

## The management of respiratory conditions presenting to the emergency department

To facilitate the correct management of patients presenting with respiratory conditions to the emergency department, management proforma and prescribing power-plans have been created on CRS for asthma, COPD and oxygen prescribing. Additional resources are also available on the intranet.

The processes have been created following review of various audits within the Trust and current Quality Improvement Initiatives (QIP) being undertaken by our colleagues in primary care.

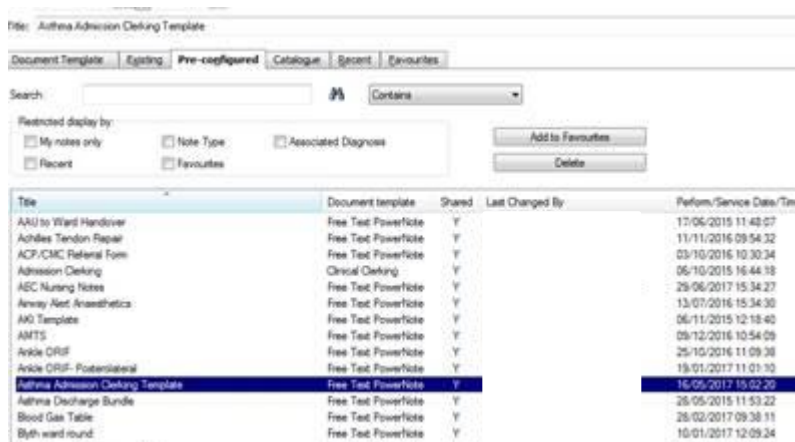
**It is essential all patients presenting with exacerbation of asthma are reviewed by their own GP within 48 hours of discharge; please record this in the discharge summary and ensure that the patient has been advised to contact their GP. In addition, it is essential that you record a post treatment PEFR.**

**Please also record a CURB-65 score in all patients presenting with chest infection in both the patient notes and in the GP discharge summary.**

### ASTHMA

To help with the clerking and management of patients with ASTHMA we have prepared an **ASTHMA prescribing power plan and an ASTHMA ADMISSION CLERKING TEMPLATE.**

- **ASTHMA ADMISSION CLERKING TEMPLATE** – This can be found in CRS preconfigured documents. This is essentially a clerking template with advice on how to assess and manage patients with asthma appropriately. Once completed, click ‘sign’ for the record to be saved in the patient’s notes.



Title	Document template	Shared	Last Changed By	Perform/Service Date/Time
AAU to Ward Handover	Free Text PowerNote	Y		17/06/2015 11:40:07
Achilles Tendon Repair	Free Text PowerNote	Y		11/11/2016 09:54:32
ACP/CRC Referral Form	Free Text PowerNote	Y		03/10/2016 10:30:34
Admission Clerking	Clinical Clerking	Y		06/10/2015 16:44:18
A&C Nursing Notes	Free Text PowerNote	Y		29/06/2017 15:34:27
Arway Net Anaesthetics	Free Text PowerNote	Y		13/07/2016 15:34:30
AKO Template	Free Text PowerNote	Y		06/11/2015 12:18:40
AMTS	Free Text PowerNote	Y		09/12/2016 10:54:09
Ankle CRIF	Free Text PowerNote	Y		25/10/2016 11:09:30
Ankle CRIF- Postlateral	Free Text PowerNote	Y		18/01/2017 11:01:10
<b>Asthma Admission Clerking Template</b>	<b>Free Text PowerNote</b>	<b>Y</b>		<b>16/05/2017 15:02:20</b>
Asthma Discharge Bundle	Free Text PowerNote	Y		28/05/2015 11:53:22
Blood Gas Table	Free Text PowerNote	Y		28/02/2017 09:38:11
Blyth ward round	Free Text PowerNote	Y		10/01/2017 12:09:24

Asthma Admission Clerking - X List

**Clerking**

<b>Peak flow (PEF)</b> - Best/ predicted .... - Admission....	<b>Oxygen saturations</b> - SpO2 ... Maintain sats 94-98%, measure ABG if SpO2 < 92% on RA or life-threatening features.
Admission pulse .... bpm	Admission heart rate ....bpm
Admission blood pressure .... mmHg	Admission RR .... bpm

<b>MODERATE ACUTE ASTHMA</b> <ul style="list-style-type: none"> <li>Increasing symptoms</li> <li>PEF &gt;50-75%</li> <li>No features of acute severe asthma</li> </ul>	<b>ACUTE SEVERE ASTHMA</b> Any one of: <ul style="list-style-type: none"> <li>PEF 33-50% best or predicted</li> <li>RR ≥25bpm</li> <li>HR ≥110bpm</li> <li>Inability to complete sentences in one breath</li> </ul>	<b>LIFE-THREATENING ASTHMA</b> In a pt with severe asthma and any one of: <ul style="list-style-type: none"> <li>PEF &lt; 33% best or predicted</li> <li>SpO2 &lt; 90%</li> <li>PaO2 &lt; 8kPa</li> <li>Silent chest</li> <li>Cyanosis</li> <li>Poor respiratory effort</li> <li>Arrhythmia</li> <li>Exhaustion</li> <li>Hypotension</li> <li>&lt; GCS</li> </ul>	<b>NEAR-FATAL ASTHMA</b> <ul style="list-style-type: none"> <li>Raised PaCO2 and/or requiring mechanical ventilation with raised inflation pressures.</li> </ul>
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Treatment - There is an **ASTHMA PRESCRIBING POWER PLAN** under the request section of CRS to help with prescribing for acute asthma

- Oxygen maintain sats between 94-98% (ABG's if SpO2 < 92% on RA or life-threatening features)

- **ASTHMA PRESCRIBING POWERPLAN** – available in CRS under requests, type ASTHMA into requests. This will show a list of all the commonly required investigations / medications and provide you with some tips and advice.

Folder: See

**Asthma**  
**Asthma \*\*INPATIENTS & ED\*\***  
Asthma F/I In

Component	Status	Details
<b>Asthma INPATIENTS (Planned Pending)</b>		
Laboratory		<input type="checkbox"/> Sputum MC&S <input type="checkbox"/> Full Blood Count (FBC) <input type="checkbox"/> Urea and Electrolytes (U&E) <input type="checkbox"/> Liver Function (LFT) <input type="checkbox"/> C-Reactive Protein Serum
Diagnostic Tests		<input type="checkbox"/> XR Chest
Medications		Please refer to the Asthma Admission Tool for more guidance on the emergency management of asthma (found in the pre-configured documentation section on CRS)
Oxygen Therapy		If SATS ≤ 92% also perform an ABG to check the PCO2 <input type="checkbox"/> Oxygen
Systemic Corticosteroids		Prescribe oral steroids in all patients able to swallow, otherwise use IV equivalent (should be given within <b>1 HOUR of admission</b> )
		<input type="checkbox"/> PrednisolONE Tablet mg - Oral - Daily every Morning <input type="checkbox"/> Hydrocortisone Infusion mg - intraVenous
Peak Flow (PEF)		<input type="checkbox"/> Record
		<ul style="list-style-type: none"> <li>Best or predicted peak flow</li> <li>Admission peak flow</li> <li>Pre and post bronchodilator peak flows</li> </ul>
Inhaled Beta-2 Agonists, Short-Acting		Use <b>HIGH-DOSE</b> inhaled β2-agonists as <b>FIRST LINE</b> agents and administer as soon as possible. Ensure that nebulised bronchodilators are also prescribed on the PRN side.
		<input type="checkbox"/> Salbutamol Select an order sentence Inhalation Nebuliser mg - Inhalation PRN for breathlessness/wheezing <input type="checkbox"/> Salbutamol

**Ipratropium Bromide**

- ⚙️ Add 4-6 hrlly to patients with **ACUTE SEVERE OR LIFE THREATENING** asthma or those with initial **POOR RESPONSE** to  $\beta$ 2 agonist therapy.
- Ipratropium Inhalation Nebuliser - DOSE: 500 microgram - Inhalation - every Four hours

**Magnesium Sulphate**

- ⚙️ Consider giving a **SINGLE** dose of IV **MAGNESIUM** to patients with **ACUTE SEVERE** asthma (**PEF < 50% best or predicted**) who have not had had a good initial response to inhaled bronchodilator therapy. Magnesium 1.2-2g over 20mins. **Escalate to a senior.**
- Magnesium sulphate (Magnesium sulphate 50% (2mmol in 1ml.) IV Injection) IN: 100 mL IN: Sodium chloride 0.9% g - intraVenous - once ONLY - INFUSE OVER: 20 minutes

**Antibiotic therapy**

- ⚙️ Routine prescription of antibiotics is not indicted for all patient with acute asthma. If concerns re infection please prescribe according to the hospitals antibiotic guidelines.

**Smoking Cessation Medications**

- ⚙️ Please prescribe **NRT** to **ALL smokers**. Counsel re-smoking cessation and refer to the smoking cessation service on discharge.
- Nicotine Replacement Therapy (NRT)

**Regular Inhalers**

- ⚙️ Please prescribe the patients **REGULAR INHALERS** and ask for them to be brought in from home. Assess and document inhaler technique. If they are not already on a regular steroid inhaler prior to admission, one should be started before discharge – please refer to the respiratory team.

- **ASTHMA – DISCHARGE BUNDLE** – again, this may be found in CRS under pre preconfigured documents. All patients being discharged with ASTHMA must have this completed and the patient provided with a copy before they leave the ED. This is in addition to the normal discharge documentation

**Asthma Discharge Checklist**

Date of Discharge: \_\_\_\_\_

Asthma medication (including wearing regime)	Name	Dose	Frequency	Duration

Satisfactory use of inhalers demonstrated and understood 

- Observe patient's taking inhalers - Y/N (use as assessed)
- If unsure on how to educate, speak to the ward link nurse or pharmacist

Peak flow reading 

- Predicted / baseline \_\_\_\_\_ ml/s
- Pre-discharge \_\_\_\_\_ ml/s

**ALL PATIENTS SEEN WITH AN EXACERBATION OF ASTHMA MUST BE REVIEWED BY THEIR GP WITHIN 48 HOURS OF DISCHARGE FROM THE ED.**

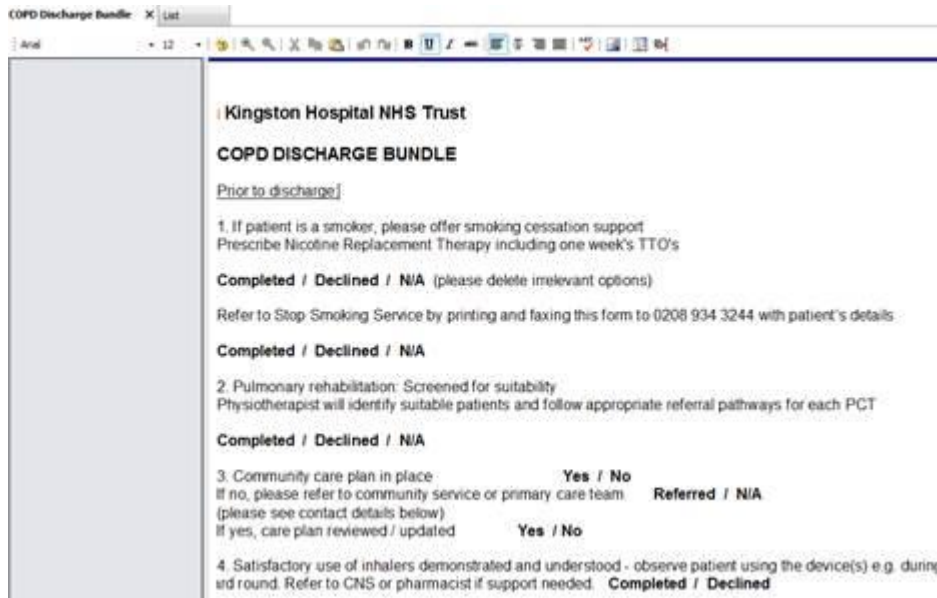
Please ensure that this is recorded on the discharge documentation from the ED and that the patient is aware of this.

## COPD

- To help with the clerking and management of patients with COPD, we have prepared a **COPD PRESCRIBING POWERPLAN** – this is available in CRS under requests, type COPD into requests. This will show a list of all the commonly required investigations / medications and provide you with some tips and advice.
- DON'T FORGET** all patients with COPD require an oxygen prescription with appropriate target saturations.

Component	Status	Details
<b>COPD ***INPATIENTS*** (Initiated Pending)</b>		
Lab		<b>COPD ***INPATIENTS*** (Initiated Pending)</b>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sputum Micro
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Full Blood Count (FBC)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Urea and Electrolytes (U&E)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Liver Function (LFT)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	C-Reactive Protein Serum
<b>Diagnostic Tests</b>		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	XR Chest
<b>Medications</b>		
Oxygen Therapy		
		If <b>SATS ≤ 92%</b> also perform an ABG to check the PCO2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen
Systemic Corticosteroids		
		Prescribe oral steroids in <b>ALL</b> patients able to swallow, otherwise use IV equivalent.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PrednisolONE Tablet mg - Oral - Daily every Morning Take with or after food.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hydrocortisone Infusion mg - intraVenous
Nebulisation Therapy		
		Use <b>inhaled β2-agonists</b> as first line agents and administer as soon as possible. Ensure that nebulised bronchodilators are also prescribed on the PRN side.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Salbutamol <b>Select an order sentence</b>
Ipratropium Bromide		
		Add <b>four to six hourly</b> . <b>STOP</b> patients <b>regular LAMA</b> whilst they are receiving a SAMA.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ipratropium Inhalation Nebuliser - DOSE: 500 microgram - Inhalation
Saline Nebulisers		
		Only use in patients coughing thick secretions they are unable to expectorate (some patient develop bronchospasm secondary to saline)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sodium chloride (Sodium chloride 0.9% Nebuliser Solution) <b>Select an order sentence</b>
Carbocisteine		
		For patients with a productive cough and having difficulty expectorating. Prescribe twice or three times a day.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Carbocisteine <b>Select an order sentence</b>
Antibiotic therapy		
		<b>Antibiotics should be prescribed when patients complain of 2 out of 3:</b> <ul style="list-style-type: none"> <li>• Change in colour of sputum</li> <li>• Increase in the amount of sputum</li> <li>• Increased shortness of breath.</li> </ul> <p>And / or have additional signs of an active infection. Please prescribe according to the hospital's antibiotic guidelines.</p>
Smoking Cessation Medications		
		Please prescribe <b>NRT</b> to <b>ALL smokers</b> . Counsel re-smoking cessation and refer to the smoking cessation service on discharge.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Nicotine Replacement Therapy (NRT)
Regular Inhalers		
		Please prescribe the patients <b>REGULAR INHALERS</b> and ask for them to be brought in from home. Assess and document inhaler technique. If they are <b>NOT ALREADY</b> on a regular inhaler prior to admission, the GP should be asked to prescribe one on discharge. All new inhaler prescriptions must be consultant approved.

- **COPD – DISCHARGE BUNDLE** – CRS - pre preconfigured documents, ALL COPD patients require you to complete a COPD discharge bundle. Please hand the patient a copy when complete before they leave the ED.



## OXYGEN

- Oxygen **must** be prescribed for **all patients with COPD** and all other patients likely to need oxygen. The nurses cannot deliver oxygen (unless in an emergency) without a valid prescription.
- **Prescribe via the Oxygen power plan** under requests in CRS - selecting the most appropriate target saturation range.

Component	Status	Details
<b>Oxygen (Initiated Pending)</b>		
Medications		
COPD + Risk of Hypercapnic Resp Failure		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Titrate Oxygen to keep saturation between 88-92%. Increase Oxygen from 24% to a) 28% then b) 35% as necessary. If concerns re: Hypercapnia, measure ABGs..
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen O2 Saturation Target 88% - 92%, Starting Device: Ventu Titrate Oxygen according to doctors instructions. Consi
HYPOXIA - Type 1 Resp Failure		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Acutely Unwell SpO2 < 94%
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen O2 Saturation Target 94% - 98%, Starting Device: Nonre Titrate Oxygen according to doctors instructions.
Long Term Oxygen Therapy		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Select ONE of the options below for STABLE patients on Long Term Oxygen Therapy:
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COPD PATIENTS, select below:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen O2 Saturation Target 88% - 92%, Starting Device: Nasal Cannula
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NON-COPD PATIENTS (Pulmonary Fibrosis/Lung Cancer), select below:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen O2 Saturation Target 94% - 98%, Starting Device: Nasal Titrate Oxygen according to doctors instructions.
Post OP Oxygen Therapy		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Select order below for short term oxygen therapy required post operatively:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Oxygen O2 Saturation Target 94% - 98%, Starting Device: Nasal Titrate Oxygen according to doctors instructions.

## RESPIRATORY INTRANET SITE

The respiratory team have compiled a reference resource which is located on the Trust intranet. This can be accessed by clicking on the 'Go to...' bar at the top of the Trust intranet home page.



- Full of hints and tips including:
  - Forms, including the respiratory disease patient information discharge bundles (which are also accessed via CRS)
  - How to contact the various team members
  - Advise on how to assess for LTOT.
  - Guidance on how to manage / investigate certain conditions i.e.: pneumonia management bundle
  - How to refer to the community teams / for pulmonary rehabilitation.



