## Patient with advanced COPD

You work as a palliative consultant at a medium sized hospital in Sweden. You are called by a junior doctor at the medical ward to see a patient who has been admitted with multiple morbidities including advanced COPD. As there is currently no respiratory consultant available at the hospital, you are asked especially to focus on ways to improve the patient's troublesome respiratory discomfort.

The patient is Naima, a 73-year old woman who has lived alone in a house in the countryside with no informal caregivers and limited social contacts. She is a former office worker and former smoker who has been struggling with obesity most her adult life. Despite sparse health care contacts prior to this admission, Naima has treatment for hypertension (thiazide diuretic), heart failure (peripheral oedema, treated with loop diuretics now and then) as well as severe COPD (inhaled short-acting bronchodilator as needed and regular inhaled glucocorticoid).

She was admitted to hospital 9 days ago due to a history of chest discomfort and rapidly worsening breathlessness over three days. There is a longer history (weeks-month) of increase leg swelling and limited mobility (mostly bed ridden) and the ambulance staff said the home was in clear disarray. At ED admission, she was stable except hypoxemia and pretty advanced ('acute on chronic')  $CO_2$ -retention which was attributed to her severe COPD. Acute ischemic heart disease has been ruled out. Over the 9 days in hospital, Naima has been treated with supplemental oxygen (currently 2L/min with a saturation (SpO<sub>2</sub>) of 94%), oral antibiotics (doxycycline) and oral betametason, but with limited improvement. Her laboratory tests (including Hb, CRP and renal panel) have been stable and OK, but her condition has worsened with increased chest discomfort, worsening productive cough, feelings of suffocation, anxiety and fatigue.

Based on these limited clinical data, please define how you would act in clinical practice regarding:

 How should the patient be evaluated? Which initial tests are needed, and depending on their results, which additional assessments should be performed?
Arterial blood gas - ventilation?
New ECG - arrythmia?
Ultracardiogram - heart failure?
CT thorax for pneumonia? pulmonary embolism? Cancer? Pleural effusion?  How should Naima be treated to improve her clinical situation and symptoms? Inhalation via nebuliser or spacer: bronchodilators and mycolytics. Physiotherapy: PEP-flute, sputum mobilisation, breathing techniques. Heart failure medication - diuretics; ACE inhib? beta-blockers? Bz low dose LmW heparin if immobilised or PE Possibly low dose morphine.

3. As she improves and survives the more acute phase, which interventions and follow-up do you suggest to improve her situation on the longer term?

Increasing doses of ACE inhib, beta-blockers?

Bronkotherapy LAMA-LABA.

Home care services, support.

Nutrition assessment and support.

Holistic assessment. Palliative care plan.

Palliative evaluation and management

## Patient with advanced COPD

You work as a palliative consultant at a medium sized hospital in Sweden. You are called by a junior doctor at the medical ward to see a patient who has been admitted with multiple morbidities including advanced COPD. As there is currently no respiratory consultant available at the hospital, you are asked especially to focus on ways to improve the patient's troublesome respiratory discomfort.

The patient is Naima, a 73-year old woman who has lived alone in a house in the countryside with no informal caregivers and limited social contacts. She is a former office worker and former smoker who has been struggling with obesity most her adult life. Despite sparse health care contacts prior to this admission, Naima has treatment for hypertension (thiazide diuretic), heart failure (peripheral oedema, treated with loop diuretics now and then) as well as severe COPD (inhaled short-acting bronchodilator as needed and regular inhaled glucocorticoid).

She was admitted to hospital 9 days ago due to a history of chest discomfort and rapidly worsening breathlessness over three days. There is a longer history (weeks-month) of increase leg swelling and limited mobility (mostly bed ridden) and the ambulance staff said the home was

in clear disarray. At ED admission, she was stable except hypoxemia and pretty advanced ('acute on chronic')  $CO_2$ -retention which was attributed to her severe COPD. Acute ischemic heart disease has been ruled out. Over the 9 days in hospital, Naima has been treated with supplemental oxygen (currently 2L/min with a saturation (SpO<sub>2</sub>) of 94%), oral antibiotics (doxycycline) and oral betametason, but with limited improvement. Her laboratory tests (including Hb, CRP and renal panel) have been stable and OK, but her condition has worsened with increased chest discomfort, worsening productive cough, feelings of suffocation, anxiety and fatigue.

Based on these limited clinical data, please define how you would act in clinical practice regarding:

- 1. How should the patient be evaluated? Which initial tests are needed, and depending on their results, which additional assessments should be performed?
- 2. How should Naima be treated to improve her clinical situation and symptoms?
- 3. As she improves and survives the more acute phase, which interventions and follow-up do you suggest to improve her situation on the longer term?