

Use of High Flow Nasal Oxygen (HFNO) on Wellington Respiratory Support Unit (Formerly Higher Care/ D bay) Clinical Guideline

V1.0

August 2026

Summary

There is no current role for the initiation of HFNO on Wellington ward (or anywhere outside of the critical care unit) unless this is done by critical care staff solely to facilitate immediate transfer to the critical care unit.

HFNO should never be started out of hours in patients who are not deemed suitable for transfer to critical care and for intubation.

HFNO may **ONLY** be used on Wellington ward with the express agreement of the responsible respiratory consultant in hours.

1. Aim/Purpose of this Guideline

1.1. This guideline applies to all adult inpatients.

Data Protection Act 2018 (UK General Data Protection Regulation – GDPR) Legislation.

The Trust has a duty under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

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2. The Guidance

- 2.1. High Flow Nasal Oxygen (HFNO) is oxygen delivered by the nasal route at flow rates beyond those achievable by conventional oxygen therapy, and higher than the spontaneous inspiratory flow of 30-40L/min; up to 60L/min depending on device and seal within the nose. This also allows delivery of higher FiO₂ since the oxygen can be delivered at a rate matching the inspiratory flow avoiding the dilution of inspired oxygen by room air which occurs with higher respiratory rates.
- 2.2. The principal experience and evidence base is in neonatal/paediatric populations and in the peri-operative and critical care settings.
- 2.3. There is to date no evidence of a mortality benefit for the use of HFNO in adult patients.
- 2.4. There is to date no evidence for benefit of any kind for the use of HFNO in adult patients who are deemed not suitable for intubation and invasive ventilation.
 - 2.4.1. The FLORALI trial in 2015 (**DOI: 10.1056/NEJMoa1503326**) was a multi-centre French and Belgian randomised trial comparing face mask oxygen, HFNO and NIV (non-invasive ventilation/ BIPAP) in 310 patients, all in intensive care units, mostly with pneumonia (82%). Patients not for intubation were excluded. Patients with a history of chronic respiratory failure, a diagnosis of asthma, or with cardiogenic pulmonary oedema were also excluded. HFNO did not decrease the rate of intubation but did show a weak signal (p=0.02) of **reduced 90-day mortality**. It should be noted that UK guidance lists pneumonia as not suitable for treatment with NIV.

- 2.4.2. The RECOVERY-RS trial in 2022 (doi:10.1001/jama.2022.0028) was a randomised controlled trial conducted in UK hospitals in the COVID-19 pandemic. It compared COT (conventional oxygen therapy) with CPAP (continuous positive airway pressure) and HFNO in 1260 patients. Patients deemed not for intubation and ventilation were excluded. It showed no benefit in intubation rates or mortality for HFNO.
- 2.4.3. The RENOVATE trial in 2024 (doi:10.1001/jama.2024.26244) was a Brazilian multi-centre randomised clinical trial comparing HFNO and NIV in 1766 patients in different groups with respiratory failure in both ICU, ward and ED settings. It was stopped early for futility in immunocompromised patients and failed to show benefits in mortality or intubation rates. It also used NIV in situations where this would not follow UK guidance and patients were excluded if they had a “do not intubate” order.
- 2.4.4. A recent meta-analysis, conducted in 2023 and published in 2024, (<https://doi.org/10.1136/bmjresp-2024-002342>) of 63 studies (26 RCTs, 13 cross-over and 24 observational studies) with 10230 participants found no significant difference in mortality (risk ratio, RR 1.08, 95% CI 0.93 to 1.26; p=0.29; 17 studies, n=5887) between HFNO and COT for all causes of acute respiratory failure. However, compared with COT, HFNO significantly reduced the overall need for escalation to intubation and ventilation (RR 0.85, 95% CI 0.76 to 0.95 p=0.003; 39 studies, n=8932); and overall need for escalation to NIV (RR 0.70, 95% CI 0.50 to 0.98; p=0.04; 16 studies, n=3076). Again, there is therefore no evidence to support HFNO use outside of critical care or in patients who are not for intubation and mandatory ventilation.
- 2.5. Withdrawal of HFNO is (in contrast to withdrawal of NIV for type 2 respiratory failure) extremely distressing and uncomfortable for patients and causes significant distress to relatives and staff also.
- 2.6. A British Thoracic Society (BTS) clinical statement on HFNO has been commissioned and is expected to be published in 2026.
- 2.7. Until such time as there is new evidence or if the BTS statement differs surprisingly from the conclusions of the available evidence, there is no role for the use of HFNO outside of a critical care unit and in patients who are deemed suitable for intubation and mechanical ventilation.
- 2.8. Since there is no evidence of benefit in using HFNO outside of critical care/intensive care and even this limited evidence of benefit only relates to avoiding intubation, HFNO is not suitable for use outside of areas where intubation can be rapidly achieved (i.e. the critical care unit).
- 2.9. HFNO should therefore never be started out of hours in patients who are not deemed suitable for transfer to critical care and for intubation and should only be started by the critical care team with an available critical care bed.
- 2.10. There may be rare exceptions for patients with chronic respiratory disease and reversible exacerbations: these are rare and require expert respiratory specialist assessment: HFNO may therefore ONLY be used on Wellington ward with the

express agreement of the responsible respiratory consultant following discussion and review within working hours (currently 08.45 to 16.30 Monday to Friday; 08.00-14.00 Saturday, Sunday and bank holidays).

- 2.11. Patients who are sufficiently unstable for there to be concern that treatment must be started out of hours, who are not felt suitable for admission to critical care and/or intubation and ventilation, will not benefit from HFNO and should be supported with maximal oxygen therapy and early palliative intervention should be considered.
- 2.12. To facilitate access to critical care for all patients, Wellington can take patients from critical care who require only single organ respiratory support. This may include patients treated with HFNO on critical care, who would not have been suitable for initial admission but who meet the following criteria:
- 2.12.1. Prescription completed (see appendix).
 - 2.12.2. Demonstrated improving trajectory and on $\leq 50\text{L}/60\%$.
 - 2.12.3. Clear treatment and escalation plan regarding re-admission to ICU; intubation and ceilings of HFNO support.
 - 2.12.4. Counselling of family and patient that if not for return to ICU, withdrawal of HFNO will be necessary if not improving or deteriorating.
 - 2.12.5. Transfer agreed with responsible respiratory consultant (therefore current discussion must be in routine working hours).

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Compliance with policy.
Lead	Rebecca Shuttleworth, Sister Wellington Ward. Matthew Berry, respiratory consultant.
Tool	Datix rates for patients attempted to be transferred or inappropriately transferred to Wellington for HFNO.
Frequency	Quarterly.
Reporting arrangements	Respiratory clinical governance. Specialist Medicine clinical governance.
Acting on recommendations and Lead(s)	Medical Director, Medicine.

Information Category	Detail of process and methodology for monitoring compliance
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within Quarterly review. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the [Equality Diversity And Inclusion Policy](#) or the [Equality and Diversity website](#).

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Use of High Flow Nasal Oxygen (HFNO) on Wellington Respiratory Support Unit (Formerly Higher Care/ D bay) Clinical Guideline V1.0
This document replaces (exact title of previous version):	New.
Date Issued/Approved:	August 2026.
Date Valid From:	August 2026.
Date Valid To:	August 2029.
Directorate/Department responsible (author/owner):	Matthew Berry, Respiratory Consultant. Meme Wijesinghe, Respiratory Consultant.
Contact details:	01872 253799.
Brief summary of contents:	Guideline for the use of HFNO (High flow nasal oxygen) in adult inpatients in Cornwall.
Suggested Keywords:	HFNO Oxygen High Flow.
Target Audience:	RCHT: Yes CFT: No CIOB ICB: No
Executive Director responsible for Policy:	Chief Medical Officer.
Approval route for consultation and ratification:	Respiratory Governance Meeting and Divisional Board Meeting.
Manager confirming approval processes:	Roz Davies.
Name of Governance Lead confirming consultation and ratification:	Natasha Andrews.
Links to key external standards:	None required.
Related Documents:	Linked in text.
Training Need Identified?	Yes. Staff using HFNO need to complete appropriate training via practice development leads.

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Information Category	Detailed Information
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet.
Document Library Folder/Sub Folder:	Clinical/Respiratory.

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
August 2026	V1.0	Initial issue	Matthew Berry, Respiratory Consultant. Meme Wijesinghe, Respiratory Consultant.

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust [The Policy on Policies \(Development and Management of Knowledge Procedural and Web Documents Policy\)](#). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Quality and Equality Impact Assessment (QEIA) Form

The QEIA process allows RCHT to monitor the impact of changes to its policies and services, ensuring that nobody is unduly disadvantaged.

Please ensure you have completed a Quality and Equality Impact Assessment (QEIA) using this link to complete the form:

[E11 QEIA Policy](#)

For guidance, please see the [QEIA Essentials – Quick Reference Guide](#) or contact as required below:

Equality, Diversity and Inclusion guidance, please contact: rcht.inclusion@nhs.net

Quality Governance guidance, please contact Jillian Tozer: jillian.tozer3@nhs.net

Appendix 3: HFNO prescription

Patient ID Label	Care Pathway Nasal High Flow Oxygen
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This document is intended for patients using NHFO outside ICU. It should be used in conjunction with NEWS2

Decision made by Intensive Care Consultant and Agreed by Respiratory Consultant	Name:	Sign:
Treatment Escalation Plan in Place:	Treatment discussed with patient:	
Care Plan Commencement	Date:	Time:
Nurse Initiating	Name:	Sign:
Indication		
Acute Hypoxemia (Normal Ph)		Respiratory Support in chronic lung disease
Ongoing hypoxemia SpO ₂ <92%		Weaning therapy from CPAP or NIV
Community-acquired pneumonia		Respiratory support post extubation and mechanical ventilation
Viral pneumonia		
Pulmonary embolism		Other, please state:
NHFO Prescription (To be completed by Medical Practitioner)		

If indicated, NHFO must be: initiated by a Respiratory Consultant or Intensive Care Consultant and set up, delivered and monitored by a competent registered care practitioner.			
Machine (Indicate):		V60 + / Airvo 2	Serial No:
Interface:		Nasal Cannula/ Tracheostomy	Size:
Starting flow rate L/min:			
Entrained oxygen %:			
Target SpO ₂ Range:		_____ % - _____ %	
Temperature: °C			
Parameters for escalation:		Max flow rate L/min:	Max oxygen %:
Sign:		Print name:	

Nursing checklist prior to commencing NHFO	
TEP completed.	
NHFO indication documented.	
Oxygen prescribed.	
Chest X Ray performed.	
Escalation parameters agreed.	
Patient information leaflet given to patient and/or relatives.	
Equipment safety checks undertaken.	
Monitored bed space.	
Problem solving	
Flow: Ensure correct cannula size. Check nasal cannula for kinks. Check tube placement and monitor for excess water collection. Ensure in Adult mode Oxygen: Check circuit. Check oxygen connections. Humidity: Check chamber placement. Replace sterile water.	
Guidance on weaning	
Patients should be weaned from NHF once their clinical condition improves as indicated by: Decreased work of breathing. Normal or improved respiratory rate. PaO₂ and Spo₂.	
Recommended parameters for weaning NHF are: Once Spo₂ are maintained within target range on FiO₂ 0.4 or below then commence wean of flow rate guided by work of breathing and respiratory rate.	

NHFO Care Plan 0 - 6 Hours.

Record Observations every 30 minutes for 2 hours then every hour for 4 hours.

Every 2 hours thereafter.

In event of significant change- and /or alteration of treatment resume care plan 0-6 hours until patient clinically stable.

NHFO Care Plan after 6 hours.

Record observations every 2 hours whilst patient clinically stable.

In event of significant change- and /or alteration of treatment resume care plan 0-6 hours until patient clinically stable.

All clinical observations must also be recorded on e-obs.

Escalate high NEWS in line with current trust policy.

Awaiting FRG review

**NHFO
Record**

Date:											
Time:											
O ₂ %											
Flow rate L/min:											
Temp:											
SpO ₂ %											
RR											
HR											
AVPU											
pH											
PaCO ₂											
PO ₂											
HCO ₃											
Changes											

Initials												
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NHFO Record												
Date:												
Time:												
O ₂ %												
Flow rate L/min:												
Temp:												
SpO ₂ %												
RR												
HR												
AVPU												
pH												
PaCO ₂												
PO ₂												
HCO ₃												
Changes												
Initials												

Awaiting FRG review

NHFO Record												
Date:												
Time:												
O ₂ %												
Flow rate L/min:												
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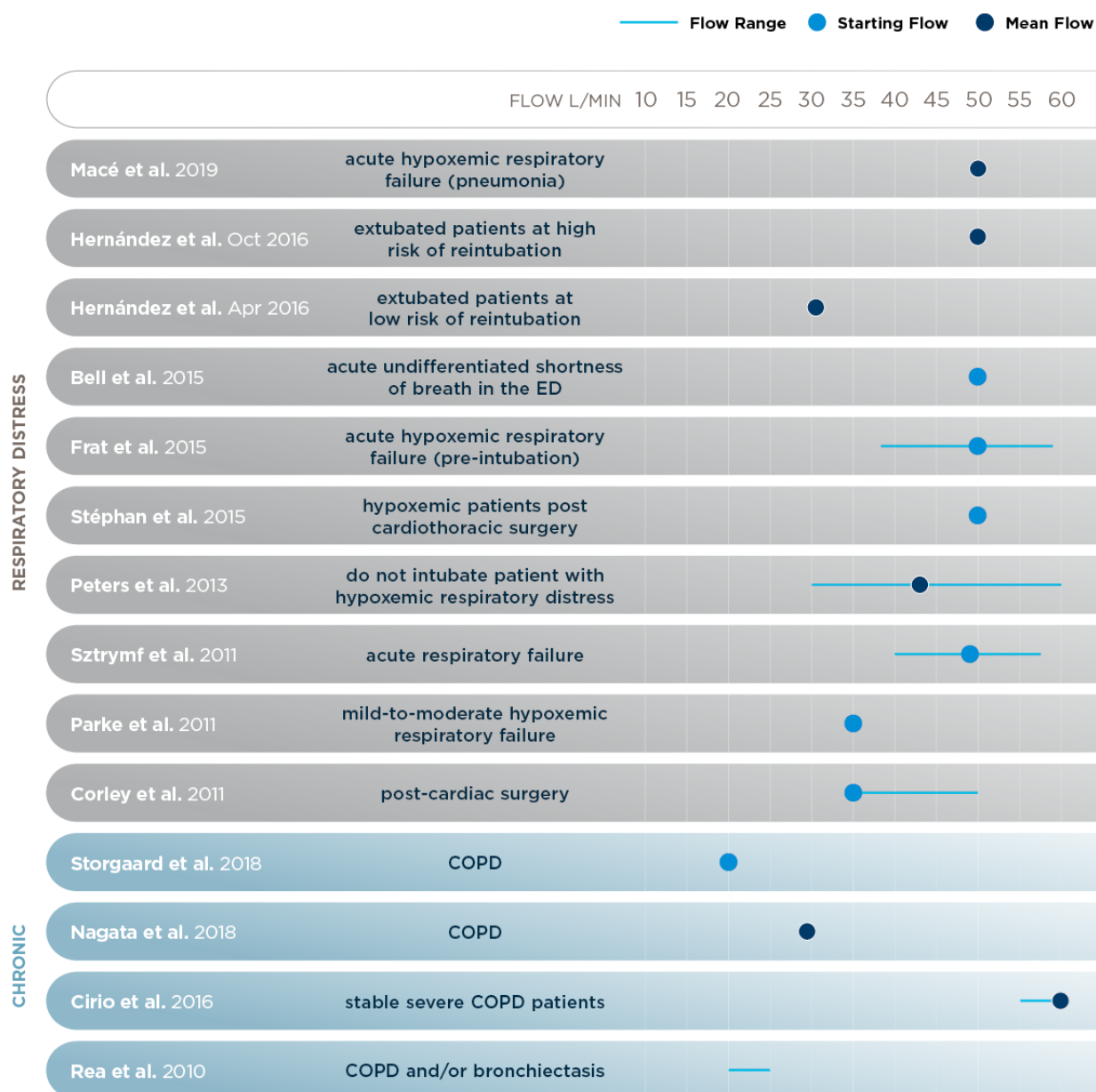
PaCO ₂											
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Changes											
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NHFO Record											
Date:											
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Flow rate L/min:											
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AVPU											
pH											
PaCO ₂											
PO ₂											
HCO ₃											
Changes											
Initials											

Awaiting FRG review

Guidance on flow rates and range.

This is a guide¹ only. Therapy should be guided clinical status.



¹ Guide taken from Fisher & Paykel typical flow rates for Nasal High Flow use
https://www.fphcare.com/en-gb/hospital/adult-respiratory/optiflow/frequently-asked-questions/#q_flowrates