

The Respiratory Team

Welcome to the respiratory team!

Registrar bleep 9431. FY/GPST bleep 9411.

Overview of the week

The FY/GPST is mostly based on the ward, you are expected to be on the ward round, at the radiology meeting and Respiratory grand round and are welcome to attend clinic when ward work allows.

Mon am: Ward round 09.00 - meet Dalhousie Office. Coffee break following ward round with charge nurse from ward.

Mon am: CF Clinic: Pre-clinic briefing at 11:30 in OPD9.

Mon pm: Respiratory Teaching in Sphere (Large Seminar Room) at 12:30-13:30 or on TEAMS

Mon pm: CF Clinic: 1330 with handover at 1630

Tues am: HDU Ward Round - commences 09.15 following Dalhousie handover at 09.00.

First and third Tuesday of the month 08:00-09:00 LTV meeting, in person or on Teams. Open to any member of the respiratory team.

Second Tuesday of every month: Bronchoscopy list, Crichton Ward.

Tues am (bar 5th Tuesday of the month): 09.00-12.30 LTV clinic. Again open to junior members of team and allied health professions. OPD9.

Tues pm Pre-Respiratory Clinic Briefing 1200-1300 in OPD 9

Tues 13:00-14:00 Hospital Grand Round, via Teams.

Tues pm 14:00: Respiratory Clinic, OPD9.

Tues pm: GP teaching.

Wed am: Ward round 09.00 – meet 09.00 Dalhousie Office.

Wed am: Scheduled spinal clinics every 2-3 weeks, 09.00-12.30.

Wed pm 13:00: Asthma Clinic- 30 minute briefing prior to clinic starting.

Wed pm: 14.00 Respiratory Consultant to attend Critical Care Grand Round

Remember to email radiology meeting request form by 16.30.

Thurs am: HDU Ward round 09.15 following Dalhousie handover at 09.00.

LTV annual reviews take place this morning (respiratory/HDU consultants pre-allocated).

Thurs 12:30-13:15: Medical radiology meeting, downstairs in radiology. Also, FY teaching 12:30-1:30.

Thurs 13:30 onwards: Respiratory Grand Round generally in 4th floor conference room and on Teams. Starts with Dalhousie patients and then discussion of HDU patients from 14.45.

Document short summary of discussion and clear plans for following week on Trak; also make a note of staff present at the Grand Round.

Update board with elective admissions for following week (see ward diary); Taylor to email details about sleep studies for following week.

CF Grand Round either at start or end of Grand Round.

Fri am: Ward round 09.00.

Friday 09.30: General Respiratory Clinic (Dave Armstrong; registrar not rota'd in, educational opportunity)

Friday pm: Prepare and send Cystic Fibrosis Clinic Preparation Sheet

Fri 14:00-16:00: Registrar teaching

Daily Tasks: Action and sign off results on TRAK, including workbench.

Introduction

Respiratory patients are complex and can be quite daunting to some trainees, so our aim is to support you as much as possible, whilst ensuring that you get enough of a flavour to learn the basics of respiratory paediatrics.

We don't expect juniors to make decisions (often we don't make them either!), but it is really helpful if when asked you can review a patient, make a basic medical assessment and gather the info needed to decide if something needs done immediately or can wait until the next ward round. Please don't think twice to bleep us if we are in clinic and you need some help.

If you have any questions that come up through the day the Consultant of the week won't mind being contacted, and all consultants carry bleeps (details below).

Routine Jobs for the FY/GPST

We ask the FY/GPST to take responsibility for a few important things that are incredibly helpful if they are done routinely:

- 1) **Document during ward round and grand round:** For the ward round you can use the \mpwrdr ensuring information copied from previous ward round entries are up to date (esp investigations and medications). For grand round there isn't currently a short code but ensure there is documentation of those in attendance, a summary of issues discussed and a clear plan. Before the team move on to discussing the next patient ensure to clarify the plan with everyone as this is not always clear.
- 2) **Culture Updates:** Up to date microbiology results should be added to the handover, in particular, in preparation for Thursday's Grand Round – with date sample taken.
- 3) **Plotting Growth Charts:** Inpatient measurements need to be plotted once a week. We *TRY* to remember to measure OFC every Monday and weights should be measured.
- 4) **HEPMA:** Ensure weight on HEPMA is accurate when prescribing. Make sure antibiotics have stop dates / reflux medicines optimised for weight etc.
- 5) **Elective Patients:** Dalhousie has a diary held by the clerkess, which contains the details of all elective patients booked. If patients come in during the day, it is the FY/GPST's responsibility to do a quick clerking and ensure they have HEPMA completed- these patients often come in around 16.00. Often patients come in the evening for sleep studies etc, and need to be handed over to evening team for quick clerking.
- 6) **Updating Handover sheet on shared drive:** Ideally this should be done in conjunction with the registrar covering the ward if possible. Add the sleep study patients who are coming that day to the bottom of the sheet so that people know who to expect in the evening.
- 7) **16:30 handover:** Complete TRAK SBAR handover and verbally hand over patients with tasks to be completed / to be aware of.
- 8) **Discharges:** As far as respiratory discharges go, usually the GPST/FY does the IDL (can use the \IDL) and then the complicated ones of these are reviewed and added to by registrars. For CF discharges, do the IDL as per the proforma (\CFDIS)
- 9) **Follow-up Appointments:** As you do the IDL it is useful if you can just make sure with the ward clerkess that a follow-up appointment (if required) has been made. This just ensures that no appointments are missed. Otherwise, respiratory secretaries are great re arranging

follow-up (RespiratorySecretaries@nhslothian.scot.nhs.uk). If you are organising a planned admission as follow-up then you need to fill in the [admissions proforma](#) and enter the patient details in the diary. PIU follow-up is done by opening a new correspondence and using \paedspiu and filling in the proforma then emailing it as per instruction on the form.

- 10) Organising Bronchoscopies:** You may be asked to book a bronchoscopy for a patient. Here are the steps to do so: a) Check with the respiratory consultants, who will be able to do it and when. b) Book child on CEPOD (bleep 9260 at theatre reception for theatre co-ordinator) and provide details of scope required (usually XP260 2.9mm or P260 4mm) and provide name and contact details of doctor performing bronchoscopy. c) Discuss with anaesthetist for bronchoscopy date. d) Inform respiratory secretaries of the date/time of admission via email or in the office and ask them to inform the parents. Patients are now often admitted to SAU pre-scope, so update SAU if this is the case, and they contact parents with fasting instructions etc.
- 11) Organising home IVs.** There is a document on this in the shared drive in the folder entitled 'resp stuff'. [LINK](#) for this. If you have any questions Emilie Tennant (ward pharmacist) is really helpful with this.
- 12) WorkBench on Trak:** Please ensure on your first day with us to set up your workbench for the respiratory patients. Sign off results whenever you chase results or you have a spare minute – all results are chased through workbench, so it's important results are not missed. Some results may be from patients that you do not know. Please find out who saw them and write a short email to them. You can always ask us for advice. For a handy guide to how to take, order and interpret respiratory swabs see Appendix 1 at the end of this document.
WorkBench Preferences Set-Up: Royal Hospital for Sick Children, Royal Hospital for Children and Young People; Result Status – Final, Corrected, Entered; Date from offset - t-10; Date to offset – t; tick Emergency, Inpatient and Outpatient boxes; Specialty – Respiratory PXAR non triaged, Paediatric Respiratory Physiology, Respiratory Medicine, Sleep Medicine
- 13) Organising Sleep Studies;** These involve filling in the sleep study request form (in the office) and taking them to Taylor's desk in the second floor clinical office or through to Kildrummy to discuss directly with the physiologists. I would follow this up with an email to Taylor if there is urgency with the timing of the sleep study request.
- 14) Referrals to physiotherapists on the ward:** ideally refer directly to physiotherapists on the team, with an SBAR handover (bleep 9163).
- 15) Organising booster immunisations.** Sometimes children will have a sub-optimal response to a vaccine and a booster needs to be organised. There is a form to fill in on this [webpage](#) and then emailed to the appropriate team.

Hope this little introduction helps. Most importantly please feel part of our team and remember that we DO value your help massively!

Clinics: general information

Cystic Fibrosis Clinic

CF clinic is a consultant led multi-disciplinary clinic. Patients are given an hour-long appointment and allocated to a single room in clinic where they will be reviewed by the doctor, CF CNS, physiotherapist and dietician individually. Most children over the age of 4 years will have spirometry

carried out in their clinic room by the respiratory physiologist. The clinic is planned carefully around infection control. Children with known pathogens of concern are highlighted and reviewed at the end of clinic, in rooms that are in a separate area of OPD.

At the end of the appointment the clinic room surfaces and any clinic room equipment must be cleaned using detergent wipes by the last professional to see the patient.

The consultant of the week (COW) will lead the pre-clinic meeting at 11.30am each Monday with a handover prepared the previous week (this is a word document, pre-populated by the admin team then finished by the registrars).

At the end of CF clinic we try to have a quick multi-disciplinary handover of the main points. The CF CNS requires all heights, weights and lung function to complete CF Registry data entry. Please also ensure required follow up is detailed in the clinic letter or discussed with CF CNS.

CF Annual Reviews are carried out on Tuesday and Wednesday mornings in OPD 9 and Dirleton. We see a maximum of 2 patients per day. The initial findings and plan from the annual review are discussed the following Monday at the CF pre-clinic meeting. Preparation for the following week's annual reviews is presented at the same meeting by the cow from the previous week.

Useful information for CF clinic:

Cystic Fibrosis Trust Standards of Care (<https://www.cysticfibrosis.org.uk/sites/default/files/2020-12/Cystic%20Fibrosis%20Trust%20Standards%20of%20care.pdf>)

US Cystic Fibrosis Foundation and European Cystic Fibrosis Society consensus recommendations for the management of non-tuberculous mycobacteria in individuals with cystic fibrosis
(<https://pubmed.ncbi.nlm.nih.gov/26666259/>)

Royal Brompton Hospital Guidelines

(https://www.rbht.nhs.uk/sites/nhs/files/Cystic%20fibrosis%20guidelines/CF%20G%202020/CF%20guideline%202020%20FINAL_edited.pdf)

SPCFMCN prescribing guidelines 2015.pdf ([https://scottish-](https://scottish-my.sharepoint.com/personal/amanda_mcgrath_nhsllothian_scot_nhs_uk/_layouts/15/onedrive.aspx?id=%2Fpersonal%2Famanda%5Fmcgrath%5Fnhsllothian%5Fscot%5Fnhs%5Fuk%2FDocuments%2FAttachments%2FSPCFMCN%20prescribing%20guidelines%202015%2Epdf&parent=%2Fpersonal%2Famanda%5Fmcgrath%5Fnhsllothian%5Fscot%5Fnhs%5Fuk%2FDocuments%2FAttachments&ga=1)

[my.sharepoint.com/personal/amanda_mcgrath_nhsllothian_scot_nhs_uk/_layouts/15/onedrive.aspx?id=%2Fpersonal%2Famanda%5Fmcgrath%5Fnhsllothian%5Fscot%5Fnhs%5Fuk%2FDocuments%2FAttachments%2FSPCFMCN%20prescribing%20guidelines%202015%2Epdf&parent=%2Fpersonal%2Famanda%5Fmcgrath%5Fnhsllothian%5Fscot%5Fnhs%5Fuk%2FDocuments%2FAttachments&ga=1](https://scottish-my.sharepoint.com/personal/amanda_mcgrath_nhsllothian_scot_nhs_uk/_layouts/15/onedrive.aspx?id=%2Fpersonal%2Famanda%5Fmcgrath%5Fnhsllothian%5Fscot%5Fnhs%5Fuk%2FDocuments%2FAttachments%2FSPCFMCN%20prescribing%20guidelines%202015%2Epdf&parent=%2Fpersonal%2Famanda%5Fmcgrath%5Fnhsllothian%5Fscot%5Fnhs%5Fuk%2FDocuments%2FAttachments&ga=1))

General respiratory clinic

Patients are shared amongst the consultants but some are better known to certain clinicians. If there are any cases not suitable for trainees to see, we will let you know. Patients tend to be allocated beforehand to clinicians. There will be mainly face to face consultations and the occasional telephone call.

Please feel free to use the clinic for training opportunities. Discuss at the time or afterwards if there is any uncertainty or concern. If any specialised investigations are required e.g. sleep study or bronchoscopy, discuss with the consultant about how to organise these.

Asthma clinic

The asthma clinic tries to run as a specialised tertiary clinic for severe and difficult to treat disease. Almost all patients with asthma either attend this clinic or are managed in primary care. Patients should therefore be discharged once a diagnosis has been reached and they are stable on a low level of treatment. Always consider discharge in your plan.

Please seek advice prior to seeing patients if there is anything unclear on TRAK. Ann and Julie are experts in managing asthma and know the patients well. Any queries about inhalers, spacers, side effects, monitoring etc. can be answered by them or the consultants. Social and psychological aspects of asthma are very important to be aware of. Please discuss these issues with the rest of the team.

Our management is based on the most recent BTS/SIGN asthma guideline (<https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/>). Make yourself familiar with the diagnosis and basic treatment sections.

We aim to perform spirometry in all patients who are able at each appointment. This might involve coming to the department prior to the appointment. Some patients with more variable conditions have home spirometers. Fraction of exhaled nitric oxide (FeNO) is also used in those where symptoms are more difficult to control (whether due to adherence or severe disease). Skin prick testing is useful in those who have an unclear diagnosis or trigger pattern. It is not a routine test. Chest x-ray is usually only performed where asthma is a less likely diagnosis based on the clinical assessment. In pre-school children, we are less ready to use the term asthma as in many the symptoms resolve. The terms 'episodic viral wheeze' and 'multi-trigger wheeze' are preferred. A premature diagnosis of asthma doesn't change the immediate treatment, but can be a hard label to reverse. It may also result in unnecessary treatment for prolonged periods.

Paediatric Community Respiratory Service (Physiotherapy)

Service lead: Zoe Johnstone, non-medical prescriber

PCRT provides a community respiratory service for children and young people across NHS Lothian (excluding West Lothian) who have recurrent respiratory infections and a high risk of admission, or CYP with respiratory muscle weakness. The caseload is largely CYP with severe learning and multiple disabilities; other neurodisability; genetic disorders; neuromuscular weakness; and recurrent LRTI requiring antibiotics and admission.

The service operates Monday-Friday 09:00-17:00 and provides:

- Weekly, monthly or quarterly respiratory reviews dependent on risk. Visits are at home, respite care or in school.
- Rapid response same day or next working day if there is concern about increased respiratory symptoms or early signs of clinical change.
- Early supported discharge from hospital and to reduce the risk of readmission within 48 hours
- Exercise counselling following an initial exercise assessment
- Training for carers and school staff in respiratory care

The community physiotherapy team provide a specialist respiratory assessment and take bacterial and viral swabs if required; swab results appear on the workbench and will be checked and followed up by the physiotherapy team. Not all of the team are non-medical prescribers and they will contact the Respiratory Reg when it is thought a prescription is indicated by clinical presentation and swab result.

Patients can be referred from the physiotherapy service, schools and the MDT via the generic PCRT email (loth.physiopcrtrhcyp@nhslothian.scot.nhs.uk, or search for physiopcrt in the address book).

Other outpatient clinic opportunities

Outlying CF clinics (St Johns Hospital, Forth Valley, Fife and Borders) – Liaise with CF team for info

Narcolepsy: Dr Urquhart

Congenital lung MDT: Dr Macleod, once a month via Teams

Neuromuscular/Duchenne: Dr McDougall

Nurse Led Asthma Clinics: discuss with Ann and Julie

The Respiratory Team

Secretarial staff; Clare Gamble (CF, ext. 50454), Taylor Gilchrist (physiology, ext. 51124), Ryan McKendrick (Spinal/LTV, ext. 50454), Lauren Cameron (general respiratory)

Consultants; Steve Cunningham, Don Urquhart (bleep 9036), Manjith Narayanan, Catherine McDougall (Resp/PICU bleep 9150), Kenny Macleod (bleep 9112), Stefan Unger (bleep 9327), Florian Gahleitner (bleep 9188), Dave Armstrong (HDU/resp Bleep 9024).

Specialist Nurses; Wellchild LTV specialist nurses: Laurie Jack and Adele Davie (bleep 9308), Asthma specialist nurses: Ann McMurray and Julie Westwood (ext. 50437, bleep 9323), CF specialist nurses: Amanda McGrath, Jenny Marwick and Lisa Russell (and Heather Dowle, on ML) - mobile 07903969606, bleep 9176.

Physiotherapists; Inpatients: Bleep 9163 or 9021. Andrea Wood, Zoe Johnstone (IP and PCRT), Zenny Farooq, Carolyn Aitken-Arbuckle, Rachel Anderson (rotational) and Orla Corrigan (rotational).

PCRT: Zoe Johnstone, Kirstin Unger and Rachel Anderson (rotational).

Dieticians; CF Dieticians: Alison Coates, Mike Mclean, Maja Chelminska (ext. 51076). Respiratory ward referrals: Mobile no 07814802974.

Respiratory physiology and sleep staff; Emma Carruthers, Laura Hill (sleep), Laura Jess (Respiratory Physiology), Kellie Moffat (Respiratory Physiology), Jody Forster (respiratory physiology), Sarah Blacklock (respiratory physiology), Kirsty Thompson (respiratory physiology).

APPENDIX 1: INDICATIONS FOR RESPIRATORY SWABS, AND HOW TO TAKE AND INTERPRET THEM

Types of swabs/specimens

All swabs and viral medium can be found in A&E, outpatients or Dalhousie Ward.

Bacterial swabs

When: Bacterial swabs are used when you think a patient has a chest infection that could potentially be treated with an antibiotic.

What to use: Use swabs with liquid medium at the bottom, they can be charcoal or clear blue swabs. DO NOT use “dry” swabs.

Viral swabs

When: Viral swabs are used if you suspect the patient has a viral illness such as a cold or the flu. If in doubt use both viral and bacterial swabs.

What to use: Use a “dry” swab and once taken snap off the swab from the handle so it can fit in the viral medium (tube of red/pink liquid).

Sputum samples/traps

Sputum samples: Use if the patient is able to co-ordinate coughing and expectorating into the specimen pots.

Sputum traps: Use with the suction machine. Attach the white end to the suction tubing and the suction catheter into the green end.

When to swab:

ALL Respiratory in-patients should have samples sent Monday and Thursday AND on the day of admission and discharge.

If the patient is showing signs of a chest infection:

- Change to breathing pattern
- Increased secretions
- Temperature changes
- Increased cough
- More agitated/drowsy

Procedure

Cough swab: when the patient can cough spontaneously or produce a cough on demand.

Throat swab: a sweep around the back of the patient's throat if they can't do the above.

Nasal swab: can be performed for viral detection in children that tolerate it, sweep inside the child's nose in a circular motion

For best results, try to perform chest physiotherapy (whatever their normal is prior to obtaining the swab). To obtain a cough swab, DO NOT touch the inside of the mouth. If contact is made then process / label as a throat swab.

Once you have taken the swabs complete the following procedure:

- Click on the Clinical Menu Tab and the subheading 'Order'.

For Bacterial Swabs:

- On the right hand side of the screen there is a box labelled 'order item'. Type in '**bact**' and select **C&S- Respiratory (Routine Bacteriology)** from the drop down menu.
- Select '**secretions tracheal**' (if it is a cough swab) or '**sputum**' (if it is from suction or self expectorated sample) from the specimen type list and '**lung**' from body part. '**Nasal swab**' should be selected if a nasal swab was obtained for viral screening. '**Nasal sinus lavage**' should be selected for nasal rinse samples. Then select 'update'
- **Never** select nasopharyngeal secretions even if the sample was obtained via NP suction as it will not be processed.

For Viral Swabs:

- As for bacterial swabs, complete Step 1
- For Step 2, type in '**Resp Virus**' and select "**Resp Virus (inc. COVID test from 9 March 2020) – VTS (swab)**" from the drop down menu on the right side of the screen. In the clinical details section specify "full viral screen".

CF Swabs

The doctors may request specific samples for children with CF. If the child can expectorate lots of sputum then all four samples should be sent otherwise it should be discussed with medical staff what the samples should be sent for.

If a sample is produced at annual review it should be sent for **'NTM analysis'**.

Bacteriology

As above but either Sputum or 'CF Cough micro' or 'CF Throat Micro'.

Virology

As above

NTM (Non Tuberculosis Mycobacterium)

In the order item box- Type in **'Mycob'** and search. You should select **'Mycobacteria TB Ix- Respiratory (Routine)'**.

Another screen will appear after you click update then select **'Sputum Mycobact'** and location **'Lung'**.

Fungus/Suspected Aspergillus

In the order item box- Type in **'Mycol'** and search. Select **'Mycology FUNGI Ix- Respiratory (Routine)'**.

Another screen will appear after you click update then select **'Mycol, Sputum'** and location **'Lung'**.

For all samples for CF it is important to write 'CF IP cough swab/sample' for patients who are on the wards and 'CF OP' for clinics/outpatients in the **'Clinical History Section'**.

Common results

Commensals

This means normal bacteria that we all have in our throat and is nothing to worry about, I just document commensals only and tell the patients parent/carer that no treatment is required

Positive Viral results

These are not treatable by antibiotics and generally the patient can be looked after at home, unless they need oxygen support (i.e. increased WOB, decreased SaO₂) and are not coping, I usually recommend Calpol, extra fluids if renal capacity allows and continue with regular chest physio. If they're worried at all they should present at A&E. I would probably call the consultant anyway to make sure they are happy with this advice and that the child ok to be in school (in terms of cross-infection) etc.

Positive Bacterial results

If there is a positive result it will say what bacteria has grown and what antibiotic the bug is sensitive and resistant to when you look up the results. Check if this patient has had the bug before particularly MRSA and pseudomonas aeruginosa.

- It is likely a few days since you saw the patient so I tend to phone parents for an update of their symptoms. This is because they may not need treatment if they are improving.
- I usually inform parents that there are positive bacterial results that I will discuss with the consultant but before I do that it is helpful to know how the child is now and if there are any antibiotics they have had in the past that don't agree with them (or any allergies)
- Check if they are able to pick up a prescription from their GP, or from the RHCYP. (Some consultants prefer doing one or the other so better to know if parents are flexible or not).
- Call Registrar and give a summary of the bugs, discuss appropriate prescription and ask them to check the TRAK results if you are not sure.
- You may need to phone the child's G.P to actually write the prescription (can find G.P details on Trak or in notes).
- Can also now email GP to request prescription: 'Clinical.s.....@nhslothian.scot.nhs.uk' e.g number at start of GP address on TRAK e.g. 78241/1
- Confirm when and where the prescription will be ready, text or phone parents to let them know.

In case of any positive result (being treated or not) I would ask parents to contact us if the patient deteriorates, and then monitor/review as needed. Arrange to review and re-swab patients following a course of treatment.