Leeds Covid-19 Recovery Follow-up in Primary Care

1. Post-COVID patient presents to GP with ongoing symptoms

Stratification of patients presenting might include:

- High risk of complications - intensive care unit admissions/ventilated patients
- Medium risk of complications - hospital ward admissions
- Low risk of complications - ED / community patients

2. GP consultation: history and examination. Investigations in primary care, as required based on symptoms – Management of post-acute covid-19 in primary care https://dx.doi.org/10.1136/bmj.m3026
Symptom Specific Recommended Management-see below

3. GP supports self-management of common symptoms
Provides the LTHT Leeds Health Pathway COVID-19 patient Rehabilitation Booklet http://flipbooks.leedsth.nhs.uk/LN004864.pdf
and direct to the **NHSE Post Covid-19 Online Support Tool:**
www.yourcovidrecovery.nhs.uk

4. Symptoms improve

5. Care remains in primary care.

6. Symptoms do not improve - Patient has any ongoing symptoms that do not resolve with self-management, or falls into any of the categories below to refer to **SPUR** using referral form. SPUR will triage and send to appropriate service, including those below. GP can also discuss referrals directly with SPUR or with **Post Covid-19 Pathway Coordinator**

7. Community Respiratory Team for post covid assessment if:

- Patient has underlying respiratory condition
- Non-improving or worsening breathlessness
- Patient requires short/long term ambulatory oxygen
- Patient experiencing disproportionate shortness of breath or breathing patterns (often in association with anxiety and in the younger population)

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8. Community-based therapy for: Holistic Assessment of need, symptoms severely impacting on life or not improving with time and self-management advice including:

- Mobility
- Self-care for daily activities
- Ongoing post viral fatigue
- Swallowing problems
- Voice change
- Weight loss/appetite persistently low

9. Leeds Mental Wellbeing Service

If patient experiencing Anxiety, depression, OCD, PTSD

10. Community Respiratory team for oxygen desaturation monitoring if:

- Ongoing shortness of breath that is limiting daily activities (that they didn't experience pre COVID-19).
- GP If the patient has progressive, deteriorating breathlessness
- These results, along with Ix results from primary care, are then reviewed with remote input from LTHT Respiratory team/ MDT if needed and advice given on any further investigations required or need to be seen in secondary care
- For further advice contact Community Respiratory Team (Mon-Fri 8.30-16.30)
  0113 8434200

Symptoms Improve?

Yes

No

11. Patient discharged with guidance for ongoing self-management

12. Referral to Virtual Covid Rehab MDT
If symptoms not improving within community services, the case is complex or there are needs spanning multiple domains, **community teams refer to Virtual COVID Rehab MDT for discussion and advice.**

Symptom Specific Recommended Management

Post Covid Symptom	Considerations specific to COVID-19	Initial investigations to consider as part of clinical assessment	When to deviate from the pathway: Red Flags
Fatigue	• Very common post COVID • Consider impact of fatigue on role – e.g. caregiving, vocation, time off work and phased return. • Self-management advice in the LTHT Leeds Health Pathway COVID- 19 patient rehabilitation booklet http://flipbooks.leedsth.nhs.uk/LN004864.pdf • Direct patient to NHSE/I www.yourcovidrecovery.nhs.uk • Reassure that with time and self-management fatigue usually improves gradually • If no improvement after 3 months, worsening of symptoms or impacting significantly on life, refer to Community Based Services via SPUR	• Consider if blood tests are indicated in light of PMHx and clinical assessment. May include: • FBC, Fe, B12 and Folic Acid , renal function, TFTs, vitamin D • O2 sats • Assess and monitor fatigue using the Modified Fatigue Impact Scale https://www.sralab.org/sites/default/files/2017-06/mfis.pdf (cognitive and physical domains should be scored separately).	
Anxiety, depression and PTSD	• Common feature post COVID • Consider if fatigue/ pain/ sleep disturbance/ cognition is also contributing or co-occurring. Online support:	• Consider a screening tools PHQ9 for depression or GAD7 for anxiety • Quality of life questionnaire - Work & Social Adjustment Scale (WSAS) • PTSD more likely in context of premorbid trauma	• Suicidal ideation or immediate risk of harm to self or others refer to Mental health crisis team

	https://www.leedscommunityhealthcare.nhs.uk/our-services-a-z/leeds-mental-wellbeing-service/covid-19-support/ https://www.mindwell-leeds.org.uk/home/information-on-coronavirus • PTSD especially in ITU survivors – ask about intrusive thoughts, flashbacks, nightmares, avoiding reminders of the event/illness. Also excessive/ obsessional cleaning/ checking, fear of going out. • Concerns re PTSD and/ or other mental health issues not improving refer to Leeds Mental Wellbeing Service. In context of significant fatigue and/ or cognitive issues neuropsychological input will be required. Other resources: https://www.bps.org.uk/coronavirus-resources; https://www.mind.org.uk/information-support/coronavirus/	• Mood impeding recovery/ causing protracted symptoms where physical examinations are normal. • Complex presentation i.e. contribution of several factors/ lack of progress despite physical recovery/ difficulties completing ADLs or work. Consider referral to CMHT or Leeds Mental Wellbeing Service • Systemic distress/ carer strain contributing to reactive distress/ relationship breakdown/ loss of support. Refer to Leeds Mental Wellbeing Service	• Neurocognitive problems in the presence of a new or pre-existing neurological diagnosis; refer to Community Neurological Rehab Team

Breathlessness	• Very common post COVID • Exertional breathlessness often persists for many weeks. Usual pattern is a gradual recovery. • Review at 3 months post Covid if not improving. • Unexplained crackles on auscultation refer for CXR. Depending on the results of this a HRCT scan may also be indicated. • Consider increased risk of VTE / PE post-COVID	**CXR**. If abnormal, repeat at 6 weeks if symptomatic, or 12 weeks if symptoms have resolved. • Bloods: FBC, U&E, LFT, Ca^{2+}, TFT, BNP • Consider sputum sample if productive cough • ECG • O2 sats • Consider referral to Community Respiratory Service for oxygen desaturation monitoring if indicated (as per box 10 above) via SPUR.	• Acute onset (<48 hours) /severe sob O2<93% (if new for the patient) Bradycardia <60bpm Tachycardia >100bpm RR > 30 breaths/minute Refer PCAL for exclusion of Acute Pathology inc. PE. • Myocardial ischaemia (chest pain) • Syncope/postural dizziness • Heart failure • Shock (hypotension)
Cough	• Cough is a common symptom. • Dry cough likely to be post-viral and self-limiting though can persist for weeks as airways remain hyper-sensitive.	• Consider sputum sample if productive cough • Treat with antibiotics according to current guidelines. If no improvement after 6 weeks request CXR • Follow the Leeds Cough Pathway https://71633548c5390f9d8a76-11ea5efadf29c8f7bdcc6a216b02560a.ssl.cf3.rackcdn.com/content/uploads/2020/09/Copy-of-GP-guidance-Chronic-Breathlessness-and-Cough-Assessment.pdf	• Haemoptysis • Unintentional weight loss night sweats • and/or a strong smoking history • urgent 2 week referral is appropriate

Pleuritic chest pain	• Flitting chest pains 6-8 weeks post COVID not unusual and do not signify PE in absence of other typical clinical features. Oxygen saturation normal: PLUS normal chest x-ray: • Consider non-respiratory causes (e.g. infection or inflammation elsewhere). PLUS chest x-ray abnormal/showing consolidation: • Symptoms may be explained by pneumonia and assess and treat appropriately	• Bloods: FBC, CRP • CXR • O2 sats	• Acute hypoxia, O2<93% (if new for the patient • Acute severe breathlessness, • Tachycardia >100bpm
Palpitations / tachycardia	• Palpitations are common. Up to 30% at 3 months • Tachycardia may be driven by infection • If symptoms persist with no clear cause or if associated with Red Flags, Refer via usual pathways	• Blood tests (including thyroid function) • Erect and supine BP • ECG	• Syncope, • Myocardial ischaemia • Complete heart block
Anosmia	• Very common-up to 50% • 9 out of 10 patients significant improvement within four weeks • Reassurance, Olfactory training and safety advice http://www.entuk.org/loss-smell-video-interview-professor-claire-hopkins http://www.Fifthsense.org.uk http://www.abscent.org • Reassess	• Associated nasal symptoms • Neurological symptoms • ENT referral if anosmia >3 months.	• Anosmia>6 weeks with additional neurological symptoms-MRI recommended

Abnormal liver function (mild rise in liver transaminases)	• Mild abnormalities in ALT <3xULN will be common post Covid-19. • Approximately 25-30% of tested population in Leeds have abnormal ALT. • Check any past LFTs. • Check alcohol history • Stop any NSAIDS. Do not introduce statins at this stage. • If abnormalities are mild, statins could be continued in diabetic patients	• ALT <x3ULN and new: Monitor monthly. It should normalise. Investigate at 3 months if not • ALT >x3ULN and new: Monitor again 2-4 weeks. Investigate at 1 month if not normalised or reducing. • Address any history of excess alcohol, optimise diabetic control, introduce exercise as possible. • Isolated raised bilirubin: Request conjugated/unconjugated bilirubin split. • Isolated raised ALP: Optimise vitamin D levels, Consider Ultrasound scan (to check biliary tract) with Doppler (to check vascular supply); Check BNP as cardiac impairment may give this picture	• Jaundice not attributable to Gilberts syndrome or not in isolation. • Acute liver injury ALT>10xULN • Start investigations immediately and refer for specialist opinion
Reduction in kidney function following an episode of Acute kidney injury (reduced eGFR from pre-COVID baseline)	• Observed in small proportion of recovering patients • Assess for improvement or worsening of eGFR over one year • Consider referral if progressive fall in eGFR or increasing ACR	• BP • Dip urine for blood and protein • Urinary Protein/Creatinine ratio • Monitor renal function 2 monthly • Review medication	• Urinary Protein/Creatinine ratio > 50 • Haematuria • Sustained fall in eGFR > 5ml/min/month • eGFR<30ml/min (new for patient)

Resources:

BMJ paper on managing long term Covid
https://dx.doi.org/10.1136/bmj.m3026

Post-discharge and Rehabilitation needs in Survivors of Covid-19 Infection – Stephen Halpin et al
https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.26368

Management of post-acute covid-19 in primary care
https://doi.org/10.1136/bmj.m3026

Anosmia and loss of smell in the era of covid-19
https://doi.org/10.1136/bmj.m2808

LTHT Guidance for Abnormal Liver Function for Covid-19

Abnormal Liver Function for Covid-19

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