

# PTS FINALS REVISION SERIES: **RESPIRATORY**

Dr Melanie Coulson  
(MBChB, MSc, FHEA)

# INTRODUCTION & LEARNING OUTCOMES:

1. Introduction
2. 5 Exam style case based questions and explanations *I have seen*
  - (with some OSCE style questions included)
3. Conclusion and questions
4. What to expect from the exams!

NB I will not be covering the whole syllabus,  
this session is aimed for testing knowledge you have (not  
teaching it for the first time)!



1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

**FBC:** slightly raised WCC

**U+Es:** Na 139, Urea 8.5, K+ 4.2, Cr 63

**LFTS:** NAD

**CRP:** 78

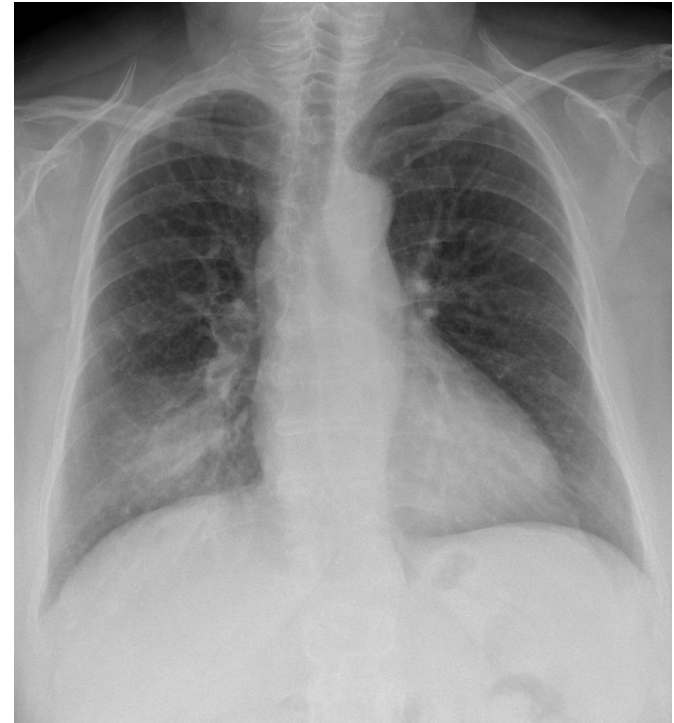
Observations:

**Sats:** 95% on 2L NC, **RR:** 27, **BP:** 145/78, **HR:** 88,  
**Temp:** 38.0 C,



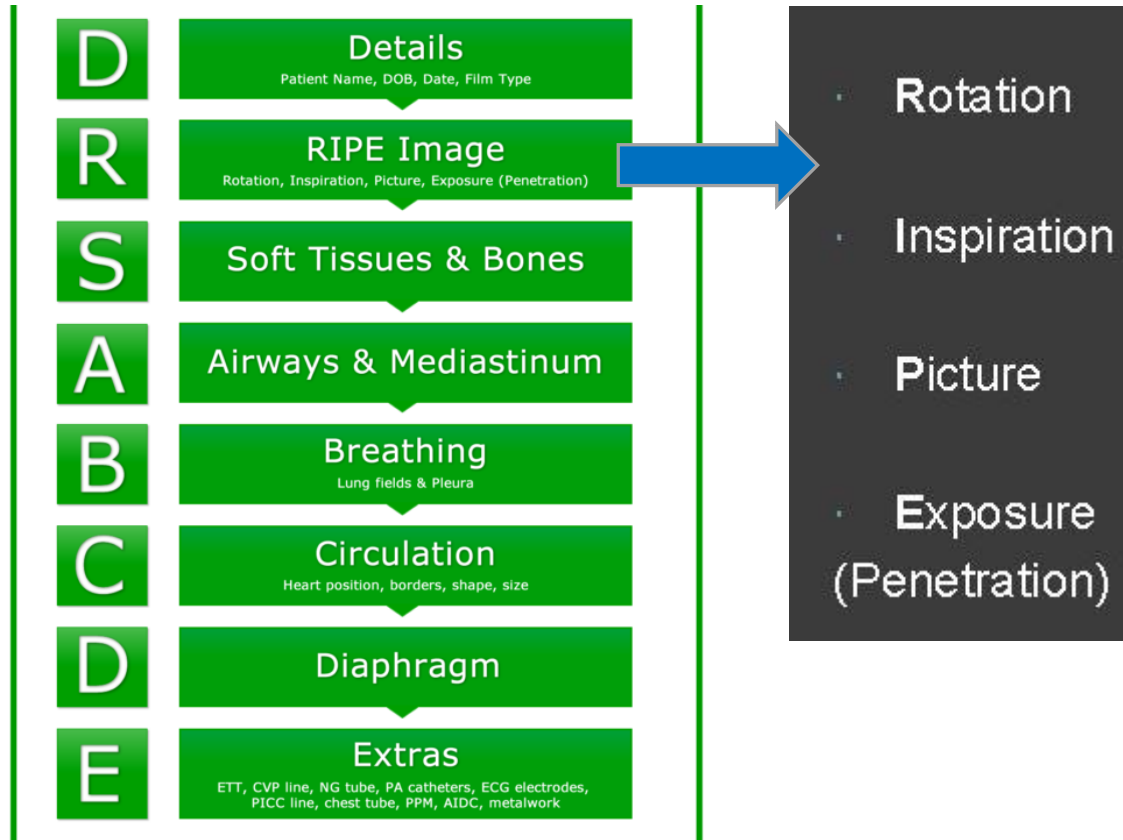
1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

**What does the CXR show?**



1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

What does the CXR show?



1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

**FBC:** slightly raised WCC

**U+Es:** Na 139, Urea 8.5, K+ 4.2, Cr 63

**LFTS:** NAD

**CRP:** 78

**What is her CURB-65 score and how should she be managed?**

Observations:

**Sats:** 95% on 2L NC, **RR:** 33, **BP:** 145/78, **HR:** 88,  
**Temp:** 38.0 C,

1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

**FBC:** slightly raised WCC

**U+Es:** Na 139, Urea 8.5, K+ 4.2, Cr 63

**LFTS:** NAD

**CRP:** 78

Observations:

**Sats:** 95% on 2L NC, **RR:** 33, **BP:** 145/78, **HR:** 88,  
**Temp:** 38.0 C,

**What is her CURB-65 score and how should she be managed?**

IV Co-amoxiclav +  
Clarithromycin (IV/PO)

Mx in hospital (not  
community)- consider ITU

Also 6w CXR F/u

1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

FBC: slightly raised WCC

U+E:

LFTS:

CRP:

Bonus questions:

1. Why do you give clarithromycin?
2. What do you give to patient allergic to penicillin's?

What is her CURB-65 score and how should she be managed?

IV Co-amoxiclav +  
Clarithromycin (IV/PO)

Mx in hospital (not  
community)- consider ITU

Also 6w CXR F/u

Observations:

**Sats:** 95% on 2L NC, **RR:** 33, **BP:** 145/78, **HR:** 88,  
**Temp:** 38.0 C,



1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15). HER CLERKING INVESTIGATIONS AND CXR ARE BELOW:

FBC: slightly raised WCC

U+E:

LFTS:

CRP:

Bonus questions:

1. Why do you give clarithromycin?  
-to cover atypical pathogens
2. What do you give to patient allergic to penicillin's?  
-doxycycline

What is her CURB-65 score and how should she be managed?

IV Co-amoxiclav +  
Clarithromycin (IV/PO)

Mx in hospital (not  
community)- consider ITU

Observations:

**Sats:** 95% on 2L NC, **RR:** 33, **BP:** 145/78, **HR:** 88,  
**Temp:** 38.0 C,

Also 6w CXR F/u

1. A 68-YEAR-OLD PATIENT IS ADMITTED WITH SOB. SHE IS ALERT (GCS 15/15).  
HER CLERKING INVESTIGATION

**NICE** National Institute for Health and Care Excellence

Search NICE...

Sign in

Guidance ▾ NICE Pathways Standards and indicators ▾ Life sciences ▾ BNF ▾ BNFC ▾ CKS ▾ About ▾ More ▾

Read about [our approach to COVID-19](#)

Home > NICE Guidance > Conditions and diseases > Infections > Antimicrobial stewardship

# Pneumonia (community-acquired): antimicrobial prescribing

NICE guideline [NG138] Published: 16 September 2019

Guidance Tools and resources Information for the public Evidence History

[Download guidance \(PDF\)](#)

Overview

**Guidance**

Recommendations

## 2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.

### ?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS).

Initial SBAR handover from the ambulance graded his exacerbation as 'Acute severe':

- The severity of an exacerbation is graded as follows:

- Moderate – PEFr more than 50–75% best or predicted (at least 50% best or predicted in children) and normal speech, with no features of acute severe or life-threatening asthma.
- Acute severe – PEFr 33–50% best or predicted, (less than 50% best or predicted in children) or respiratory rate of at least 25/min in people over the age of 12 years, 30/min in children between the ages of 5 and 12 years, and 40/min in children between 2 and 5 years old, or pulse rate of at least 110/min in people over the age of 12 years, 125/min in children between the ages of 5 and 12 years, and 140/min in children between 2 and 5 years old, or inability to complete sentences in one breath, or accessory muscle use, or inability to feed (infants), with oxygen saturation of at least 92%.
- Life threatening – PEFr less than 33% best or predicted, or oxygen saturation of less than 92%, or altered consciousness, or exhaustion, or cardiac arrhythmia, or hypotension, or cyanosis, or poor respiratory effort, or silent chest, or confusion.



2. A 36-YEAR-OLD PATIENT IS ADMITTED TO  
A+E.

?ACUTE EXACERBATION OF ASTHMA  
(CHILDHOOD DIAGNOSIS).

**How will you manage this patient?**



**2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.**

**?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS).**

**How will you manage this patient?**

**Oxygen (aiming 94-98%) + Nebulised Salbutamol**

**Nebulised Ipratropium bromide**

**Steroids: ICS/Prednisolone PO/IV hydrocortisone**

**(adjuncts: IV Magnesium, abx)**

**ESCALATE**



2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.

?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS).

How will you manage this patient?

Oxygen (aiming 94-98%) + ICS

Nebulised Ipratropium bronchodilator

Steroids: ICS/Prednisolone PO

(adjuncts: IV Magnesium, abx if infected)

ESCALATE

O  
S  
H  
-  
(T)  
M  
E



2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.

?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS).

**What should you observe when you are considering this treatment for acute asthma?**

U+Es – salbutamol can cause hypokalaemia!



**2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.**

**?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS).**

**You go back the following day shift to review this patient and are happy to see he is now stable with improvements in his condition.**

**He wants to know what may have caused this hospital admission?**





## 2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.

### ?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS).

You go back the following day shift to review this patient and are happy to see he is now stable with improvements in his condition.

He wants to know what may have caused this hospital admission?

- Exacerbating factors e.g. environment, infections, lifestyle choices such as smoking etc
- Poor asthma control/self medication/education
- Poor inhaler technique



## 2. A 36-YEAR-OLD PATIENT IS ADMITTED TO A+E.

### ?ACUTE EXACERBATION OF ASTHMA (CHILDHOOD DIAGNOSIS)

You go back the following day to see the patient and are happy to see some improvements in his condition.

He wants to know what might have caused his hospital admission?

- Exacerbating factors e.g. environmental factors, lifestyle choices such as smoking
- Poor asthma control/self management
- Poor inhaler technique

**\*\*OSCE TIP\*\***

Make sure you know how to:

- Advise on inhaler technique
- Advise a patient on how to perform peak flow
- Etc etc

3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

**What should you do first?**

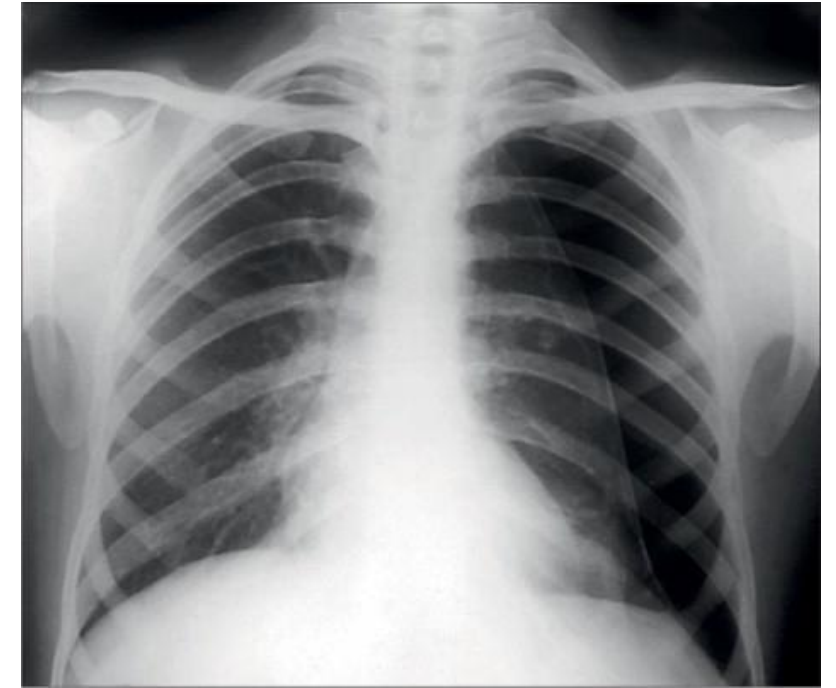
3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

**What should you do first?**

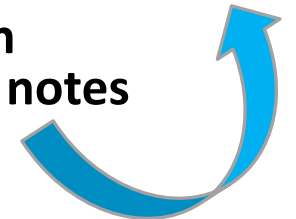


3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

What should you do first?

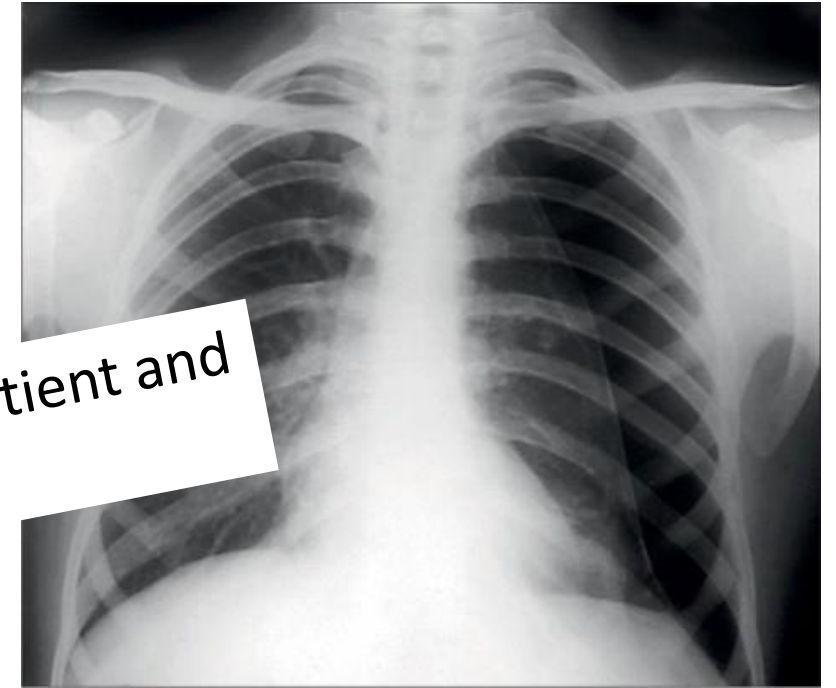
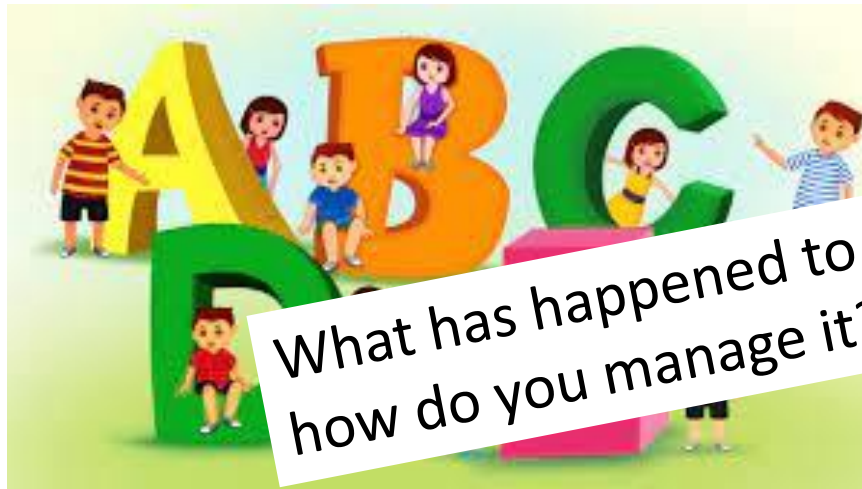


You have now assessed the patient. They have O<sub>2</sub> saturations of 78% and have been started on 15L NRB. He has reduced breath sounds on one side. You also read in his notes he has a background of ILD. You order an urgent portable CXR which looks like this

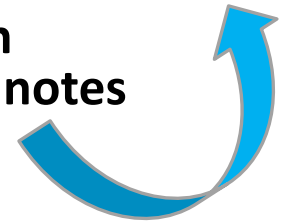


3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

What should you do first?



**You have now assessed the patient. They have O<sub>2</sub> saturations of 78% and have been started on 15L NRB. He has reduced breath sounds on one side. You also read in his notes he has a background of ILD. You order an urgent portable CXR which looks like this**



3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

Secondary spontaneous pneumothorax > **chest drain!**

If this was primary spontaneous pneumothorax, what would the management be?

3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

Secondary spontaneous pneumothorax > **chest drain!**

If this was primary spontaneous pneumothorax, what would the management be?

**If large, will need needle aspiration. (F/u depends on success/recurrence etc)**



# 3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE BATHROOM AND FIND BREATH.

Secondary spont

If this was prima

If large, will need

HE  
ENED  
)

gement be?

ce etc)

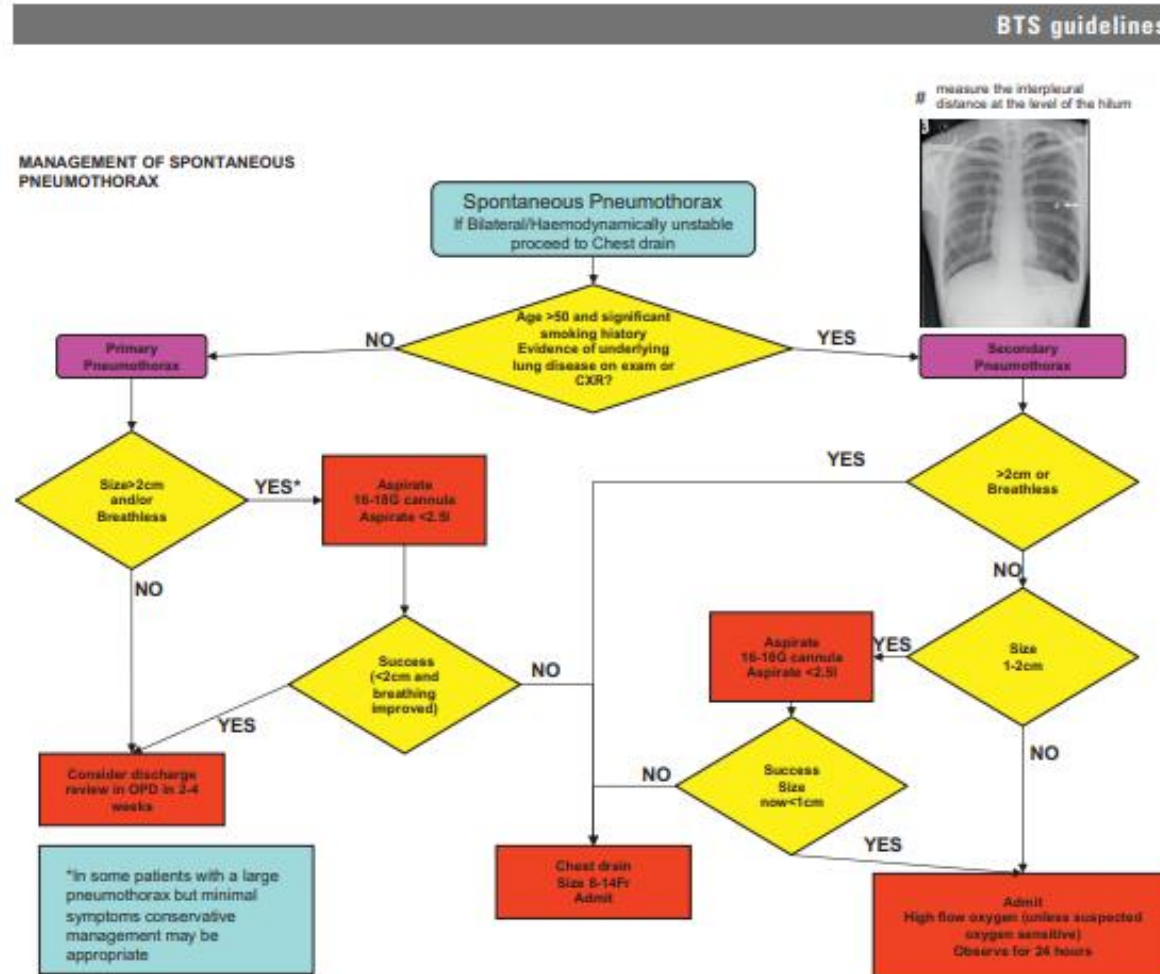


Figure 2 Flowchart of management of spontaneous pneumothorax.

► Observation is the treatment of choice for small PSP without significant breathlessness. (B)

Up to 80% of pneumothoraces estimated as smaller than 15% have no persistent air leak, and recurrence in those managed

3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

Secondary spontaneous pneumothorax > **chest drain!**

If this was primary spontaneous pneumothorax, what would the management be?

**If large, will need needle aspiration. (F/u depends on success/recurrence etc)**

If it was a tension pneumothorax how would it present and how would you manage it?

3. A RESPIRATORY PATIENT FROM THE WARD HAS PULLED THE EMERGENCY ALARM WHILST IN THE BATHROOM. YOU GO TO CHECK WHAT'S HAPPENED AND FIND HIM ON THE FLOOR STRUGGLING TO BREATHE.

Secondary spontaneous pneumothorax > **chest drain!**

If this was primary spontaneous pneumothorax, what would the management be?

**If large, will need needle aspiration. (F/u depends on success/recurrence etc)**

If it was a tension pneumothorax how would it present and how would you manage it?

**Hypotension, hypoxia, reduced breath sounds, tracheal deviation etc**

**Mx: large bore cannula into pleural space- 'urgent needle decompression' (second anterior intercostal space in the mid-clavicular line)**

**Hiss = correct dx. DO NOT WAIT FOR CXR = EMERGENCY.**

3. A RESPIRATORY PATIENT FROM THE WARD HAS  
PULLED THE EMERGENCY  
BATHROOM. YOU  
AND FIND HIM OUT OF  
BREATH.

Secondary spontaneous pneumothorax



WARD HAS  
IN THE  
APPENED  
IG TO

If this was primary spontaneous

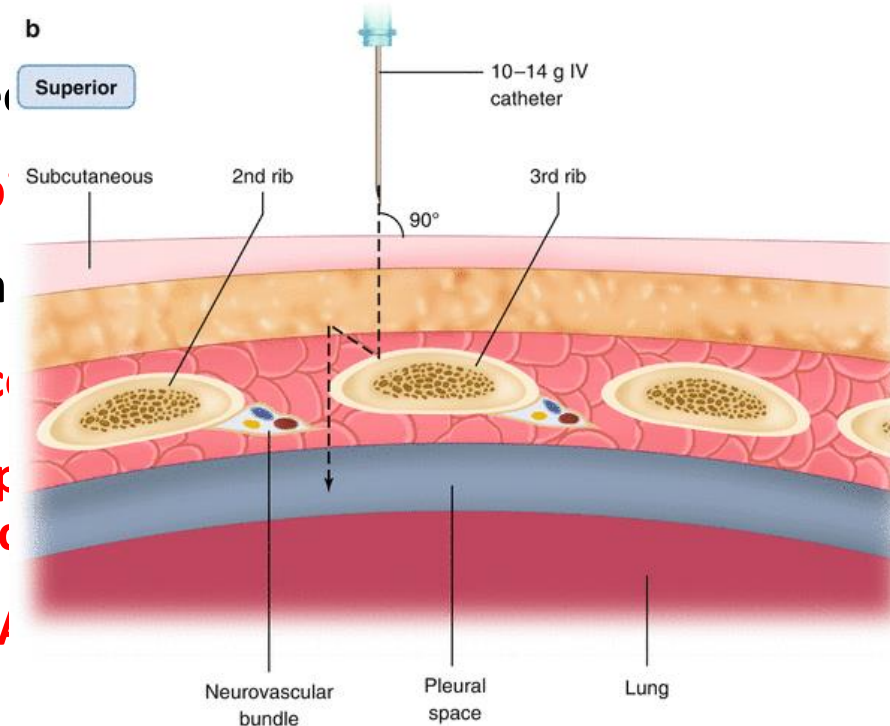
If large, will need needle aspiration

If it was a tension pneumothorax

Hypotension, hypoxia, reduced

Mx: large bore cannula into pleural  
intercostal space in the mid-clavicular

Hiss = correct dx. DO NOT WAIT



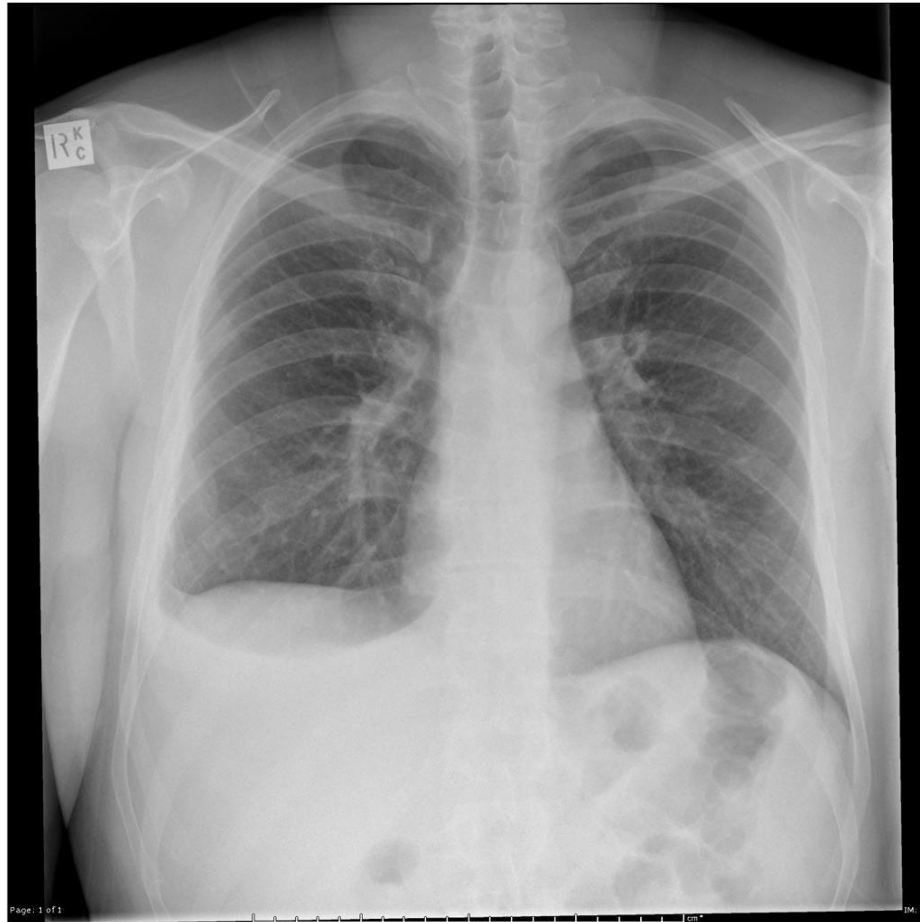
management be?

etc)

How do you manage it?

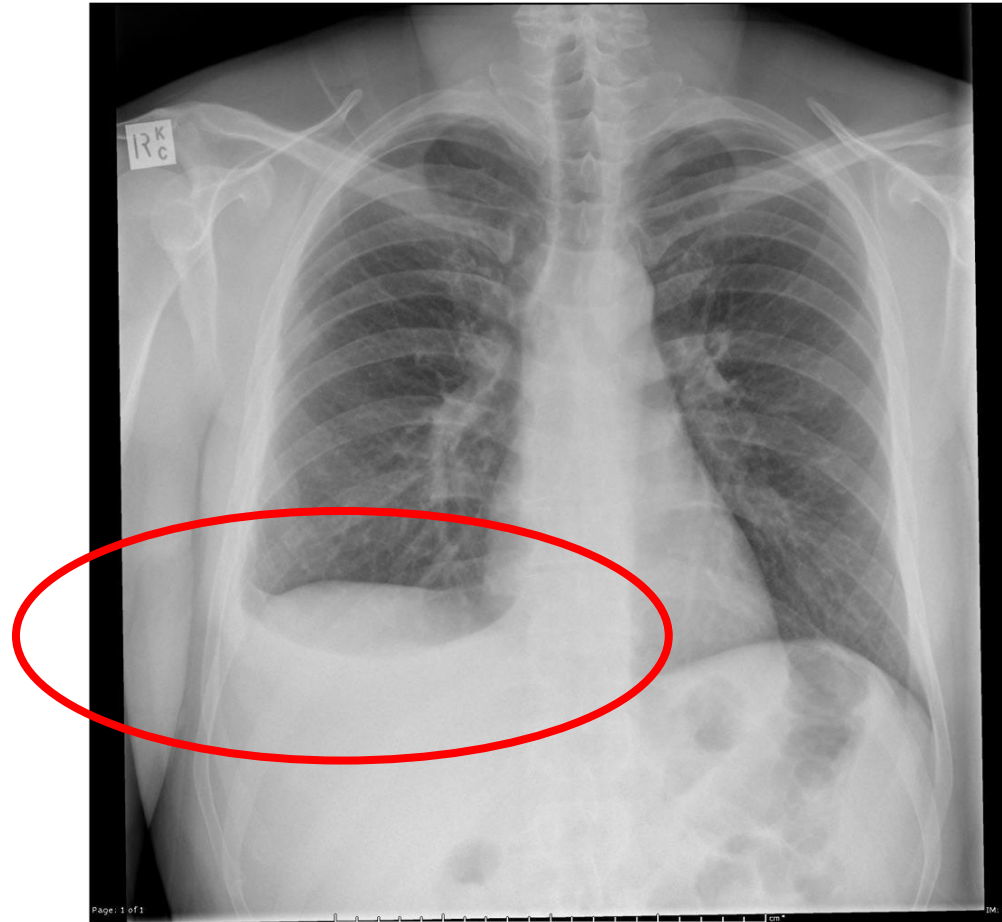
on' (second anterior

## 4. CXR SEEN IN A+E. SOMEONE DESCRIBE WHAT CAN BE SEEN?



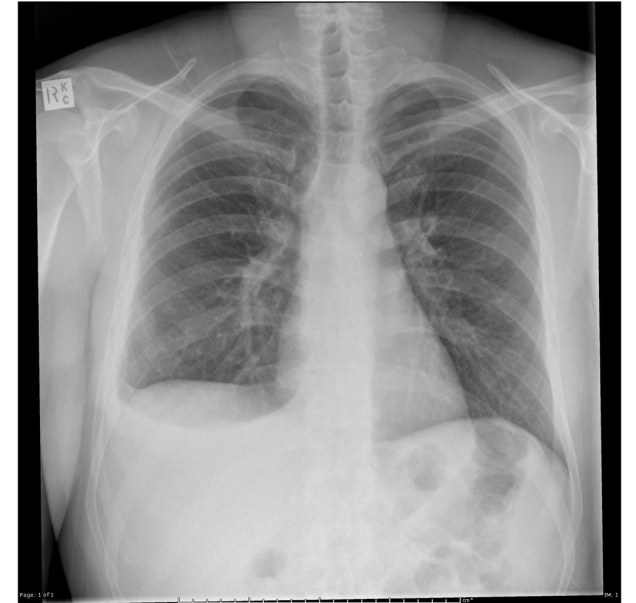
# 4. CXR SEEN IN A+E. SOMEONE DESCRIBE WHAT CAN BE SEEN?

Pleural effusion



## 4. CXR SEEN IN A+E. SOMEONE DESCRIBE WHAT CAN BE SEEN?

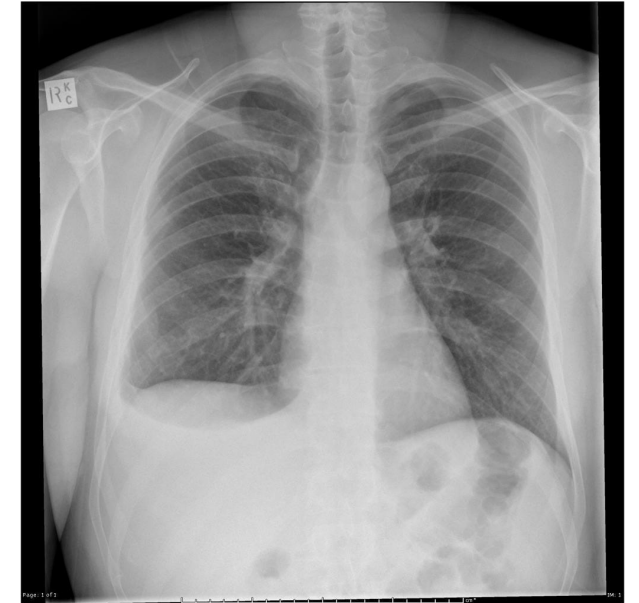
What can cause pleural effusions? How can we categorise these causes?



# 4. CXR SEEN IN A+E. SOMEONE DESCRIBE WHAT CAN BE SEEN?

What can cause pleural effusions? How can we categorise these causes?

<b>TRANSUDATE</b> (protein < 30g/L) Oncotic/hydrostatic pressures	<b>EXUDATE</b> (protein > 30g/L) Local factors that cause changes in pleural fluid movement
CCF	Pulmonary infection
Liver cirrhosis/failure	Local malignancies
Nephrotic syndrome/renal failure	Local traumas





# 4. CYD SEEN IN ALL SOMEONE DES

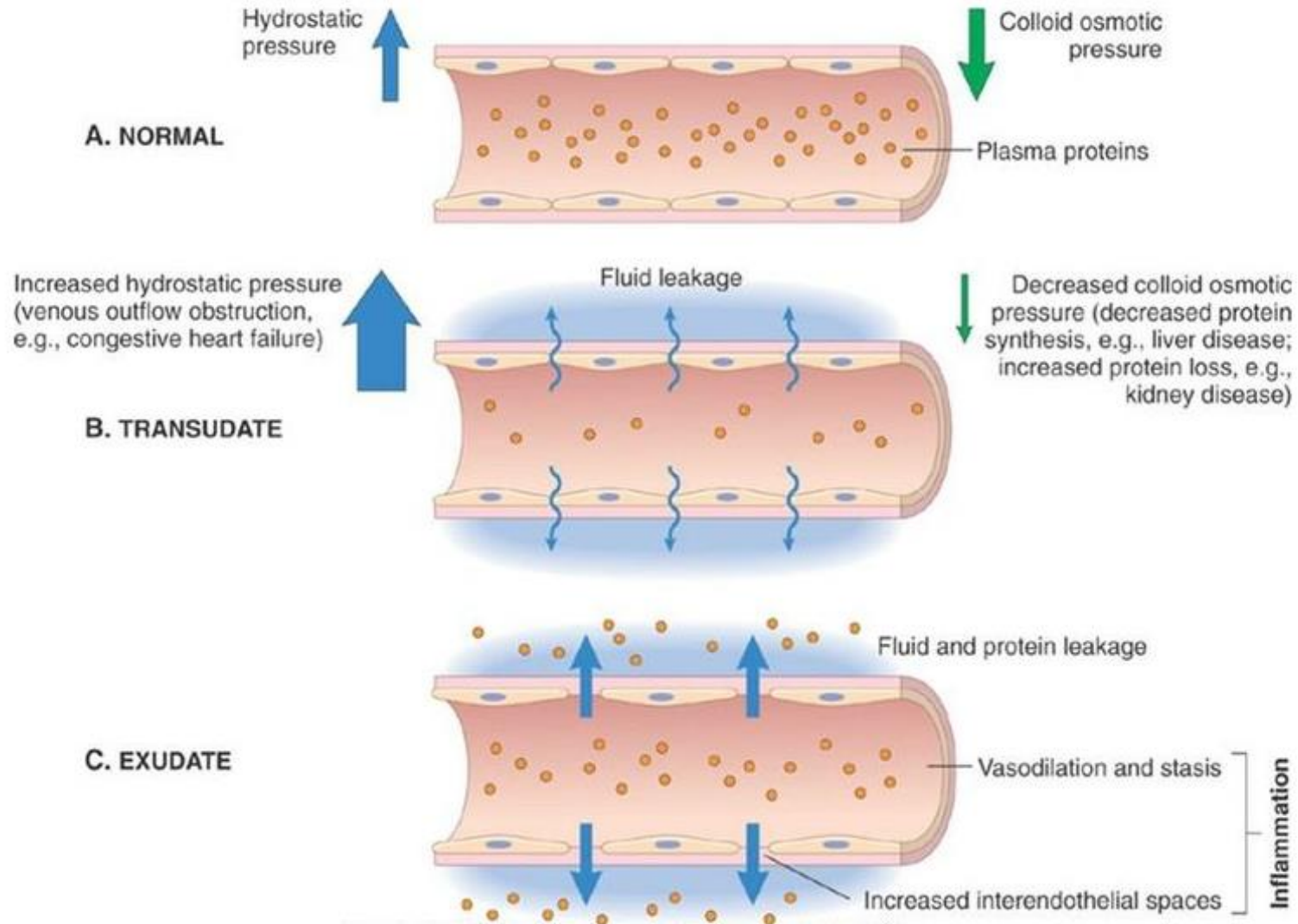
What can  
causes?

TRANSUDATE  
Oncotic/hydrostatic

CCF

Liver cirrhosis

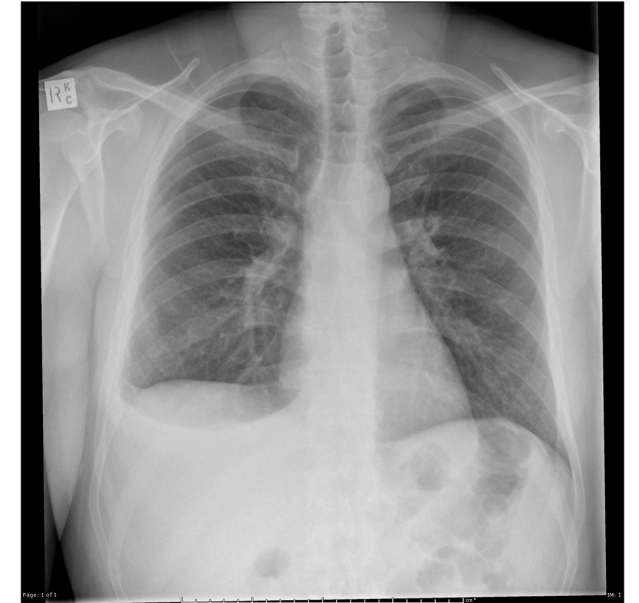
Nephrotic syndrome



# 4. CXR SEEN IN A+E. SOMEONE DESCRIBE WHAT CAN BE SEEN?

What can cause pleural effusions? How can we categorise these causes?

<b>TRANSUDATE</b> (protein < 30g/L) Oncotic/hydrostatic pressures	<b>EXUDATE</b> (protein > 30g/L) Local factors that cause changes in pleural fluid movement
CCF	Pulmonary infection
Liver cirrhosis/failure	Local malignancies
Nephrotic syndrome/renal failure	Local traumas

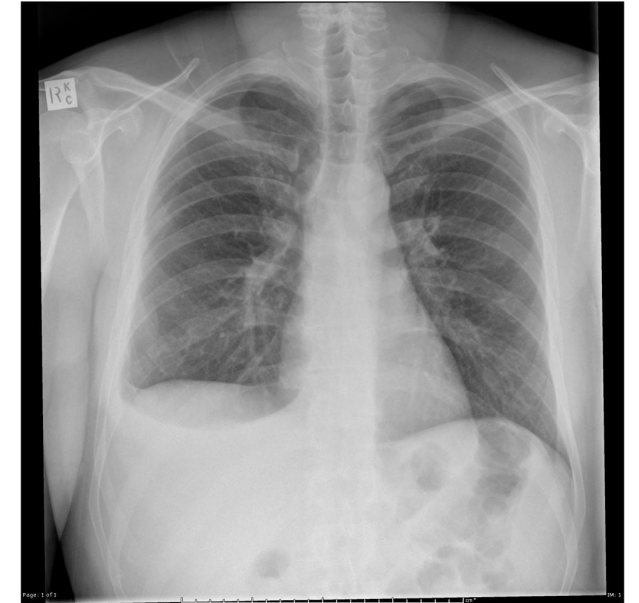


For accurate diagnosis of exudate: use **Lights Criteria!**

# 4. CXR SEEN IN A+E. SOMEONE DESCRIBE WHAT CAN BE SEEN?

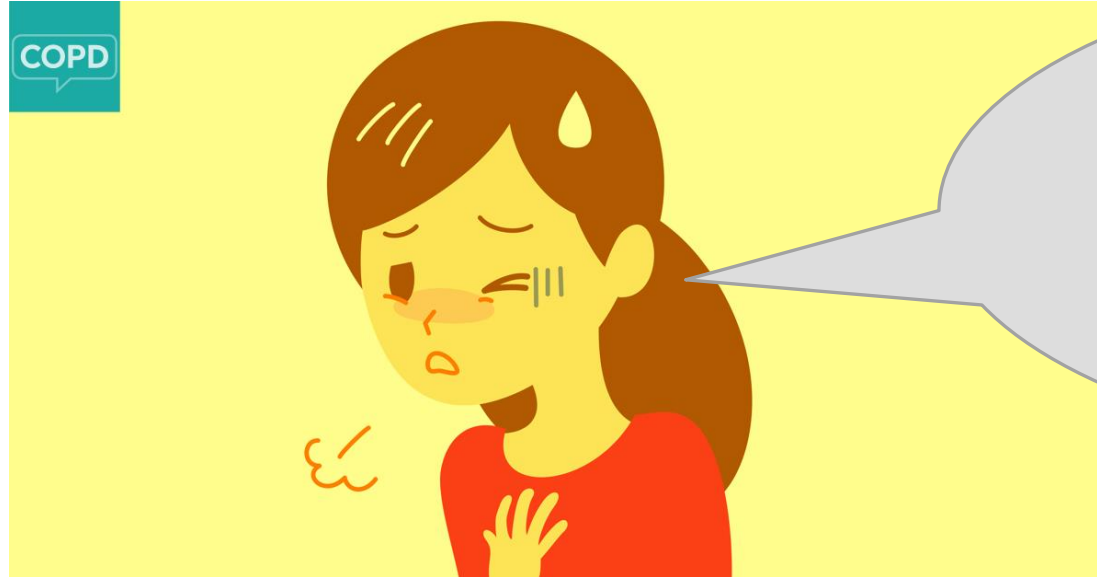
What can cause pleural effusions? How can we categorise these causes?

<b>TRANSUDATE</b> (protein < 30g/L) Oncotic/hydrostatic pressures	<b>EXUDATE</b> (protein > 30g/L) Local factors that cause changes in pleural fluid movement
CCF	Pulmonary infection
Liver cirrhosis/failure	Local malignancies
Nephrotic syndrome/renal failure	Local traumas



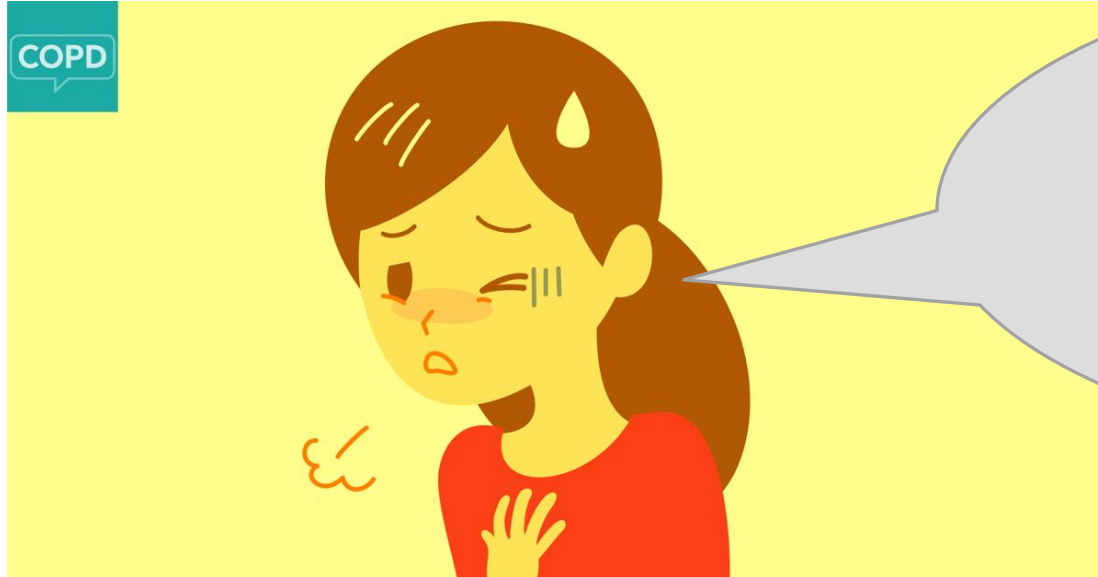
For accurate diagnosis Management depends on cause!  
e.g. diuretics, abx criteria!

## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.



- exertional breathlessness
- chronic cough
- regular sputum production
- frequent winter 'bronchitis'
- wheeze.

## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.



- exertional breathlessness
- chronic cough
- regular sputum production
- frequent winter 'bronchitis'
- wheeze.

**How do you quantify the breathlessness?**

Table 1 MRC dyspnoea scale

Grade	Degree of breathlessness related to activities
1	Not troubled by breathlessness except on strenuous exercise
2	Short of breath when hurrying or walking up a slight hill
3	Walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace
4	Stops for breath after walking about 100 metres or after a few minutes on level ground
5	Too breathless to leave the house, or breathless when dressing or undressing

How do you quantify the breathlessness?

## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**Name 3 investigations that could be done to diagnose COPD?**

## 6. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**Name 3 investigations that could be done to diagnose COPD?**

- Spirometry (inc with bronchodilator)
  - CXR > hyperinflation
  - High resolution CT scan > signs of emphysema/chronic airway disease
- (bloods, ECG, sputum culture, alpha1AT, echo etc)*





## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**Ix confirm the diagnosis of COPD- what may be included in management plan?**

# 5. A PATIENT ATTENDING SURGERY WITH A HISTORY OF COPD

How can we confirm the diagnosis of COPD- with

Current BTS guidelines  
>>>>>>>>

\*\*be able to suggest first line and also an example of each SABA/SAMA/LABA/LAMA

## Confirmed diagnosis of COPD

### Fundamentals of COPD care:

- Offer treatment and support to **stop smoking**
- Offer **pneumococcal** and **influenza** vaccinations
- Offer **pulmonary rehabilitation** if indicated
- Co-develop a personalised **self-management plan**
- Optimise treatment for **comorbidities**

These treatments and plans should be revisited at every review

### Start inhaled therapies only if:

- all the above interventions have been offered (if appropriate), and
- inhaled therapies are needed to relieve breathlessness and exercise limitation, and
- people have been trained to use inhalers and can demonstrate satisfactory technique

Review medication and assess inhaler technique and adherence regularly for all inhaled therapies

Offer SABA or SAMA to use as needed

## If the person is limited by symptoms or has exacerbations despite treatment:

No asthmatic features or features suggesting steroid responsiveness<sup>a</sup>

Offer LABA + LAMA

Person has day-to-day symptoms that adversely impact quality of life

Consider 3-month trial of LABA + LAMA + ICS<sup>b,c</sup>

If no improvement, revert to LABA + LAMA

Person has 1 severe or 2 moderate exacerbations within a year

Consider LABA + LAMA + ICS<sup>b,c</sup>

Asthmatic features or features suggesting steroid responsiveness<sup>a</sup>

Consider LABA + ICS<sup>b</sup>

Person has day-to-day symptoms that adversely impact quality of life, or has 1 severe or 2 moderate exacerbations within a year

Offer LABA + LAMA + ICS<sup>b,c</sup>

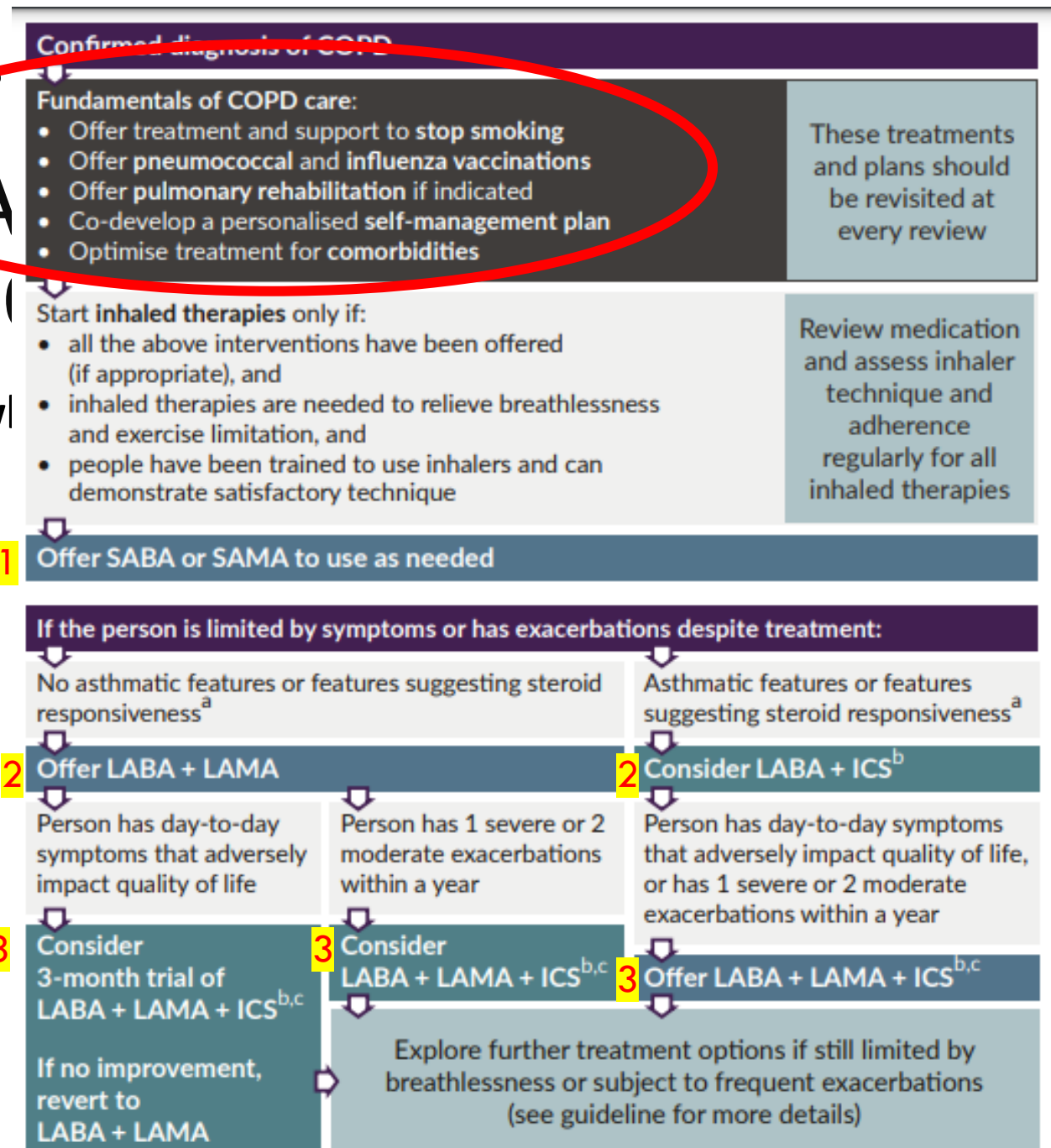
Explore further treatment options if still limited by breathlessness or subject to frequent exacerbations (see guideline for more details)

# 5. A PATIENT ATTENDING SURGERY WITH A HISTORY OF COPD AND CURRENT SYMPTOMS OF COPD

How can we confirm the diagnosis of COPD- with

Current BTS guidelines  
>>>>>>>>>

\*\*be able to suggest first line and also an example of each SABA/SAMA/LABA/LAMA



## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**If a patient then develops an exacerbation of COPD, how would they be managed pharmacologically?**

## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**If a patient then develops an exacerbation of COPD, how would they be managed pharmacologically?**

-nebulisers/hand held inhalers

-30mg oral prednisolone daily for 5 days

-abx: first line is amoxicillin for 5 days (PO) (*depends on sputum culture C+S*)

# 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

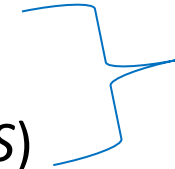
**If a patient then develops an exacerbation of COPD, how would they be managed pharmacologically?**

-nebulisers/hand held inhalers

-30mg oral prednisolone daily for 5 days

-abx: first line is amoxicillin for 5 days (PO) (*depends on sputum culture C+S*)

What is the combination of these 2 called when prescribed in anticipation in the community?



## 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**If a patient then develops an exacerbation of COPD, how would they be managed pharmacologically?**

-nebulisers/hand held inhalers

-30mg oral prednisolone daily for 5 days

-abx: first line is amoxicillin for 5 days (PO) (*depends on sputum culture C+S*)

**= rescue pack!**

# 5. A PATIENT ATTENDS YOUR GP SURGERY WITH ALL THE 'CLASSIC' SYMPTOMS OF COPD.

**If a patient then develops an exacerbation of COPD, how would they be managed pharmacologically?**

-nebulisers/hand held inhalers

-30mg oral prednisolone daily for 5 days

-abx: first line is amoxicillin for 5 days (PO) (*depends on sputum culture C+S*)

-consider theophylline's

-consider O2/NIVs (NB target sats 88-92%)

(+chest physio + lifestyle advice)

**= rescue pack!**



# THE DREADED ABG INTERPRETATION!

- **pH:** 7.35 – 7.45
- **PaCO<sub>2</sub>:** 4.7 – 6.0 kPa || 35.2 – 45 mmHg
- **PaO<sub>2</sub>:** 11 – 13 kPa || 82.5 – 97.5 mmHg
- **HCO<sub>3</sub><sup>-</sup>:** 22 – 26 mEq/L
- **Base excess (BE):** -2 to +2 mmol/L

- ❖ THEY WILL GIVE YOU THE REFERENCE RANGES!
- ❖ Look at/read about the patient's clinical condition! For example, a patient with a 'normal' O<sub>2</sub> level but on high amounts of oxygen therapy is not 'normal' or well.
- ❖ Know that oxygen devices give different percentage rates > look them up if you do not know yourself.

# THE DREADED ABG INTERPRETATION!

•**pH:** 7.35 – 7.45  
•**PaCO<sub>2</sub>:** 4.7 – 6.0 kPa || 35.2 – 45 mmHg  
•**PaO<sub>2</sub>:** 11 – 13 kPa || 82.5 – 97.5 mmHg  
•**HCO<sub>3</sub><sup>-</sup>:** 22 – 26 mEq/L  
•**Base excess (BE):** -2 to +2 mmol/L

- ❖ THEY WILL GIVE YOU THE REFERENCE RANGES!
- ❖ Look at/read about the patient's clinical condition! For example, a patient with a 'normal' O<sub>2</sub> level but on high amounts of oxygen therapy is not 'normal' or well.
- ❖ Know that oxygen devices give different percentage rates > look them up if you do not know yourself.
- ❖ Consider T1RF and T2RF
  - ❖ T1 – low oxygen- V/Q mismatch- low ventilation: bronchiolar constriction, low perfusion: PE
  - ❖ T2- low oxygen and cannot get rid of CO<sub>2</sub>- low ventilation: MND, COPD i.e. obstruction, drugs reducing resp effort etc.
- ❖ Acidosis? Normal? Alkalosis? Resp or metabolic cause? Compensation?
- ❖ **Top tip:** practice these in your own time with a friend!

# SPIROMETRY INTERPRETATION

- ❖ Allows for differentiation between restrictive and obstructive respiratory disease
- ❖ 3 important measurements?

# SPIROMETRY INTERPRETATION

- ❖ Allows for differentiation between restrictive and obstructive respiratory disease
- ❖ 3 important measurements?
  - ❖ FEV1 > 80% predicted
  - ❖ FVC > 80% predicted
  - ❖ FEV1/FVC > 0.7

# SPIROMETRY INTERPRETATION

- ❖ Allows for differentiation between restrictive and obstructive respiratory disease

- ❖ 3 important measurements?

- ❖ FEV1 > 80% predicted

- ❖ FVC > 80% predicted

- ❖ FEV1/FVC > 0.7

Obstructive: **FEV1** < 80%, **FVC** same/slightly reduced, **FEV1/FVC** < 0.7

- COPD, asthma, CF

- If reversible with SABA then asthma > COPD

Restrictive: **FEV1** < 80%, **FVC** < 80%, **FEV1/FVC** > 0.7

- Pul Fibrosis, ILDs, lobectomy, kyphoscoliosis, MND

# SPIROMETRY INTERPRETATION

❖ Allow

❖ 3 impo

❖ FEV<sub>1</sub>

❖ FVC

❖ FEV<sub>1</sub>/FV

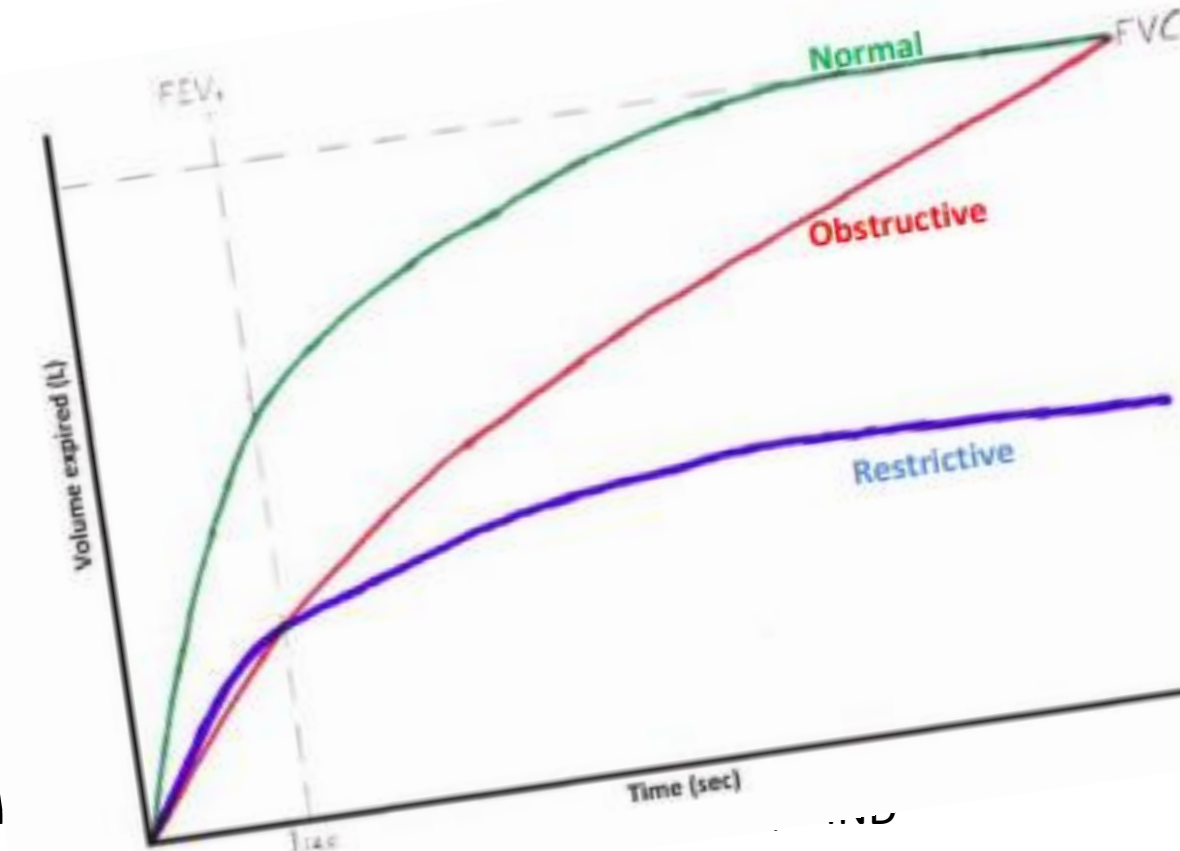
Obstructive

- CC

- If r

Restrictive: F

- Pul I



respiratory disease

# CPAP VS BIPAP

CPAP	BIPAP
?	?



# CPAP VS BIPAP

CPAP	BIPAP
<ul style="list-style-type: none"><li>❖ Continuous positive pressure which keeps the airways open</li><li>❖ This reduced effort of breathing and prevents airways from collapsing</li><li>❖ Used in <b>type 1 respiratory failure (hypoxia)</b></li></ul>	<ul style="list-style-type: none"><li>❖ Biphasic airway pressure: improves ventilation- both inspiratory and expiratory pressures</li><li>❖ Used in <b>type 2 respiratory failure</b></li></ul>





# CPAP VS BIPAP

## CPAP

- ❖ Continuous positive airways open
- ❖ This reduced effort
- ❖ Used in **type 1 respiratory failure**

Consider that an OSCE station could be explaining the benefits of these devices to a non compliant patient- a common conversation had on my ward!

improves ventilation-  
ratory pressures  
**respiratory failure**



# FEEDBACK LINK



# CONCLUSION AND QUESTIONS!

Today's questions and answers

> any questions?

Topics not discussed today for you to go over:

- ❖ Lung cancers
- ❖ PE
- ❖ TB
- ❖ Management of non-acute asthma i.e. BTS step ladder
- ❖ ILDs
- ❖ Occupational lung diseases

# 2021 OSCE AND EXAM- WHAT TO EXPECT!



