Adult Home Oxygen Funding Criteria

Background & Scope

The EnableNSW Adult Home Oxygen Funding Criteria were developed through consensus with a panel of expert clinicians in consultation with the Thoracic Society of Australia and New Zealand and the Agency for Clinical Innovation's Respiratory, Palliative Care and General Practitioner Networks. The criteria are evidence-based and align with current clinical guidelines.[1-3]

EnableNSW provides oxygen therapy equipment for people aged ≥ 16 years, who are deemed clinically stable and can be safely managed in the community (at least four weeks following an acute illness).

EnableNSW provides home oxygen under two categories: short-term oxygen therapy (STOT)- Part A, Section 1; and long-term oxygen therapy (LTOT)- Part A, Section 2. All requests must be made by an eligible prescriber-Part A, Section 4. Refer to EnableNSW matrix for home oxygen application process and timelines.

Part A: Funding Criteria

1. Funding Criteria: Short-Term Oxygen Therapy (STOT)

- STOT may be provided for the 5th -12th week following discharge from an acute care facility (the first month's supply of oxygen is funded by the discharging facility) to people who meet criteria 1.1 or 1.2.
- All people who are eligible for STOT will be provided an oxygen concentrator as the primary device.
- Portable cylinder oxygen may be provided by EnableNSW for people who meet criteria 1.3.
- The prescription should include the means of oxygen delivery, duration, and oxygen flow rate for each oxygen device (e.g. concentrator and cylinders).
- The prescribed oxygen flow rate should aim to achieve PaO_2 ≥ 60 mmHg (or SpO_2 ≥ 90% at rest), or SpO_2 88-92% in people with COPD, people with known hypercapnia or sleep hypoventilation, or those with a high risk of developing hypercapnia with oxygen supplementation.(1,2)
- Refer to Part B for information on timing of re-assessment and application for LTOT.
- An EnableNSW **Adult STOT Request form** must be submitted.

The person must meet the following criteria, PLUS either criteria 1.1 or 1.2:

i. At least the first month's supply of oxygen has been funded by the discharging service **AND**

ii. The person is in the recovery phase of their exacerbation (STOT eligibility assessed within 1 or 2 days prior to discharge from acute care facility)

1.1 STOT for people with hypoxaemia on discharge from hospital	i. Daytime PaO_2 ≤ 55 mmHg, measured via arterial blood gas (ABG) while at rest and breathing room air, taken within 48 hours* prior to discharge. **OR** ii. Daytime PaO_2 56 – 59 mmHg, measured via ABG while at rest and breathing room air, taken within 48 hours* prior to discharge, with objective evidence or confirmation (in physician letter) of significant end-organ damage due to hypoxia e.g. pulmonary hypertension, right heart failure, polycythaemia. *For people discharged on a Monday, EnableNSW will accept ABGs taken on the previous Friday.
1.2 STOT for isolated nocturnal hypoxaemia or sleep-disordered breathing	i. Polysomnography (PSG) or nocturnal oximetry report with or without positive airway pressure (PAP) therapy demonstrating artefact-free SpO_2 ≤ 88% for ≥ 30% of total sleep time **OR** SpO_2 ≤ 80% for ≥ 10% of total sleep time. **AND** ii. *If applicable:* For people who are unable to tolerate PAP and are prescribed oxygen as an alternative treatment for sleep-disordered breathing, a letter of justification is required outlining why the person is unable to tolerate PAP and the reason for prescribing oxygen.

1.3 Portable Cylinder Oxygen for People on STOT

To be eligible for portable cylinder oxygen the person must meet **all** the following criteria:

i. The person is aware of and willing to partially fund the therapy, including charges for cylinder refills and any delivery charges **AND**

ii. The person agrees to use portable oxygen as recommended by the prescriber (under-usage indicates that the person may not require portable oxygen)

PLUS all criteria for either A or B:

A. People requiring continuous oxygen (24 hours/day)	i. The person is currently in receipt of and is compliant with STOT (24 hours/day via concentrator). Exercise tests are not required.
B. People requiring oxygen ≥ 16 hours/day	i. The person is currently in receipt of and is compliant with STOT (≥ 16 hours/day via concentrator) **AND** ii. Evidence of significant desaturation during exercise (SpO_2 < 88%) while breathing room air (exercise test report required) **AND** iii. Distance walked in 6-minute walk test while on oxygen improves by ≥ 25m or by > 50% in people with baseline 6 minute walk distance < 50m (exercise test report required)

2. Funding Criteria: Long-Term Oxygen Therapy (LTOT)

- People who will require oxygen for > 12 months may apply for LTOT.
- People eligible for LTOT will be provided with a stationary oxygen concentrator as the primary device
- A prescription including the means of oxygen delivery, duration, and oxygen flow rate is required for each oxygen device (e.g. concentrator and cylinders).
- The prescribed oxygen flow rate should aim to achieve PaO_2 ≥ 60 mmHg (or SpO_2≥ 90% at rest), or SpO_2 88-92% in people with COPD, people with known hypercapnia or sleep hypoventilation, or a high risk of developing hypercapnia with oxygen supplementation.[1,2]
- Ongoing LTOT provision is subject to clinical review requirements outlined in Part B
- An EnableNSW **LTOT Request Form** must be submitted.

To be eligible for LTOT, the person must meet either Criteria 2.1, 2.2 or 2.3

2.1 LTOT for Chronic Hypoxaemia	**LTOT may be provided to people with chronic hypoxaemia who meet either of the following criteria:** i. Daytime PaO_2 ≤ 55 mmHg, measured via ABG while at rest and breathing room air when clinically stable **OR** ii. Daytime PaO_2 56 – 59 mmHg, measured via ABG while at rest and breathing room air when clinically stable, with objective evidence or confirmation (in physician letter) of significant end-organ damage due to hypoxia e.g. pulmonary hypertension, right heart failure, polycythaemia

2.2 LTOT for Nocturnal Hypoxaemia	**LTOT for nocturnal hypoxaemia may be provided for people who meet criteria i, ii or iii, plus ALL of criteria iv, v and vi:** i. Isolated nocturnal hypoxaemia (oximetry or PSG) while breathing room air with artefact-free nocturnal SpO_2 ≤ 88% for ≥ 30% of sleep time **OR** ii. Artefact-free nocturnal SpO_2 ≤ 80% for ≥ 10% of sleep time **OR** iii. Significant nocturnal desaturation not meeting the above criteria but with evidence of hypoxia-related sequelae (polycythaemia, right heart failure, pulmonary hypertension) provided in a clinical letter of justification. **AND all of:** iv. Objective evidence of improvement (e.g. improved mean nocturnal SpO_2 on either a PSG or pulse oximetry) on nocturnal oxygen with/without PAP therapy to confirm the ongoing need for oxygen therapy **AND** v. Nocturnal investigations of oxygenation were carried out during a period of clinical stability i.e. at least 4 weeks following an acute exacerbation **AND** vi. *If applicable*: for people who are unable to tolerate PAP and are prescribed oxygen as an alternative treatment for sleep-disordered breathing, a letter of justification is required outlining why the person is unable to tolerate PAP and the reason for prescribing oxygen.
2.3 LTOT for Central Sleep Apnoea Related to Congestive Heart Failure	**LTOT may be provided to people with Central Sleep Apnoea (CSA) related to congestive heart failure who are not responsive/ intolerant to CPAP,[3,4] and who meet ALL of the following criteria:** i. Diagnostic PSG (including technical and physician's report) demonstrating AHI > 20/hour, with CSA for a majority (> 50%) of events **AND** ii. CPAP titration PSG (including technical and physician's report) demonstrating residual AHI > 15/hour on CPAP **AND** iii. Oxygen titration PSG (including technical and physician's report) demonstrating AHI < 15/hour **OR** a 50% reduction in central events on titrated oxygen therapy **AND** iv. *If applicable:* For people with CSA who are intolerant of PAP, a letter of justification is required outlining why the person is unable to tolerate PAP

3. Funding Criteria: Long-Term Portable Cylinder Oxygen

Portable cylinder oxygen may be provided by EnableNSW on the prescriber's request to people who meet all of criteria i-iii, PLUS all criteria for either 3.1, 3.2 or 3.3:

i. Confirmation provided by the prescriber of long-term need for portable oxygen e.g. provision of portable oxygen enables greater mobility, a break in oxygen therapy causes the person's SpO_2 to drop to a dangerous level or permits participation in pulmonary rehabilitation or attendance at medical appointments **AND**

ii. The person is aware of and willing to partially fund the therapy including charges for cylinder refills and any delivery charges **AND**

iii. The person agrees to use portable oxygen as recommended by the prescriber (under-usage indicates that the person may not require portable oxygen)

PLUS 3.1, 3.2 or 3.3:

3.1 People requiring continuous oxygen (24 hours/day)	i. The person is currently in receipt of and is compliant with LTOT (24 hours/day via concentrator). Exercise tests are not required.
3.2 People requiring oxygen ≥ 16 hours/day	i. The person is currently in receipt of and is compliant with LTOT (≥ 16 hours/day via concentrator) **AND** ii. Evidence of significant desaturation during exercise (SpO_2 <88%) while breathing room air (exercise test report required) **AND** iii. Distance walked in 6-minute walk test while on oxygen improves by ≥ 25m or by > 50% in people with baseline 6 minute walk distance <50m (exercise test report required)
3.3 People on oxygen <16 hours/day	i. Diagnosis of interstitial lung disease or other non-COPD lung disease[1,5] **OR** ii. Any respiratory diagnosis with evidence of hypoxia-related sequelae (polycythaemia, right heart failure, pulmonary hypertension) provided in a clinical letter of justification **AND** all of the following: iii. Evidence of significant desaturation during exercise (SpO_2 < 88%) while breathing room air (exercise test report required) **AND** iv. Distance walked in 6-minute walk test while on oxygen improves by ≥ 25m or > 50% in people with baseline 6 minute walk distance < 50m (exercise test report required) **AND** v. Evidence of a successful trial of portable cylinder oxygen in the community, documented in a letter from the prescriber

4. Eligible Prescribers

A. Respiratory or palliative care physician

B. Registered nurse practitioners who meet the criteria below may apply to become an eligible prescriber of home oxygen:

- Working in rural/remote areas with limited access to respiratory or palliative specialist services
- Working in nominated specialty area of respiratory medicine or palliative care
- Employed by NSW Health and work for a Local Health District (LHD) or primary care
- Have the appropriate training around the prescription and ongoing management of people on home oxygen
- Working in collaboration with a respiratory or palliative care physician
- Two referees provided (including at least one respiratory or palliative care physician) and have completed a probationary period including three monitored applications
- Have submitted an Out of Scope Prescriber Form and provided documentation to support the fulfilment of all criteria

C. Requests from other prescribers, such as general practitioners or physicians, will only be considered in rural or remote areas, where an eligible prescriber (respiratory physician, palliative care physician or respiratory nurse practitioner) is unavailable within the health service/ Local Health District. If is the case, with each application the prescriber must provide a letter:

- Outlining the reasons why an eligible prescriber is not available, and
- Detailing the clinician responsible for follow-up and ongoing respiratory care of the person.

If an eligible prescriber becomes available in the area, the person should be referred accordingly.

5. Inclusions & Exclusions

5.1 Contract in place	• C313B Home Oxygen (2018), HealthShare NSW
5.2 Inclusions	• Oxygen concentrator (with standard supply of nasal cannulae and extension tubing) • Ongoing rental of two (2) portable (C-size) oxygen cylinders with regulator flow meter or conserver device, if eligible under portable cylinder oxygen criteria • Rental of one (1) backup (D-size) cylinder as an emergency backup for people on continuous oxygen (24 hours/day) living > 2 hours from their closest hospital, if requested and supported with a letter of justification
5.3 Exclusions	• Intermittent, episodic oxygen or emergency therapy (except for portable cylinder oxygen in eligible people with normoxia who desaturate during exercise under criteria 3.3) • The first three (3) months supply of Short Term Oxygen Therapy (STOT) for people requiring palliative care (these need to be managed by the LHD - LHD policies and procedures apply) • The first four week's supply of STOT for all other people (these need to be managed by the discharging hospital) • Alternate oxygen delivery systems (e.g. face masks) • Cost of refilling portable (C-size) cylinders and delivery charges • STOT (discharge oxygen) for people discharged from private hospital

6. Assessment Requirements

Assessment of daytime hypoxaemia: ABGs

- In keeping with clinical guidelines,[1,2] ABGs are required for the assessment of daytime hypoxaemia and eligibility for STOT/LTOT through EnableNSW. Surrogate measures obtained from pulse oximetry spot checks, earlobe capillary blood gases or venous blood gases do not accurately predict PaO_2 and may lead to inappropriate prescription of home oxygen, and therefore will not be accepted. STOT Criteria 1.2 and LTOT Criteria 2.2 provide a pathway for applying for home oxygen via overnight oximetry where ABG results cannot be obtained.

Assessment of nocturnal hypoxaemia

- A full oximetry report or PSG is required for assessment of nocturnal hypoxaemia, and demonstration of improvement on oxygen.
- In people using long-term CPAP/bi-level ventilation, a full PSG or partial home study that includes nocturnal oxygen saturation monitoring is required for LTOT application. Assessment for LTOT must be performed on the person's long-term PAP settings

7. Smoking

- People who continue to smoke will not be eligible for the provision of STOT/LTOT by EnableNSW
- In the event of a person starting or resuming smoking, the clinician must inform the person that they will not be eligible for EnableNSW funding while they smoke. If the person is unable to cease smoking on a long-term basis, EnableNSW will cease funding of home oxygen only on written request from the prescriber.

Part B: Additional Information for Prescribers

Review Recommendations

People on STOT

- If the need for home oxygen is expected to be ongoing, eligibility for LTOT should be assessed by the prescriber at least 8 weeks after discharge but also allow sufficient time for the LTOT application process prior to the end of the 12-week STOT provision period.

People on LTOT

- Re-assessment of ongoing need for LTOT must be confirmed by the prescriber after the first 12 months of LTOT, and an EnableNSW Annual Oxygen Re-application Form must be submitted
- The review should be performed by the original prescriber, or the person should be referred to an appropriately trained and skilled team for review.
- Routine annual clinical review is recommended for all people on LTOT to ensure clinical stability, compliance and ongoing need for home oxygen.
- Where a person is unable to access a specialist directly, details of the person's clinical history, blood gases/oximetry, and need for ongoing therapy should be directed to an appropriate specialist by the person's local doctor for approval.
- Compliance with the LTOT prescription should be confirmed, attainable through meter readings from the oxygen supply company.
- If non-compliance is reported on the annual review or if room air $SpO_2 \geq 88\%$, ABGs should be performed to determine ongoing need.
- **Prescribers must inform EnableNSW in writing of any changes to oxygen therapy prescription, flow rate, or if home oxygen is no longer required**

If delays in access to tests occur (e.g. sleep studies for someone transitioning from STOT to LTOT), EnableNSW will take this into consideration if justified in writing.

Requirements for STOT ABGs for people discharged to non-acute health care facilities

For people discharged from an acute care facility to a non-acute health facility (e.g. rehabilitation), ABGs performed at the acute care facility will be accepted under the following conditions:

i. ABGs must be performed within 48 hours of discharge from the acute care facility (ABGs from admission or early in treatment will not be accepted).
ii. For people with prolonged stays in non-acute care facilities: ABGs older than 4 weeks will not be accepted and clinical assessment and new ABGs will be required for a STOT application
iii. Oxygen is continued to be used and required in their respite / rehab / subacute facility
iv. Weaning of oxygen has been considered
v. During their admission, oxygen is provided by the facility and not EnableNSW
vi. Respite / rehab / subacute facility is responsible for first month's supply of oxygen upon discharge home

Responsibilities

It is the responsibility of the prescribing physician/clinical teams to submit/organise and ensure the following:

Social/ Care Criteria

- The person and/or family/carers are capable of using the equipment safely and appropriately, including basic equipment care and minor troubleshooting
- The person/primary carer should retain a copy of prescription settings which should be attached as a clearly visible and dated card on the device and updated where indicated by the prescribing clinical team.
- The person must be willing to comply with device usage as prescribed by their physician and must be informed that therapy compliance data will be recorded

- Provide the person with information about their ongoing treatment plan, ongoing clinical review and assessment requirements in relation to oxygen therapy.
- The person and/or carer must be aware of emergency procedures in the event of respiratory equipment failure. Emergency procedures may include presentation to hospital. NB: EnableNSW and contracted equipment suppliers do not provide a 24 hour equipment support contact line.
- The person and other residents in the home do not smoke in close vicinity to the person and/or oxygen equipment and have been educated regarding the risks of using oxygen in the home while using electrical and gas appliances.
- Notify EnableNSW if the equipment is no longer required or the person does not comply with documented prescription. LHDs can contact oxygen suppliers for oxygen concentrator compliance data and oxygen cylinder usage data.

Environmental factors

- Ensure the oxygen equipment prescribed is compatible with all other equipment prescribed or in use.
- Ensure that the person's place of residence has access to a stable electrical power source that is sufficient for oxygen concentrator operation.
- A NSW Government Planning & Environment Electricity Rebate Form is completed.
- The person has received information on the safe use of equipment.

Equipment factors

- At flow rates above 3L/min, an alternate delivery device (e.g. face mask or oximiser) may be more comfortable. However, monitoring of the person is required to ensure rebreathing is not occurring. Alternate devices are not provided by EnableNSW.

References

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7. Nocturnal Oxygen Therapy Trial Group. Continuous or nocturnal oxygen therapy in hypoxemic chronic obstructive lung disease: a clinical trial. *Ann Intern Med 1980; 93*:391-398
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9. Victorian Aids and Equipment Program Guidelines. *Prescriber Manual for the Domiciliary Oxygen Program – A manual devised by the State-wide Equipment Program (SWEP) Clinical Advisory Team to assist SWEP registered prescribers*.