

NHS Lothian

COVID Zone

Doctors in Training

Welcome + Induction Pack



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Lots of excellent resources and useful information on the **NHS Lothian Medical Education site, COVID zone:** www.med.scot.nhs.uk

Online learning sessions “Re-skilling for COVID” are happening frequently, via Zoom. Links to the sessions are via the Medical Education website. <https://www.med.scot.nhs.uk/resources/covid-19>

Also, **COVID speed read** : Daily updates via **NHS Lothian intranet**

In addition, **NES** have produced a range of great resources to support you:

<https://learn.nes.nhs.scot/27993/coronavirus-covid-19>

Team and Ward Orientation

There will be senior clinicians present on the wards every day, until H@N handover.

The senior team will be a combination of consultants + registrars, from Respiratory, Acute/General Medicine and other specialties.

Their role is to lead the team and make important decisions about treatment and escalation of therapy.

In addition, they are there to support you and clarify any uncertainties you might have.

You are an important part of the team + your contribution is welcome and valued.

COVID Zone is a dynamic environment; the exact wards serving as COVID Assessment and COVID positive wards are changing in response to clinical requirement.

All members of the COVID team, on each site, at every grade, must be flexible and prepared to move wards, as required. This might be on a daily basis.

Morning and night **handovers** remain essential to safe practice.

COVID Zone Details

(subject to rapid change on all sites)

RIE	<ul style="list-style-type: none"> • Wards 207/208 alternating daily as COVID Assessment Unit • Wards 209 / 220 COVID positive wards + expanding laterally on level 2 • RIE COVID Zone Cons Phone: 07814117548
WGH	<ul style="list-style-type: none"> • W74/75 (top floor) ID • W72/73 (middle floor) Resp with GM contribution to receiving • W70/71 (ground floor) Haem/Onc • Acute receiving will return to MAU (trolleys) as a 'red/COVID' zone and SAU 'green /non COVID' zone. Surgical assessment (non COVID) will go through DOSA in AFB.
SJH	<ul style="list-style-type: none"> • Wards in SJH are designated red (COVID+/ suspected COVID+) and blue (non-COVID). • Medical HDU is located within the Medical Admissions unit and is the area in SJH where non-invasive ventilation (NIV) is delivered. • You will be assigned a base ward and will be part of a team consisting of a lead consultant and other medical trainees, who will be responsible for all patients on that ward.

Please ring the Reg / Consultant in charge if they are not present on the ward when you first arrive. It is likely that they will start the day in COVID unit meetings before they come to the wards. These are essential to update on staffing / patient numbers / policy updates etc. That means that WRs might not start as early as they would normally do.

The charge nurse + other team members will be delighted to welcome you in the meantime.

There will be daily ward rounds (mixture of cons-led and junior-led with cons back-up).

There may be a **combination of teams in charge** of patients in COVID zone.

These teams will likely include Respiratory / Acute + General Medicine / Infectious Diseases / Medicine of the Elderly.

You should join their ward rounds whenever possible

- Please remember that we are here to look after people with acute illnesses, many of which will be due to COVID-19.
- A calm, standardised, structured approach to their assessment and management is the key to patient and clinician safety.

Patients with COVID-19 are at particular risk of:

- **Thromboembolic events – VTE Prophylaxis is essential**
- **Diabetic emergencies** – See Diabetes UK guidance via MED site:
www.med.scot.nhs.uk/resources/covid-19#resources-and-guidelines

Some of these patients will be terminally unwell.

Please refer to the detailed guidance for **End of Life Care**, via:

NHSL intranet ⇒ COVID-19 ⇒ Patient Management

Ward Round and IDL Trak Templates

New Trak WR + IDL templates have been created to enhance documentation + prompt good decision-making.

Some examples of their content are below e.g. \resprev \respiewr \rrieidl \dailycovidwr

Ask your seniors about which menu to use for W/Rs on your unit

Suspected COVID-19 Ward Round Ward round lead:	
Diagnosis: 1.	
COVID-19 Status: 1. POS/NEG/UNK	
Clinical exam: NEWS score:	
Plan: 1.	
Destination if COVID-19 negative: VTE prophylaxis?: IVF/PVC required?: Antibiotics required?: **Anticipatory Care Plan: see separate document** Resuscitation status: Escalation plan: Name/grade of ACP maker: Is NOK aware of ACP?: **In the event of deterioration** 1st tier response: FY1 bleep ##### 2nd tier response: Medical SpR bleep 4110/ Resp SpR bleep 2832 3rd tier response: 2222 and Medical Consultant on-call ITU SpR: bleep 2306	

Trak menu: \resprev	
Respiratory RIE Oncall Review Reviewing Clinician + Grade: COVID-19 VTS Status: If COVID-19, eventual stepdown to: If suspected/confirmed COVID, Date of onset of symptoms: Is patient for repeat COVID-19 VTS swab if first is negative? Escalation Status: Is ward-level NIV appropriate? Patient / carer(s) aware of escalation decision yet? ACP completed?	
Resp Background Baseline Ex.Tol / Function: FEV1: Usual Cons: Co-morbidities	
Acute Symptoms Examination	
Investigations	
Impression	
Plan: Is patient accepted to Resp Med? If for Resp Med, which Consultant? Nebulisers rationalised? Target SpO2: Contacts – Resp Med Oncall Reg Page 2832 // COVID Zone Reg Page 2822 // Ward Reg 2826 RNS Mobile: 07970158283	

Trak menu \respiewr	
Respiratory RIE Inpatient Ward Round Reviewing Clinician + Grade: Inpatient Day: COVID-19 VTS Status: Is patient for repeat COVID-19 VTS swab if current swab is negative? If COVID-19, Day of Illness: Escalation Status: Is ward-level NIV appropriate? Patient / carer(s) aware of escalation decision yet? ACP completed?	
Active Issues: New Investigations Examination	
Plan Target SpO2: Nebulisers rationalised? Is patient for repeat COVID-19 VTS swab if current swab is negative? Outstanding Ix: EDD: Planned Resp Follow Up Contacts – Resp Med Oncall Reg Page 2832 // COVID Zone Reg Page 2822 // Ward Reg 2826 RNS Mobile: 07970158283	

\rrieidl	
PRINCIPAL DIAGNOSIS / PROCEDURE	
COVID-19 VTS RESULT: ISOLATION ADVICE GIVEN:	
CHANGES TO DRUGS SINCE ADMISSION	
REQUESTS FOR GP	
OUTSTANDING INVESTIGATIONS / PLANNED FOLLOW-UP	
ESCALATION PLAN (at time of discharge) SpO2 at time of discharge	
ALLERGIES / ADVERSE DRUG REACTIONS	
BRIEF INPATIENT SUMMARY	
Yours sincerely..... Designation.....	
This is an immediate discharge letter and a further letter may follow.	

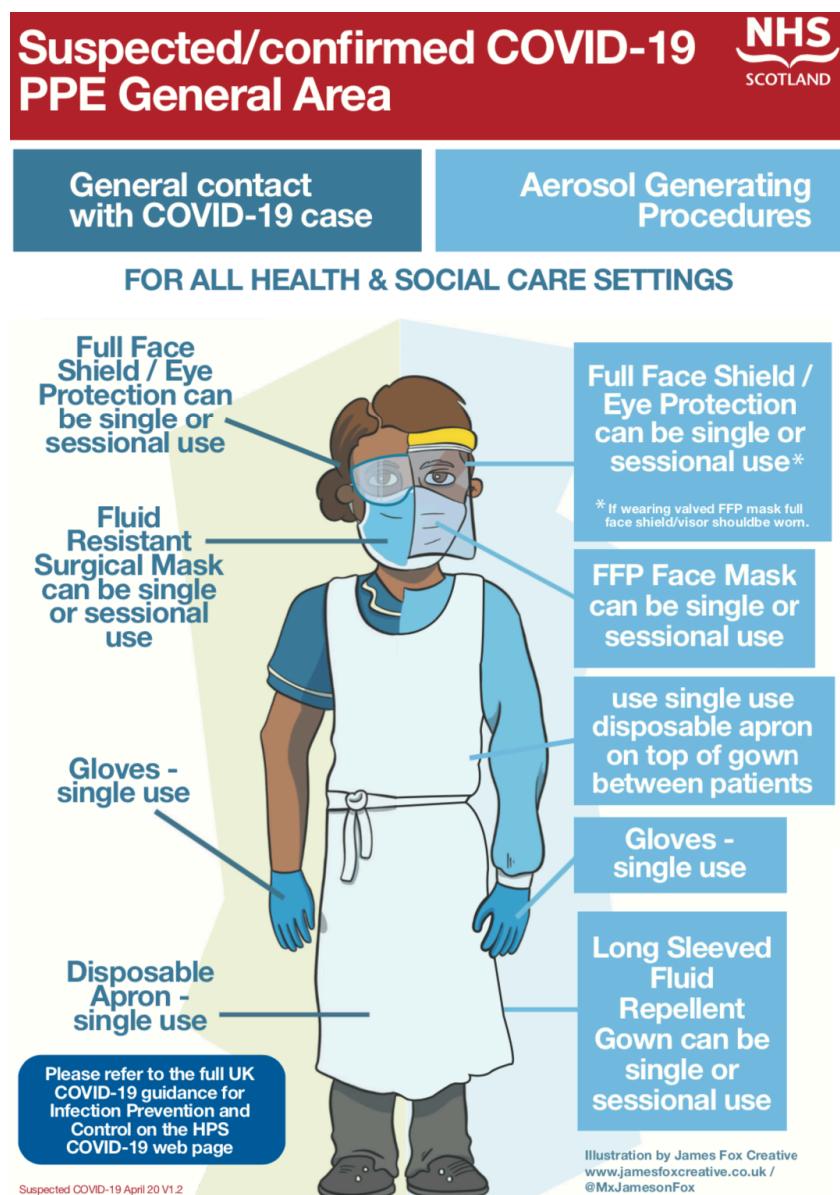
Update on PPE advice from Health Protection Scotland/England

(For all patient interactions during COVID-19 pandemic)

The following link takes you to the full pdf file on what type of PPE to use and when:

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control>

In short, for all ward-based (non-AGP) patient interactions, standard PPE is required: surgical mask, apron, gloves + eye protection if coughing / bodily fluids



Nebulisers are NOT considered to be AGPs by HPS/PHE

In keeping with good practice, we recommend:

- Reviewing bronchodilator requirements (at least once daily)
- Switching to Inhaled Salbutamol via Spacer whenever possible (100mcg, 4 puffs QDS)

Recommended PPE for healthcare workers by secondary care inpatient clinical setting, NHS and independent sector

Setting	Context	Disposable Gloves	Disposable Plastic Apron	Disposable fluid-resistant gown	Surgical mask	Fluid-resistant (Type IIR) surgical mask	Filtering face piece respirator	Eye/face protection ¹
Acute hospital inpatient and emergency departments, mental health, learning disability, autism, dental and maternity settings	Performing a single aerosol generating procedure ² on a possible or confirmed case ³ in any setting outside a higher risk acute care area ⁴	✓ single use ⁵	✗	✓ single use ⁵	✗	✗	✓ single use ⁵	✓ single use ⁵
	Working in a higher risk acute care area ⁴ with possible or confirmed case(s) ³	✓ single use ⁵	✓ single use ⁵	✓ sessional use ⁶	✗	✗	✓ sessional use ⁶	✓ sessional use ⁶
	Working in an inpatient, maternity, radiology area with possible or confirmed case(s) ³ – direct patient care (within 2 metres)	✓ single use ⁵	✓ single use ⁵	✗	✗	✓ sessional use ⁶	✗	✓ sessional use ⁶
	Working in an inpatient area with possible or confirmed case(s) ³ (not within 2 metres)	✗	✗	✗	✗	✓ sessional use ⁶	✗	✓ risk assess sessional use ^{6,7}
	Working in an emergency department/acute assessment area with possible or confirmed case(s) ³ – direct patient care (within 2 metres)	✓ single use ⁵	✓ single use ⁵	✗	✗	✓ sessional use ⁶	✗	✓ sessional use ⁵
	All individuals transferring possible or confirmed case(s) ³ (within 2 metres)	✓ single use ⁵	✓ single use ⁵	✗	✗	✓ single or sessional use ^{6,8}	✗	✓ risk assess single or sessional use ^{6,7}
	Operating theatre with possible or confirmed case(s) ³ – no AGPs ⁹	✓ single use ⁵	✓ single use ⁵	✓ risk assess single use ^{5,7}	✗	✓ single or sessional use ^{6,8}	✗	✓ single or sessional use ^{5,6}
	Labour ward/area – 2nd/3rd stage labour vaginal delivery (no AGPs ⁹) – possible or confirmed case ³	✓ single use ⁵	✓ single use ⁵	✓ single use ²	✗	✓ single or sessional use ^{6,8}	✗	✓ single or sessional use ^{5,6}
	Inpatient care to any individual in the extremely vulnerable group undergoing shielding ¹⁰	✓ single use ⁵	✓ single use ⁵	✗	✓ single use ⁵	✗	✗	✗

Aerosol-Generating Procedures (AGPs)

(Other than NIV, you are unlikely to encounter these on your wards)

- Intubation, extubation and related procedures;
- Tracheotomy/tracheostomy procedures;
- Manual ventilation;
- Open suctioning;
- Bronchoscopy;
- Non-invasive ventilation (NIV) e.g. Bi-level Positive Airway Pressure (BiPAP) and Continuous Positive Airway Pressure ventilation (CPAP);
- Surgery and post-mortem procedures in which high-speed devices are used;
- High-frequency oscillating ventilation (HFOV);
- High-flow Nasal Oxygen (HFNO)
- Induction of sputum (see glossary);
- Some dental procedures (e.g. high speed drilling).

Escalation Decisions

Escalation decisions should always be made by a **senior clinician**.

These will be based upon the person's functional status, co-morbidities and severity of current illness

This should happen on admission using the new Lothian **Anticipatory Care Plan (ACP)**. Paper and Trak versions are pictured below:

- Your role is to prompt the senior decision maker, while on WRs
 - DNACPR status should be documented - form kept at front of patient's folder
 - Ensure DNACPR forms are countersigned by senior doctor as soon as possible
 - Death certification – cause of death must be discussed with consultant prior to completion (**COVID-19 Deaths do NOT need to be discussed with PF**)

Recognising the Deteriorating Patient

- A-E Approach (see below)
- NHS Lothian uses the NEWS 2 observation form
- There is a protocol on the form for escalation of patients with high NEWS
- The nursing staff will inform you if a patient's NEWS score has significantly changed or is causing concern
- There will be a Board in the ward doctors' room with patient details

Systematic Assessment



Airway + Oxygen

CALL FOR HELP

SIMPLE AIRWAY MANOEUVRES– head tilt and chin lift

→ GIVE HIGH FLOW OXYGEN



Breathing

RESPIRATORY RATE

OXYGEN SATURATIONS (SP02)

LISTEN TO THE CHEST- is there air entry throughout, added noises?

→ TAKE AN ABG



Circulation

PERFUSION- Warm peripheries? What is the capillary refill time? (normal<2 seconds)

PULSE- Weak or bounding? What is the rate?

BLOOD PRESSURE

→ OBTAIN IV ACCESS + SEND BLOODS

→ CONSIDER FLUID BOLUS

Systematic Assessment



Disability

CHECK PUPILS- size and reactivity to light
GCS OR AVPU
TEMPERATURE
DON'T EVER FORGET GLUCOSE- Treat if BM <4
→CHECK THE KARDEX



Exposure and Environment

CHECK FOR RASHES, BLEEDING..
CHECK THE NEWS CHART & NOTES
THINK ABOUT URINE OUTPUT- Do they need to be catheterised, watch FB
→CONSIDER FURTHER INVESTIGATIONS- CXR, ECG, FULL SEPTIC SCREEN

(A-E Image Courtesy of Dr Emma Scahill, Clinical Teaching Fellow NSHL)

Initial Investigations for Deteriorating Patient

1. FBC, U+E's, LFT's, CRP, **Glucose** (+/- Blood Cultures)
2. ABG - document FiO₂ at time this is taken
3. CXR – for suspected/confirmed patients with Covid-19, please highlight this on the request and bleep for a portable film. There is a delay of around 20 minutes before this is visible on PACS
4. ECG

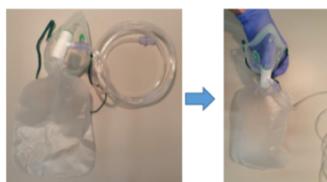
Caution with fluids in COVID-19.

- Only use fluid challenges if hypotensive e.g. 250/500mls

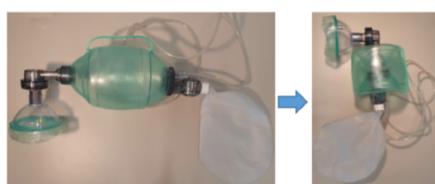
Aim for euvolaemia

Oxygen therapy

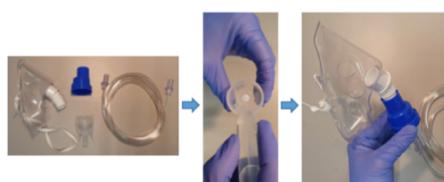
- Target SpO₂ in COVID Pneumonia = **92-96%** (most patients)
- Target SpO₂ in COVID Pneumonia = **86-90%** (if risk of T2RF e.g. severe COPD)



**Non-rebreather mask
(high-concentration reservoir mask)**
Indication: Critical illness and/or severe hypoxaemia
Flow rate: 15 L/min
O₂ conc: 60 – 90% (depending on mask fit & breathing pattern)
Make sure the reservoir bag is inflated before use.
If the patient needs less oxygen, switch masks, don't turn down the flow!



Bag-Valve Mask
Indication: Cardiorespiratory arrest or assisting ventilation in patients with inadequate respiratory rate/effort
Flow rate: 15 L/min
O₂ conc: ~ 90-95% (dependent on seal)
The valves on a BVM make it harder to breathe for patient with spontaneous respiration; if they have adequate respiratory effort – use a non-rebreather mask instead!



Nebuliser mask
Indication: Nebulised drug delivery (e.g. salbutamol in asthma)
Flow rate: 6-8 L/min
Add the drug into the bottom half of the 'acorn'
If the flow rate is too low, the drug won't vaporise; too high & the nebuliser pops apart or the tubing pops off the O₂ port!



Venturi mask
Indication: Controlled O₂ delivery - when you want to be sure of the concentration of oxygen delivered (e.g. COPD)

O ₂ concentration (%)	24	28	35	40	60
Minimum flow (L/min)	2	4	8	10	15

The concentration of O₂ delivered won't increase as you turn the flow rate up – change the venturi adapter and not just the flow!



Nasal Cannula
Indication: Low-medium oxygen concentration delivery
Flow rate: Usually 1-4 L/min
O₂ conc: Variable dependent on flow and patient's breathing pattern but ~24-40%

(Image Courtesy of University of Edinburgh MBChB Clinical Skills Team)

Conscious Proning

- This appears to be a good strategy to improve ventilation in COVID-19
- Consider using it for people with FiO₂ ≥ 0.28 , who can physically co-operate
- See further details on ward charts

(Additional notes are below this image)

Nasal Cannulae: Using standard nasal cannula NOT High Flow Nasal Oxygen

- Used for patients requiring low flow oxygen
- Between 0 and 4 litres can be delivered using this method
- Most patients prefer this type of administration as they can eat and drink whilst it is in place

Face mask with venturi:

- Used for patients who are oxygen sensitive (retaining CO₂) and therefore require accurate administration of oxygen
- Oxygen can be titrated in this group of patients by changing the mask and oxygen flow settings
- Coloured adapters are used to filter oxygen, using the appropriate flow rate for that colour:
 - Blue 2 litre = 24%
 - White 4 litre = 28%
 - Yellow 8 litre = 35%
 - Red 10 litre = 40%
 - Green 15 litre = 60%

Humidified oxygen:

- Used for flow rates of above 28% for long periods of time
- 98% oxygen can be delivered using this method
- Used to moisten the airways = loosens secretions

Non-rebreathe mask:

- Used in emergency situations to deliver high flow oxygen
- This mask has a large reservoir that fills while the patient is exhaling.
- Patient breathes in pure oxygen

Arterial Blood Gases

Who needs blood gases?

- Consider performing ABGs for All Sick Patients
- Hypoxia (based on cyanosis and/or oxygen saturations)
- Metabolic disturbance
 - Lactic acidosis
 - Diabetic Ketoacidosis
 - Sepsis
 - Acidosis in renal failure
 - Major electrolyte disturbance
 - Drug overdose
- Type 2 Respiratory Failure, of which hypoventilation is the main cause, due to:
 - Airways obstruction (common; COPD)
 - Respiratory muscle fatigue (common; pneumonia, asthma)
 - Respiratory depression (common; opiates)
 - Inadequate chest expansion (uncommon; neuromuscular disease)
 - Decreased lung compliance (uncommon; pulmonary oedema)

Lungs cannot “blow off” CO₂ so retain and convert to H⁺

Normal blood gas values (Room Air)

- H^+ 36-44 nmol/l
- PO_2 12-15 kPa
- PCO_2 4.4-6.1 kPa
- HCO_3 21-27.5 mmol/l
- BE +2 to -2 mmol/l



Respiratory Failure (Room Air - FiO2 0.21)

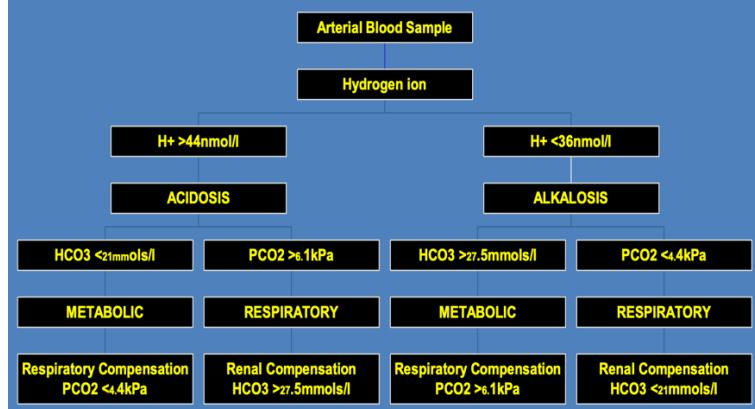
Type 1

- $pO_2 < 8$
- $pCO_2 < 6$

Type 2

- $pO_2 < 8$
- $pCO_2 > 6$

ABG interpretation



Non Invasive Ventilation



Your role is to recognise when a person is unwell, perform the ABG, recognise decompensated Type 2 Resp Failure + escalate to the Resp Reg.

NB discussion with the Respiratory Registrar or Consultant on-call is required when making a decision to commence NIV

The Respiratory Senior Nursing Team will set it all up, once the decision is made to commence NIV.

NIV - Which Patients

- COPD with exacerbation
- Cardiogenic pulmonary oedema, unresponsive to CPAP
- Chest wall deformity, neuromuscular disorders
- Obesity hypoventilation/obstructive sleep apnoea
- NOT pneumonia

NIV - When to do it

- Respiratory acidosis ($\text{PaCO}_2 > 6.0 \text{ kPa}$, $\text{pH} < 7.35$ or $\text{H}^+ > 45 \text{ nmol/l}$) despite maximal medical treatment and appropriate controlled oxygen therapy
- Sick but not moribund
- Able to protect airway
- Conscious and cooperative
- Haemodynamically stable

NIV - How to do it

NIV is an Aerosol Generating Procedure and FFP3 PPE should be used. Depending on patient numbers at any one time, these cases may be cohorted into one room.

- Mode Spontaneous/timed
 - EPAP 4–5 cm H₂O
 - IPAP 12–15 cm H₂O (to be increased as tolerated to 20 cm H₂O)
 - Back up rate 15 breaths/min Back up I:E ratio 1:3
- Clinical evaluation
 - patient comfort, conscious level, chest wall motion, accessory muscle recruitment, coordination of respiratory effort with the ventilator, respiratory rate, and heart rate.
- Arterial blood gas analysis
 - after 1–2 hours of NIV and after 4–6 hours if the earlier sample showed little improvement.
- Oxygen saturation
 - monitored continuously for at least 24 hours after commencing NIV and supplementary oxygen administered to maintain saturations between 85% and 90%

NIV- treatment failure – Trouble shooting

- Is the treatment of the underlying condition optimal?
- Have any complications developed?
 - Consider a pneumothorax, aspiration pneumonia, etc
 - Is the patient on too much oxygen? (common cause of elevated Paco₂ in COPD)
- Is there excessive leakage?
- Is ventilation inadequate?
- If Paco₂ improves but Pao₂ remains low, try increasing FiO₂ cautiously
- Consider increasing EPAP (with bi-level pressure support)

Top Tips for Common Respiratory Conditions

Disease	Pneumonia
Target SpO2	92-96% (provided RR<24)
Common Drug Rx	<ul style="list-style-type: none"> See "Does my patient need Antibiotics?" - below LMWH prophylaxis throughout admission
Other Inpatient Stuff	<ul style="list-style-type: none"> Review Antibiotics at 48-72 hrs e.g. IVOS
Ready for Discharge?	<ul style="list-style-type: none"> Afebrile on oral antibiotics x 24 hours Mobilising freely + feeling ready for home
Follow Up?	<ul style="list-style-type: none"> Only CXR at 8 weeks if dense/lobar consolidation (req. on D/C) Copy IDL to named Resp Cons for CXR FU. (D/W Resp if unsure)

Does my patient need Antibiotics? (Suspected/Confirmed COVID Pneumonia)

Most patients do not require antibiotics	CURB65		
<p>CRP can be raised in COVID-19 infection and does not always indicate a bacterial infection. Raised CRP may be associated with severity. If in doubt ask a senior team member for advice. Many patients have a prolonged fever with COVID-19.</p>	<p>1 point for each of the following prognostic features:</p> <ul style="list-style-type: none"> Confusion: abbreviated Mental Test score 8 or less, or new disorientation in person, place or time Urea: >7 mmol/L Respiratory rate: 30 breaths per minute or more Blood pressure: diastolic 60 mmHg or less, or systolic less than 90 mmHg 65 years of age or more 		
Factors that reduce the likelihood of bacterial infection	Factors that increase the likelihood of bacterial superinfection		
<p>CXR – bilateral consolidation/ground glass change Bloods – lymphopenia without neutrophilia CRP <100 Symptoms – drug cough, clear sputum Length of symptoms <10 days</p> 	<p>CXR – unilateral consolidation Bloods – neutrophilia CRP >100 Symptoms – purulent sputum Length of symptoms ≥10 days</p> 		
Hold off antibiotics	Consider antibiotics		
<p>Reconsider if patient deteriorates, COVID-19 testing is negative, or patient develops:</p> <ul style="list-style-type: none"> a neutrophilia or purulent sputum <p>Send repeat microbiological investigations (blood cultures, repeat COVID-19 testing, sputum culture) and assess for an alternative source of infection.</p>	<ul style="list-style-type: none"> Use CURB65 and prescribe as per MicroGuide Use IV therapy when oral route not available or if CURB 3–5 Review all antibiotics @48–72 hours with microbiology investigations Stop antibiotic treatment after 5 days unless microbiological results suggest a longer course is needed or the person is not clinically stable 		
CURB 0-1	CURB 2	CURB 3-5	CURB 3-5 FRAIL ELDERLY
<p>Investigations: VTS</p> <p>Antibiotic recommendations: Amoxicillin 500mg every 8 hours orally Penicillin allergy Doxycycline 200mg on first day then 100mg daily orally</p> <p>Review drug interactions (Ca/Mg and doxy/cipro) and QTc prolongation (clari/cipro)</p>	<p>Investigations: VTS, blood cultures, sputum culture.</p> <p>Antibiotic recommendations: Amoxicillin 500mg orally or 1g IV every 8 hours orally Penicillin allergy Doxycycline 200mg on first day then 100mg daily orally</p>	<p>Investigations: VTS, blood cultures, sputum culture. If no sputum send urine for Legionella antigen.</p> <p>Antibiotic recommendations: Co-amoxiclav 1.2g every 8 hours IV PLUS Clarithromycin 500mg every 12 hours IV Penicillin allergy Vancomycin IV PLUS Ciprofloxacin 400mg every 12 hours IV</p> <p>IVOST: Co-amoxiclav 625mg every 8 hours orally. Review MicroGuide for need for ongoing clarithromycin Penicillin allergy Doxycycline 200mg on first day, then 100mg</p>	<p>Investigations: VTS, blood cultures, sputum culture</p> <p>Antibiotic recommendations: Amoxicillin 1g every 8 hours IV PLUS Gentamicin IV Penicillin allergy Vancomycin IV PLUS Gentamicin IV</p> <p>IVOST: Amoxicillin 500mg 8 hours orally Penicillin allergy Doxycycline 200mg on first day, then 100mg</p>



**STOP
AFTER 5
DAYS**

Source: Dr Anna Lithgow, consultant physician at RIE and Dr Morgan Evans, consultant physician at WGH.

Top Tips for Common Respiratory Conditions (cont.)

Disease	COPD (Exacerbation)
Usual Target SpO2	86-90% (provided RR<24) [sometimes even lower – see Resp notes]
Common Drug Rx	<ul style="list-style-type: none"> Amoxicillin or Doxycycline x 5 days Prednisolone 40mg x 5 days + stop (wean if recurrent) Salbutamol nebs (via air) x 24-48hrs + stop (if no home nebs) LMWH prophylaxis throughout admission
Other Inpatient Stuff	<ul style="list-style-type: none"> Complex patients will have Trak alerts Sputum cultures guide antibiotics (don't change if improving) Nicotine-replacement (see Lothian Formulary Section 4.10) Smoking cessation ref: smokefreerie@nhslothian.scot.nhs.uk Inhaler review (RNS)
Ready for Discharge?	<ul style="list-style-type: none"> Off nebs overnight (if no home nebs) + feels ready for home Expedite D/C with Community Resp Teams (via RNS)
Follow Up?	<ul style="list-style-type: none"> Most patients do NOT require clinic F/U Only COPD Clinic F/U if recurrent exac/needs image/LTOT Assess. Copy IDL to site Resp team if they need F/U

Disease	Asthma (Exacerbation)
Usual Target SpO2	92-96% (provided RR<24)
Common Drug Rx	<ul style="list-style-type: none"> Prednisolone 40mg x 5 days + stop (wean if recurrent) Salbutamol nebs x 24-48hrs + stop LMWH prophylaxis throughout admission
Other Inpatient Stuff	<ul style="list-style-type: none"> Nicotine-replacement (see Lothian Formulary Section 4.10) Smoking cessation ref: smokefreerie@nhslothian.scot.nhs.uk Inhaler review (RNS) Most are viral but sputum cultures guide antibiotics
Ready for Discharge?	<ul style="list-style-type: none"> Off nebs overnight Mobilising freely + feeling ready for home
Follow Up?	<ul style="list-style-type: none"> Most patients do NOT require clinic F/U Only Asthma Clinic F/U if severe/recurrent exac./needs imaging Copy IDL to site Resp team if they need F/U

Top Tips for Common Respiratory Conditions (cont.)

Disease	Bronchiectasis
Target SpO2	92-96% (provided RR<24) [sometimes lower – see Resp notes]
Common Drug Rx	<ul style="list-style-type: none"> • See Resp Trak notes for antibiotic plans + contact RNS if needed • Nebulised antibiotics (usually continue from community) • Salbutamol nebs commonly used throughout exacerbation • LMWH prophylaxis throughout admission
Other Inpatient Stuff	<ul style="list-style-type: none"> • Look at Bronchiectasis clinic review notes for micro/Abs etc • Sputum cultures guide antibiotics (don't change if improving) • Nicotine-replacement (see Lothian Formulary Section 4.10) • Smoking cessation ref: smokefreerie@nhslothian.scot.nhs.uk
Ready for Discharge?	<ul style="list-style-type: none"> • Completed IV Antibiotic course • Feels ready for home
Follow Up?	<ul style="list-style-type: none"> • Most have pre-existing F/U at Bronchiectasis clinic • Copy IDL to site Resp team if F/U not already in place

Disease	Interstitial Lung Disease
Target SpO2	86-90% (provided RR<24) [sometimes lower – see Resp notes]
Common Drug Rx	<ul style="list-style-type: none"> • Amoxicillin or Doxycycline x 5 days • Consider steroids (Resp will do this) • LMWH prophylaxis throughout admission
Other Inpatient Stuff	<ul style="list-style-type: none"> • Look at ILD clinic review notes for classification / treatments • Early palliative care input if deteriorating • Nicotine-replacement (see Lothian Formulary Section 4.10) • Smoking cessation ref: smokefreerie@nhslothian.scot.nhs.uk
Ready for Discharge?	<ul style="list-style-type: none"> • Off O2 x 24hours (if no LTOT) • Feels ready for home
Follow Up?	<ul style="list-style-type: none"> • Most have pre-existing F/U at ILD clinic • Copy IDL to site Resp team if F/U not already in place

Top Tips for Common Respiratory Conditions (cont.)

Disease	Pulmonary Embolism
Target SpO2	92-96% (provided RR<24)
Common Drug Rx	<ul style="list-style-type: none"> • Apixaban 10mg BD x 1 week, then 5mg BD • LMWH if suspected / confirmed cancer
Other Inpatient Stuff	<ul style="list-style-type: none"> • Screen for malignancy by Hx/Ex +/- imaging/scopes • Dipstick for blood+protein / Breast exam • Nicotine-replacement (see Lothian Formulary Section 4.10) • Smoking cessation ref: smokefreerie@nhslothian.scot.nhs.uk
Ready for Discharge?	<ul style="list-style-type: none"> • Feels ready for home + any pain is controlled • Anti-coagulation counselling (pharmacists / docs)
Follow Up?	<ul style="list-style-type: none"> • 3-month F/U at RIE PE Clinic (Echo prior to F/U if RHS on CTPA) • Copy IDL to site Resp team for 3/12 review

If in doubt, ask!



We look forward to working with you