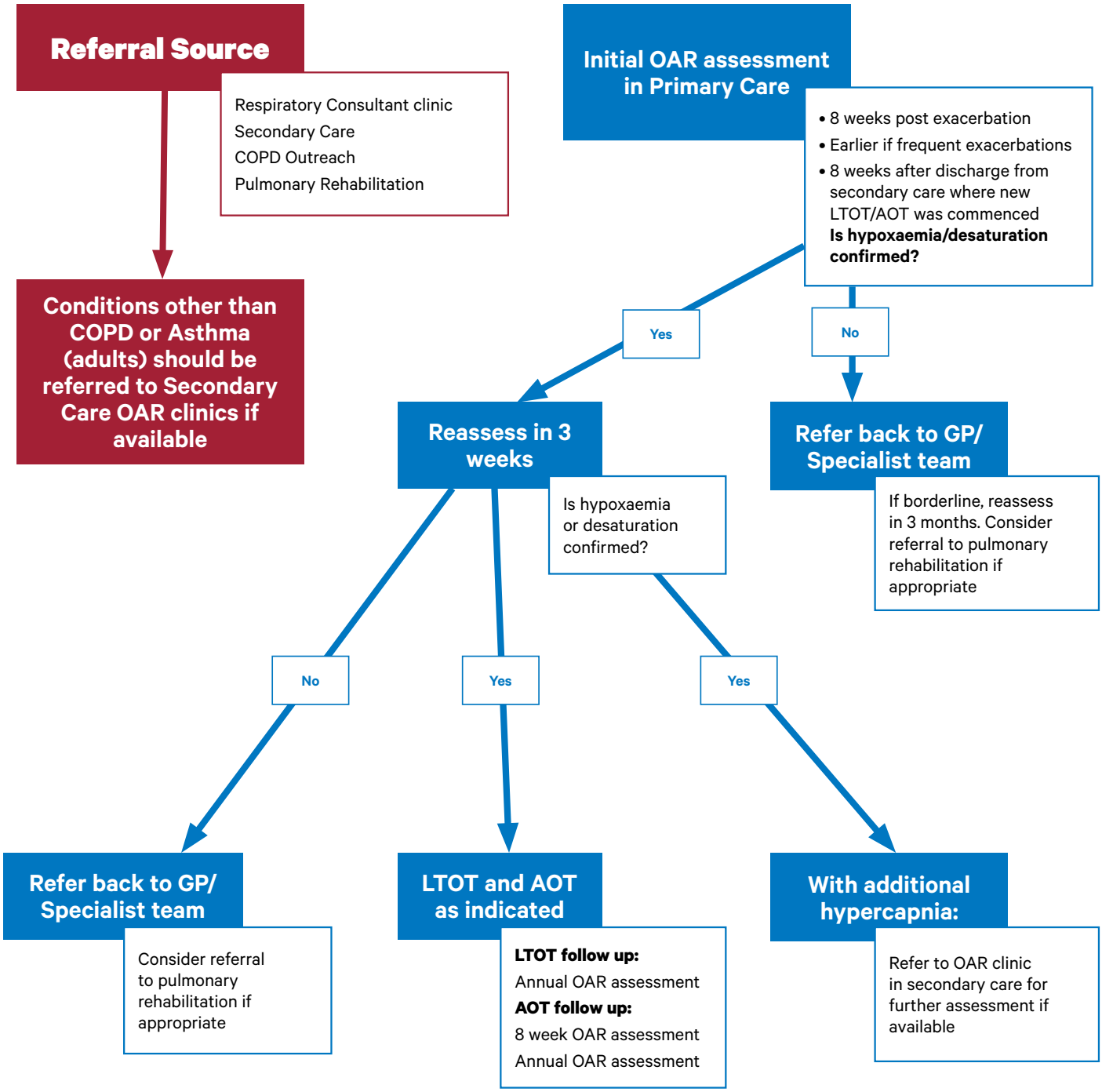

Figure 4: Sample Oxygen assessment pathway

6.1 First assessment

6.1.1 For details on assessment and suitable quality of life scores and assessment tools, overnight oximetry and AOT see ITS/BTS guidelines.

6.1.2 Staff will discuss the rational for oxygen therapy with the patient. This is a minimum should cover the prescribed requirements (both LTOT and AOT) and safety aspects of oxygen therapy in the home, followed by appropriate patient information leaflets.

6.1.3 If the patient is a current smoker or members of their family are current smokers, brief smoking cessation advice is provided. Local hub policy and agreement with the governing Consultant Respiratory Physician will direct if patients who are current smokers should be commenced on LTOT/AOT. This will be decided on a case-by-case basis with frequent review.

6.1.4 The patient and other residents in the home need to be strongly counselled on the risk of fire and personal injury associated with smoking or naked flames and the use of home oxygen therapy. It should be made clear that no amount of smoking in the home where oxygen is supplied is acceptable. Advice should be provided on the need for a working smoke alarms, fire blankets and/or extinguishers.

6.1.5 For information on follow up visits please see ITS guidelines. Local policy and patient complexity will define requirement for subsequent visits to the clinic in the acute or community setting.

6.2 LTOT: annual review

6.2.1 A full review of all patients on oxygen therapy is carried out annually from the date of the first appointment with the service.

6.2.2 Assessments are performed as per initial assessments in accordance with international and national guidelines and standards.

6.2.3 Existing oxygen users will have their oxygen prescription checked by the OAR team against their actual usage (information to be requested through oxygen suppliers) and amended as clinically appropriate to their needs.

6.2.4 Patients identified as having additional health care needs will, with their consent, be referred or signposted as required to the appropriate community services and managed in partnership between the OAR team and other services e.g. Public Health Nurse, Palliative Care, Pulmonary Rehabilitation, HSCPs, disease specific support groups, Mental Health services, GP etc.

6.2.5 Service user feedback will be sought annually by OAR team via a Patient Experience Questionnaire.

6.2.6 Existing patients on oxygen who no longer meet the clinical requirements for oxygen therapy will work in partnership with the OAR team to develop a personalised care plan to wean off their oxygen prior to it being withdrawn (in as many cases as possible).

6.3 Ambulatory Oxygen Therapy (AOT) assessment and follow-up.

6.3.1 Ambulatory oxygen assessments are carried out in accordance with national and international guidelines and standards.

6.3.2 Patients who commence AOT without LTOT should receive a follow up OAR clinic assessment 8 weeks after commencing the therapy and annually thereafter.

7.0 Discharge Criteria

7.1 Patients should be discharged from the OAR service if:

- They do not attend or decline 3 offers of an appointment.
- Oxygen therapy is no longer deemed to be required after a complete assessment.
- Oxygen therapy is withdrawn and sufficient monitoring time has been completed.

7.1.1 Discontinuation of home oxygen therapy can be complex and may require several reviews or a weaning/reduction programme. It is particularly difficult where equipment has been in place for some time regardless of use. The process can be stressful for patients and their families so should be approached sensitively. If they are using oxygen for breathlessness alternative supports for this should be considered, such as pulmonary rehabilitation, palliative care or psychology support for anxiety.

7.1.2 Considerable time and effort goes into removing oxygen. It is important that patients with borderline ABG results and progressive lung disease have a very careful assessment of need. If their condition is likely to deteriorate in the future it may not be of benefit to remove oxygen if likely to be re-instated in the future. (Hardinge et al. 2005)

8.0 Data metrics

The OAR team will carry out an annual audit and performance reporting. Suggested topics for inclusion in the report include:

- Number of patients referred to the acute & hub OAR clinics.
- Source of referrals.
- Number of patients accepted for assessment at acute and hub OAR clinic.
- Number of patients transferred from acute to hub clinic.
- Number of patients transferred from hub to acute clinic.
- Number of assessments performed.
- List of reasons for inappropriate referrals.
- Time from receipt of referral to first appointment offer being sent to patient.
- Number of DNA/CNAs.
- Number of existing patients requiring a change to prescription as a result of OAR assessment.
- Number of patients who had oxygen discontinued.

9.0 Competency training for advanced practice for all staff for OAR Clinics

Competency requirements are clearly laid out in the accompanying documents.

9.1 Clinical Skills

1. Undertake and complete a training programme in Arterial Blood Gas (ABG) sampling and complete the relevant Hospital Peripheral ABG Sampling Competency Workbook including 10 supervised ABG's, and use of the Allen's test.
2. Laboratory training for ABG's. Analysis of Arterial Blood Gases: Relevant staff will receive documented training in the correct handling and analysis of blood gas samples, including sample handling requirements, the correct operation of the equipment for measurement, interpretation of results, limitations and interferences, and contact and referral pathways for abnormal results and other analytical issues.

3. Be familiar with instructions for use when processing blood gas samples as per local laboratory systems. Safety standards:
    1. Blood Gas Equipment: All blood gas equipment in use MUST be linked to and under the governance of the local Laboratory Point of Care Service with robust Internal Quality Control and External Quality Assurance programmes and review in place, as part of a quality management system.
    2. Blood Gas Equipment: All blood gas equipment MUST comply with HPRA requirements and be verified as suitable for use for all parameters, regardless of whether based in the hospital or community setting.
    3. The National Near Patient Testing Guidelines – 2020 (issued by the National Point of Care Consultative Group can be referenced as guidance).
    4. Liaise with local laboratory for procurement of portable gas sampling devices and connectivity and software to Hospital Laboratory middleware and train staff in equipment use.
    5. Understand the disposal of sharps as per the local Waste Disposal Policy.
    6. Be supervised in theoretical and practical aspects of ABG sampling and analysis by a Respiratory Clinical Specialist/ Senior Physiotherapist/ CNS/ANP who has completed all stages of this process and accept and understand the scope and accountability of your own practice.
    7. Knowledge of subjective and objective oxygen clinic assessment.
    8. Knowledge regarding the ordering of oxygen, including flow rate and type of device.
    9. Awareness of what constitutes appropriate/inappropriate referrals.
    10. Prioritisation skills regarding waiting list urgent referrals and suitability for face to face and remote assessments.

9.2 Administrative Skills

1. Awareness of local booking process / respiratory waiting list.
2. Clinical Letter writing skills.

9.3 Accountability

In order to autonomously run an oxygen clinic, physiotherapists and CNS's must have knowledge of and demonstrate understanding of their individual:

- Relevant Code of Professional Conduct and Ethics.
- Local Infection Control Guidelines.

9.4 Prescribing

Prescribing will be discussed with the respiratory consultant who is governing the pathway and will depend on the competency and training of the staff members. At this time the Health Products Regulatory Authority (HPRA) guidance states that ordering of oxygen by staff without prescribing rights can only be allowed for devices that do not contain medical oxygen or use medical oxygen. This means Physiotherapists/CNS's can order oxygen concentrators or portable/transportable devices (e.g. Inogen/Sequal) but there is a barrier to ordering oxygen cylinders which contain medical oxygen or liquid Oxygen (LOX). This will be considered at a local level with progress as deemed appropriate by the Respiratory Consultant.

10.0 Evaluation and Audit

10.1 A record of all competent practitioners will be maintained by teaching site.

10.2 All practitioners will maintain their own records of ABG sampling and disseminate to their line managers/Consultant.

10.3 A local policy and audit tool will be agreed upon for practitioners; audits will be conducted by practitioners and will include case samples of prescribing. Results will be disseminated to their line manager and the governing consultant on a 3 monthly basis.

10.4 Revision of this document will be considered if an audit, serious incident, organisational structural change, scope of practice change, advances in technology or significant changes in international best practice or legislation identifies the need to update the procedure.

Appendix 1 Glossary of terms

Long Term Oxygen Therapy (LTOT) refers to the provision of oxygen therapy for continuous use via an oxygen concentrator at home for patients with chronic hypoxaemia (Defined as $Pa0_2$ at or below 7.3 kPa when stable or $Pa0_2$ of 7.3 to 8.0 kPa when stable but with evidence of Cor Pulmonale, secondary polycythaemia or nocturnal hypoventilation).

Ambulatory Oxygen Therapy (AOT) refers to the provision of oxygen therapy during exercise and activities of daily living. It may potentially improve exercise capacity and reduce breathlessness in patients with arterial oxygen desaturation. (Defined as a fall in $Sa0_2$ of 4% to a value <90 %.)

Portable Oxygen Concentrator (POC): Small lightweight devices which deliver pulsed oxygen mode only. Suitable for patients requiring up to 4L/min on exertion who can trigger a conserving device. The flow is provided as numerical settings which do not directly correlate to L/min flow rate, all patients require a titration test before use.

Transportable Oxygen Concentrator (TOC): These are devices capable of delivering pulsed dose and continuous flow oxygen up to 3L/min. They are similar to home concentrators but smaller in size and more portable. Intermittent flow is provided as numerical settings which do not directly correlate to L/min flow rate, all patients require a titration test before use.

Liquid Oxygen (LOX): Liquid oxygen is suitable for patients who are highly ambulatory. It consists of a base unit which contains the reserve supply of liquid oxygen; this is used to refill a small portable unit when needed.

Appendix 2 Space and resources

OAR clinics can be delivered safely in a variety of settings, for example hospital and community settings and virtual assessments. The location of OAR clinics should be easily accessible for patients.

The OAR clinic venue should have a suitable space in relation to the number of people being treated and the interventions being performed including space of either a level corridor or walking track suitable to carry out a field walking test.

Recommended room resources are:

- Located close to parking.
- Wheelchair accessible.
- On ground floor or access to an elevator.
- Adequate assessment space for minimum 2 clinicians, 2 patients and 2 carers at a time.
- Waiting area for minimum 2 patients and 2 carers at a time.
- Access to sink and bin.
- A quiet space with good sound absorption to allow for ease of communication with patients.
- Desk.
- Chairs.
- Computer.
- Printer.
- Telephone.
- Minimum 10 metre walk space for performing 6MWT, which can be closed to public access.
- Adequate storage for oxygen equipment and consumables.

Equipment Resources

- 2 Overnight oximeters.
- Overnight oximetry software if no access to Respiratory Physiology.
- 2 cones.
- Stopwatch.

- Dynamap.
- Device to measure height and weight.
- ABG machine- Static machine/ portable-(EPOC or ISTAT).
- ABG syringes.
- BORG scores laminated for patients to read and understand.
- Static concentrator.
- Eclipse portable concentrator.
- Inogen portable concentrator.
- CD cylinders/ backpacks and trolleys.
- Access to a crash trolley/ AED / airway resuscitation (e.g. mask & ambu bag).
- Suction machine & consumables.
- Glucometer.
- PPE.
- Consumables: alcohol wipes, ABG syringes/needles, gauze/plasters, sharps bin.
- Sphygmomanometer, portable SpO_2/HR monitor.
- Water/ Sugar drink (lucozade) / fridge.

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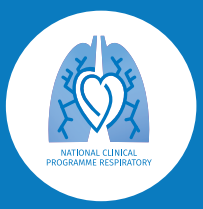
Part 2

A framework of Competences for OAR Clinics



Section 1 Introduction

This document was developed by the National Clinical Programme (NCP) Respiratory to support the 'Operational Guidance Document for a NCP Respiratory pilot project to set up Integrated Oxygen Assessment and Review (OAR) Clinics for Respiratory Integrated Care' and to support the rollout of the project for setting up OAR clinics in Respiratory Integrated Care services.

This project is supported by the NCP Respiratory and their Consultant Advisory Group, the Irish Society of Chartered Physiotherapists (ISCP), and, the NCP Respiratory Oxygen Assessment and Review Advisory Group as a project as part of the Enhanced Community Care (ECC) chronic disease hubs. This competency document was developed with the NCP Respiratory Oxygen Assessment and Review Advisory Group, involving Chartered Physiotherapists and Nurses with specialist experience.

This document needs to be read in conjunction with other relevant oxygen guidelines such as the Irish Thoracic Society Oxygen Guideline and the British Thoracic Society Guideline, the Operational Guidance document, other NCP Respiratory documents including models of care and NCEC guidelines, along with respective professional body guidelines, local policies, procedures, protocols and guidelines.

1.1 Who is this framework for?

This document is for all staff who wishes to work towards an expertise to work in OAR clinics.

1.2 Why do I need it?

This framework gives you and colleagues guidance about the competences you need to cover in addition to the training requirements in OAR. It gives you a clear picture of what you have to achieve to have the expertise to work competently and safely in this area.

1.3 How do I use the framework?

You can sit down with the framework on your own and use it to help you identify areas of practice that you need to work on and those areas in which you feel fairly confident. You can talk to your line manager or peers support team about the balance of your experiences and look for ways to ensure you cover all areas you need to.

1.4 Progression

Following completion of the competency framework the HCP should be competent to take up a post in an OAR clinic.

1.5 A note about the format of this document

This framework sets out the additional competences which should be achieved to work in an OAR clinic. The HCP has to achieve all the competences in this document before commencing work in this area.

1.6 Integrated care pilot project

The integration of OAR across primary and secondary are is being introduced as part of the ECC hubs. The NCP Respiratory will be seeking feedback from the HCP's who complete the competency over the 12 months. This will look at:

1. Need for further training areas of development in this area.

2. Addition or omission of competences unique to the area.

3. Usefulness of the competency.

4. Outcome of trainees undertaking the competency.

5. Need for revision of the competences.

6. Need for further amendments.

1.7 Objectives of the pilot project

The following objectives are required to achieve the aim of the integrated OAR clinics:

- Put systems in place that will ensure the safe and effective delivery of a service.
- Outline the role of each key stakeholder in the programme.
- Ensure standards of practice are maintained in line with national and international guidelines.
- Ensure evidence based practice.
- Facilitate the sharing of information for future service development.
- Comply with GDPR (technology and information sharing and consent).

1.8 Scope of the pilot project

The guidance contained in this document is intended for line managers and clinicians working to establish or integrate an OAR clinic. The overarching purpose of the OAR Competency Framework is to support and enhance the practice of HCPs by providing explicit statements to guide the development of the OAR clinic. HCP's will use the Competency Framework to reflect on their practice, identify areas for development and to evaluate their continuing education needs. The scope of this competency framework is specific to the delivery of an OAR clinic and does not reflect the competences needed to complete a full respiratory assessment.

Section 2 Advanced Practice Competencies

For the purpose of the pilot project the integrated OAR clinics will be staffed with HCPs ranging in grade including from senior and clinical specialist physiotherapists as well as clinical nurse specialists and Respiratory Advanced Nurse Practitioners. However in line with the End to End Model of Care 2019 it is recognised that those staff performing the tasks delineated in this Competency Framework, specifically taking and interpreting Arterial Blood Gases(ABGs), prescribing Long Term Oxygen Therapy (LTOT) and Ambulatory Oxygen and assessment and management of their caseload, are working at an Advanced Practice level.

Discipline specific competencies for Advanced Practice have been developed by both the NMBI and the ISCP. ISCP competencies are currently being updated.

All integrated OAR HCPs are required to be cognisant of and meet the standards of their respective professions as delineated in the above documents.

Section 3 Performance Levels

This competency framework describes 3 stages along a continuum of performance.

Stage 1:

Pre-Requisites to commencing Stage 1:

- Experience as a senior physiotherapist or CNS in areas of respiratory: cardiology, medical.
- An understanding of oxygen clinic services including suitability, criteria and assessment and ordering forms.

Aims:

1. Knowledge of chronic lung diseases and the pharmacological and non-pharmacological management of these diseases.
1. Knowledge of the Irish guidelines on Long Term Oxygen Therapy (LTOT) in Adults (2015) and Irish Guidelines on the Administration of Oxygen Therapy in the Acute Clinical Setting in Adults (2017).
2. Knowledge of pulmonary rehabilitation and COPD Outreach – aims, methods and outcomes as referrals may originate from these services or may need to assist/support oxygen assessments for these services.
3. Develop a clear understanding of criteria for use of LTOT and Ambulatory Oxygen Therapy (AOT).
4. Develop a clear understanding of the differences between the need for LTOT and AOT.
5. Be aware of the various delivery options for both LTOT and AOT and the uses of the different AOT devices.
6. Knowledge of objective measures used in oxygen clinic.

Stage 2:

Pre-Requisites to moving to Stage 2:

- Stage 1 completed.
- The completion of ABG training is relevant to the role you are in and will be in for the next 6 months.
- Discussion/ approval by the line manager and respiratory consultant
- Must be willing and able to complete Stage 2 and 3.

Aims:

1. Develop administrative and clinical skills for running the oxygen clinic by specific training / shadowing with Respiratory Clinical Specialist / Senior Physiotherapist / CNS / ANP who has completed all stages of this process.

Clinical Skills:

1. Undertake and complete a training programme recognised by the relevant professional body in Arterial Blood Gas (ABG) sampling
2. Complete the relevant Hospital Peripheral ABG Sampling Competency Workbook including 10 supervised ABG's and use of the Modified Allen's test.

3. Laboratory training for ABG's. Analysis of Arterial Blood Gases: Relevant staff will receive documented training in the correct handling and analysis of blood gas samples, including sample handling requirements, the correct operation of the equipment for measurement, interpretation of results, limitations and interferences, and contact and referral pathways for abnormal results and other analytical issues.
4. Be familiar with instructions for use when processing blood gas samples as per local laboratory systems. Ensure a link with the laboratory point of care at the local site to ensure training in ABG equipment and to adhere to national near patient testing guidelines.
5. Safety standards:
    1. Blood Gas Equipment: All blood gas equipment in use MUST be linked to and under the governance of the local Laboratory Point of Care Service with robust Internal Quality Control and External Quality Assurance programmes and review in place, as part of a quality management system.
    2. Blood Gas Equipment: All blood gas equipment MUST comply with HPRA requirements and be verified as suitable for use for all parameters, regardless of whether based in the hospital or community setting.
    3. Liaise with local laboratory for procurement of portable gas sampling devices and connectivity and software to hospital laboratory middleware and train staff in equipment use.
    4. Understand the disposal of sharps as per the local Waste Disposal Policy.
    5. Be supervised in theoretical and practical aspects of ABG sampling and analysing by a Respiratory Clinical Specialist / Senior Physiotherapist / CNS / ANP who has completed all stages of this process and accept and understand the scope and accountability of your own practice.
    6. Knowledge of subjective and objective oxygen clinic assessment.
    7. Knowledge re ordering of oxygen, including flow rate and type of device.
    8. Aware of appropriate / inappropriate referrals.
    9. Prioritisation skills regarding waiting list urgent referrals and suitability for face to face and remote assessments.

Administrative Skills:

1. Awareness of local booking process / respiratory waiting list.
2. Clinical Letter writing skills.
3. Communication with Consultant and GP where appropriate.

Stage 3:

Pre-Requisites to moving to Stage 3:

- Stage 1 and 2 completed.

Aims:

1. Commence seeing patients under guidance. Progress through:
   - Shadowing Respiratory Clinical Specialist / Senior Physiotherapist / ANP / CNS who has completed all stages of this process
   - Seeing a patient with supervision Respiratory Clinical Specialist / Senior Physiotherapist
   - / ANP / CNS who has completed all stages of this process
   - Seeing a patient and linking with the Respiratory Clinical Specialist / Senior Physiotherapist / ANP / CNS who has completed all stages of this process
   - Seeing patients independently (minimum of 1 patient every week for the first 6 weeks reducing to a minimum of 2 patients per month ongoing after that to maintain competency).
2. Ongoing case discussion with Respiratory Clinical Specialist / Senior Physiotherapist / CNS / ANP who has completed all stages of this process.
3. Regular in-service training / case studies / journal club.
4. Peer review completed every 6 months.
5. Peer review and ABG supervision as per stage 2 after return from maternity leave/career break or other substantial length of time away from the service.

Section 4 Task Specific Competencies

The following are the clinical skills expected of a HCP working in an integrated OAR clinic at an advanced practice level:

- Airway Clearance.
- Breathing Control techniques.
- Mobility assessment.
- In-depth knowledge of respiratory medicines and their relevance.
- Ability to recognise sub-optimal medical management, and the need for medical review.
- Knowledge / ability to recognise the need for overnight oximetry/sleep studies/NIV assessment.
- Be familiar with all different types of oxygen devices available both LTOT and AOT and the companies that supply each.
- Be familiar with local systems for oxygen ordering- companies who provide the service in the locality as well as the processes for non-medical card and medical card patients and sign off from aids and appliances officer if required.

In addition to the above clinical skills, HCPs working in an OAR will be expected to maintain competency in the following tasks:

- Performing ABG's.
- Performing 6 Minute walk Test (6MWT).
- Ordering of Oxygen equipment.

The required competency standard for each task is delineated as below.

4.1 Guidance for Completion of the competencies form

This form is designed to be used as part of the competency assessment of each HCP working in the OAR clinic. The form should be completed by the HCPs before starting work in an OAR clinic and at 6 monthly intervals. The rating system for competency assessment will be based on 3 levels. This rating scale is based on the Dublin Academic Teaching Hospitals Staff Grade Physiotherapy Competency grading scale.

If there was demonstration that the assesse excelled in a specific component of the competency, it is rate "S".

If the assessor rates the assesse an acceptable competency, it is rated as "C".

If there were areas that needed further review or practice this would be rated as "N" with the specific areas for review documented on the form below.

Rating	Description
S	Area of Strength
C	Acceptable Competency
N	Development Need

4.2 ABG Competencies

4.2.1 Guidelines to complete competency for ABG sampling via needle puncture

The purpose of this section is to provide a framework to support HCPs in the transfer of theoretical knowledge into practice and introduce the skills and knowledge. This competency should be completed by HCPs whose manager has deemed it relevant to perform their role.

All staff who anticipates needing to perform this skill are required to have training in ABG sampling and deemed competent to be able to practice independently within their role. The Clinical Evidence Logbook (Appendix B) should be completed after review of at least 10 patients. In order to be deemed competent the HCP would be expected to achieve "C" or "S" in all competencies by following the 10 patient review.

Staff are expected to:

- Work at a level of clinical specialism where ABG's would be considered an essential adjunct to the delivery of direct patient care.
- Have ABG training (organised locally or nationally and delivered by a practitioner competent on this skill).
- Follow the ABG Guidelines to complete competency for ABG sampling.
- Complete 10 supervised practices in the Clinical Evidence Logbook (Appendix B).
- Complete the ABG Competency Assessment Framework Final Declaration.
- The competency documents must be completed within 4 months from the date of training.
- To retain the accreditation of competency, staff must carry out this

procedure on a regular basis – it is expected that staff should perform this skill at least once every month to remain competent. If staff are unable to achieve this, a new training session may be considered to assess competency. This must be signed by a practitioner who retains their own competence and meets the guidelines as stated above.

- All staff should have access to local update training if it is required to enable them to continue to practice competently. This may be considered after periods of extended absence through sickness or maternity leave or where lack of practice opportunities has compromised potential competence and can be addressed through completion of the Competency Assessment Framework Final Declaration once.
- Staff joining the hospital with previous and recent (practiced in last 12 months) experience/ transferable skills must provide signed evidence of their competence and then complete a single competency checklist with a competent practitioner.
- As evidence of best practice, staff can have this skill peer reviewed at any time by a competent colleague to ensure practice is at the hospital/ hub/ care setting expected level.
- A copy of the competency document must be kept in the HCP's department.
- It is the manager responsibility to ensure that the competency is recorded in the HCP's file.

Guidelines for Assessors

- The assessor of the evidence logbook must be a senior/specialist HCP who is working clinically, who understands the ABG sampling process and have been using this competency in their regular practice and is deemed competent in the practice.
- Assessors can only be those who currently practice the skill being assessed.
- Assessments must only be carried out for competencies that have been observed.
- If the practitioner does not achieve the minimum standard at the formative stage, the assessor must write comments and action plan in the comments sheet.
- The competency assessment framework final declaration must be completed and signed by a Consultant or Registrar.

Completing the competency framework

- The clinical logbook of evidence below needs to be completed in at least 10 patients to be signed off as competent.
- The 'Competency Assessment Framework Final Declaration' must be completed and signed by a Consultant or Register.
- Once the competency is completed, the practitioner should photocopy the signed record of 'Competency Assessment Framework Final Declaration' and send a copy to their Line Manager.
- The original sheet is kept by the HCP.
- Annual retesting of knowledge is not required but each practitioner is responsible for maintaining their knowledge and practice up to date

4.3 Six Minute Walk Test (6MWT) Competencies

The purpose of this section is to provide a framework of support for Health Care Professionals (HCP) in using their theoretical knowledge, experience and skills in practice to carry out a 6MWT. This competency should be completed by any HCP who they themselves or their line manager has deemed it relevant to their job or who is responsible for carrying out a 6MWT test as part of their role in providing health care.

The competency packs should form part of the HCP's professional development and will also be used as the basis for your Personal Development Review (PDR) as well as contribute to the standard required by the appropriate regulating body.

Guidelines for Assessors

- The assessor of the evidence logbook must be a HCP who is working clinically in the area of speciality, who understands the 6MWT process and has evidence of using this competency in their regular practice and is deemed competent in this practice. HCPs at stage 3 of the competency framework can self assess their competency. This may include a Senior/Clinical Specialist Physiotherapist, Clinical Nurse Specialist (CNS) or a Registered/Candidate Advanced Nurse Practitioner (R/CANP).
- Assessors should be agreed and identified per work location.
- Assessors can only be those who currently practice the skill being assessed.
- Assessments must only be carried out for competencies that have been observed.

- If the HCP being assessed does not achieve the minimum standard at the formative stage, the assessor must write comments and action plan in the comments sheet.
- The competency assessment framework final declaration must be completed and signed by the designated assessor.

Completing the competency framework

- The full competency framework needs to be completed only once
- The clinical logbook of evidence (Appendix D) needs to be completed on at least 3 patients to be signed off as competent. In order to be deemed competent the HCP would be expected to achieve "C" or "S" in all competencies by following the 3 patient review.
- The Competency Assessment Framework for 6MWT Final Declaration (Appendix E) must be completed and signed by the assigned assessor.
- The HCP should photocopy the signed 'Competency Assessment Framework Final Declaration' and send a copy to their Line Manager.
- The original sheet and the logbook are kept by the HCP.
- A review of competency is recommended where the assesse deems it necessary for their own learning or upskilling e.g. after a period of leave.

4.4 Prescribing / Ordering Oxygen competencies

Prescription / Order of LTOT

Oxygen is a drug and therefore must **be prescribed except in life-threatening emergencies** when it must be started immediately.

- Prescribing Oxygen – A Registered Nurse Prescriber has the prescriptive authority to prescribe, subject to local agreement:
  - Oxygen Concentrators, Portable Oxygen Concentrators, i.e. Inogen / sequel eclipse
  - Liquid Oxygen and Portable Oxygen Cylinders as indicated by thorough patient assessment, using relevant guidelines and in collaboration and under the governance of the local consultant.
- Ordering Oxygen – Registered Nurses (CNSps & RANPs) and Physiotherapists can order:
  - Oxygen concentrators and Portable Oxygen Concentrators i.e. Inogen / sequel eclipse can be ordered as indicated by thorough patient assessment, using relevant guidelines, in collaboration and under the governance of the local consultant.

The prescribing/ordering practice involves a number of complex skills including comprehensive consultation, diagnosis, information giving and accurate documentation. Consultation with a person/service user during the prescribing process and the correct completion of a prescription enhances the person/service user's safety and reduce the likelihood of a medication error (World Health Organisation, 1994). The rationale for providing these standards and guidelines is as follows:

- Safe and effective prescribing/ordering practice will lead to improved person/service user outcomes, and reduce the incidence of adverse events related to the medication.
- Specific standards for prescription writing must be adhered to as required by legislation and the local health service provider's medicinal product prescribing PPPGs.

The Competency Assessment Framework for prescribing and ordering oxygen as part of the OAR team under the governance and direction of the Respiratory Consultant is available in Appendix F. Prescribing and ordering oxygen is at the discretion of the governing consultant and may vary from site to site depending on different levels of experience and competency of staff. It is only allowed where it is of clear benefit to the patient and is safe to do so. New oxygen assessments for patients will be performed in collaboration with Consultant; review oxygen assessments for patients can be done independently but with communication of outcomes to the medical team. Any indications of withdrawal of oxygen must be discussed with the Respiratory Consultant. Change of devices where a prescription is required e.g. from Inogen to oxygen cylinders must be discussed with the Respiratory Team.

Acknowledgments

Thank you to the frontline nurses and physiotherapists and the Irish Society of Chartered Physiotherapists in particular Dr Marie Ó Mír Advanced Practice Project Officer, ISCP who assisted with and provided feedback on this document.

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Section 6 Appendices

Appendix A

Glossary of Terms and Definitions

6MWT: 6 Minute Walk Test

ABG: Arterial Blood Gas measures the acid-base balance of the body

ANÁIL: Respiratory Nurses Association of Ireland

AOT: Ambulatory Oxygen Therapy

HCP: Health Care Professional

Modified Allen's Test: this confirms the patency of the ulnar artery circulation and assesses collateral circulation to the hand in the event of radial artery damage (Dougherty & Lister 2008, Girling & Hobbs 1997)

Radial Artery: The radial artery runs along the lateral aspect of the anterior forearm and can be easily palpated between the styloid process of the radius and the flexor carpi radialis tendon.

LTOT: Long-term oxygen therapy (LTOT): Provision of oxygen therapy at home on a continuous and long-term basis, ideally for at least 16 hours daily, including time spent asleep.

NIV: Non-Invasive Ventilation: The provision of ventilatory support through the patient's upper airway using a mask or similar device (BTS, 2002).

ISCP: Irish Society of Chartered Physiotherapist HSCP: Health and Social Care Professional NICE: Nice Institute of Clinical Evidence COPD: Chronic Obstructive Pulmonary Disease

M&K Update: UK based company who provide training and development for HCPs

CANP: Candidate ANP

RANP: Registered Advanced nurse practitioner

CNS: Clinical Nurse Specialist

Appendix B: Clinical logbook of evidence for ABG sampling (10 patients required)

Clinician	**Ward Location**	**Date**
Indication for ABGs (please document)		

Consent The patient's consent must be obtained verbally prior to arterial blood gas sampling unless the patient in unconscious – explicit and detailed documentation in patient notes is required.	**Competency** **Rating**
Preparation • Compliant with following Hospital policies :Sharps policy, Spillage of waste, Blood and body fluids, Hand washing and principles of skin disinfection • Correctly identify those patients in whom arterial sampling is required. • Identify an appropriate site for undertaking the procedure • Infection Control: Correctly execute Aseptic technique	**Competency** **Rating**
Procedure • Aseptic technique competency (intranet) • Safety: Safe disposal of sharps • Be aware of the manufacturers guidelines for correct use of the arterial blood gas syringe • Be familiar with the correct technique for assessing collateral hand circulation (Allen's Test) • Follow correct procedure (as per training session) • Able to demonstrate use of blood gas analyser • Awareness of complications during and after the procedure • Ensure the bleeding has stopped from the puncture site before finally leaving the patient's bedside • Use of appropriate dressings	**Competency** **Rating**

Was the ABGs acquired successfully	**Yes / No**
Did the ABG influence the patient's management? Please comment why	**Yes / No**
Things to improve next time:	
Assessors Signature: **Assessors Print Signature:**	**Position:** **Date:**

Mark each competency as: S = Strength, C = Competence or N = Development Need

Appendix C: Competency Assessment Framework for ABG Sampling

No:	**The Registered Health Care Professional will be competent in arterial blood gas sampling via a needle puncture. They must be able to perform these skills satisfactorily without supervision or assistance with acceptable speed and quality of work.**	**Competency Rating**
1.	Demonstrate the Allen's Test?	
2.	What are normal results for PaO_2, $PaCO_2$, pH & HCO_3 with patient breathing air?	
3.	Explain how you would diagnose Type 1 and Type 2 respiratory failure with the aid of an ABG?	
4.	Name one contraindication to taking an ABG?	
5.	What is the local policy on sharps / spillage of body fluids?	
6.	How would you identify the correct site to take an ABG?	
7.	How would you ensure the blood gas machine is giving accurate measurements?	
8.	How long should pressure be applied after taking an ABG?	
9.	Define a metabolic and respiratory acidosis and the likely causes?	
10.	Define a metabolic and respiratory alkalosis and the likely causes?	
11.	Understand compensation for acid base disturbance?	
	Participant Signature: **Position:**	**Date:**
	Assessor Signature: **Assessor Print Sig-nature:** **Position (Consultant/Register):**	**Date:**

Appendix D: Clinical logbook for Six Minute Walk Test (3 patients required)

Assesse Name and Title	**Assessor Name and Title**	
Date	**Location of Test**	**Test No**
Indication for 6MWT (please document)		

Consent • The patient's consent must be obtained verbally prior to carrying out the test	**S / C / N**
Preparation • Be able to identify suitable patients that require a 6MWT to be carried out • Identify any precautions prior to carrying out the test including contraindications • Ensure the location of where the test is being carried out is prepared appropriately • Identify all the necessary equipment required for carrying out a test and ensure they are ready for use • Be able to explain the indications for the test and the procedure to the patient. This should include clear instructions on the modified BORG scale	**S / C / N**
Procedure • Record the baseline measurements including Heart Rate, SpO_2 and modified BORG score • Give the necessary instructions of the test to the patient • If appropriate demonstrate a lap of the circuit to the patient • Start the test, recording the timer and the laps carried out by the patient • Demonstrate how to record the patient's Heart Rate, SpO_2 and modified BORG score at each minute interval • Monitor the patient for any untoward signs and symptoms throughout the duration of the test • Recognise any signs or symptoms during the test that may warrant the test to be stopped by either the patient or the HCP • Safety: Outline how to manage a patient if the test is stopped by either the patient or the HCP • After completion of the test demonstrate appropriate management of the patient including recording measurements, continual monitoring of the patient, recording distance achieved and instructions on test performance	**S / C / N**
Results Reporting and Interpretation • Document results in patient records, identifying any abnormalities and relevant actions • Identify clinical signs for stopping a test and if/when repeat testing should be considered • Identify specific indications for considering Ambulatory Oxygen Therapy (AOT) • Demonstrate the procedure for a repeat test with AOT • Carry out appropriate oxygen titration depending on the findings and outcome	**S / C / N**

• Demonstrate clinical reasoning and interpretation of a patients response to AOT • Outline the various AOT devices available and how to select the most appropriate one including the interface • Carry out the appropriate prescription procedure where AOT is indicated • Arrange the appropriate follow up for the patient • Report results to medical team responsible for that patient's care			
Knowledge • Knowledge and understanding of the normal anatomy, physiology and pathophysiology of the cardio-respiratory system. • Knowledge and understanding of various conditions where a 6MWT may be indicated such as Chronic Obstructive Pulmonary Disease (COPD), Pulmonary Fibrosis, Neuromuscular disease and Heart Failure. • Knowledge of various methods of oxygen administration (e.g. nasal prongs, high-flow) and methods of oxygen humidification. • Good knowledge of current literature and guidelines and ability to critically evaluate research in order to inform their practice. • Recognise the contraindications for performing a 6MWT and know when to refer to medical • colleagues for advice or assistance.			**S / C / N**
Was the 6MWT performed successfully	**Yes**	**/ No**	
Did the 6MWT influence the patient's management? Please comment how:	**Yes**	**/ No**	
Things to improve next time:			
Assessors Signature: **Assessors Print Name:**	**Title:** **Date:**		

Appendix E: Competency Assessment Framework for Six Minute Walk Test

Competency Assessment Framework for 6MWT Final Declaration	
The Health Care Professional (HCP) named below has demonstrated competency in conducting and performing a Six Minute Walk test (6MWT). The HCP has a competently assessed 3 patients and carried out some of the following tasks:	**PASS/FAIL**
Consent Able to seek appropriate consent and document same	
Preparation Adequately prepared the patient, the environment and themselves to carry out the test successfully; including educating the patient of the test procedure, setting up the test location and ensuring all the necessary equipment was available and working,	
Procedure Demonstrated competency in carrying out a test including monitoring of the patient throughout, recording of findings and managing all situations during and after the test procedure	
Reporting and Interpretation Appropriately reported on the test including documenting in the medical chart Competently interpreted the findings of the test and acted accordingly with same Competently carried out an Oxygen prescription (if necessary) and arranged follow up appointments	
Knowledge Demonstrated appropriate background knowledge and skills necessary to carry out the 6MWT	
Assesse Signature: **Assesse Print Name:** **Title:**	**Date:**

Appendix F: Competency Assessment Framework for Prescribing / Ordering Oxygen

No:	The Registered Health Care Professional should have the skills and be competent in performing a complete respiratory assessment including gathering the relevant information of the service user in relation to LTOT & AOT.	Competency Rating
1	Demonstrates consideration for prescribing / ordering oxygen only with adequate, up-to-date awareness of its actions, indications, dose, contraindications, interactions, cautions, and unwanted effects.	
2	Demonstrates understanding of the potential for adverse effects and takes steps to avoid/minimise, recognise and manage them.	
3	Demonstrates clinical decision making skills and the ability to consider all of the options available for the management of the patient. This will include interpreting relevant investigations necessary to inform treatment options.	
4	Demonstrates the ability to identify key health and / or medication related issues with the patient, including making or reviewing the diagnosis.	
5	Demonstrates understanding of the condition being treated, the natural progression and how to assess severity, deterioration and anticipated response to oxygen therapy.	
6	Assesses the risks and benefits for the patient of using Oxygen therapy and initiates risk assessment where indicated in home situation	
7	Demonstrates the ability to prescribe / order within own scope of practice and recognises the limits of own knowledge and skill.	
8	Demonstrates the ability to refer to or seek guidance from another member of the team, a specialist or a prescribing information source when necessary	
9	Demonstrates the ability to reach a shared decision with patient, oxygen team +/- carer based on assessment and evidence based practice.	
10	Demonstrates the ability to communicates this decision to patient/carer	
11	Demonstrates the skills to assess patient for ability to manage oxygen device with consideration for level of mobility and lifestyle. Works with the patient/carer in partnership to make informed choices, agreeing a plan that respects patient preferences including their right to refuse or limit treatment.	
12	Demonstrates the ability to prescribe / order within relevant frameworks for medicines use as appropriate (e.g. local formularies, care pathways, protocols and guidelines).	
13	Demonstrates the ability to work as part of the Oxygen Team to safely and accurately calculate relevant parameters and frequency for ordering and place on relevant order form based on assessment and evidence based practice.	
14.	Demonstrates the ability to work as part of a team to safely prescribe or order the relevant device on relevant order form based on assessment and evidence based practice.	
15.	Demonstrates the ability to prepare and send relevant paperwork for medical card patients to aids and appliance for approval.	
16	Provides written information to the service user and relevant stakeholders	
17.	Stays up-to-date in own area of practice and applies the principles of evidence-based practice, including clinical and cost-effectiveness	