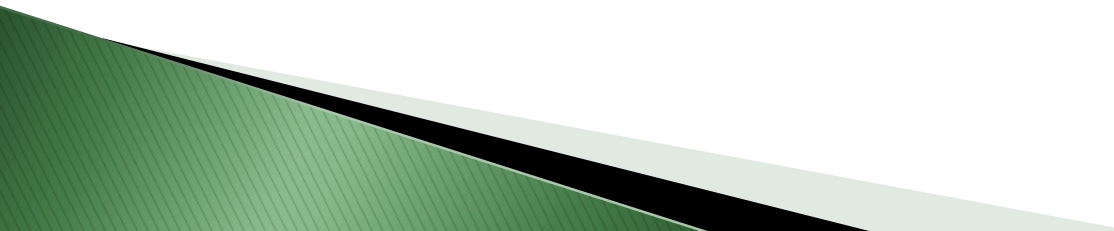


Dyspnea in End of Life

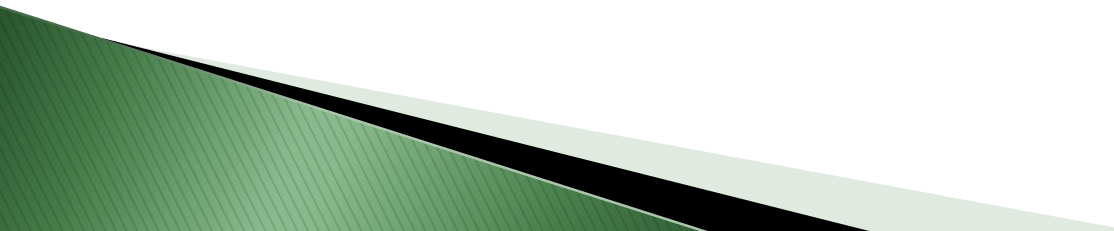
Cynthia Savoy MD CCFP

Dr-Georges-L.-Dumont UHC, Moncton, NB

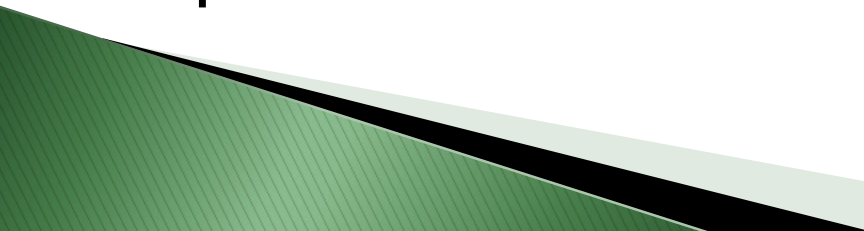
Clinical Case

- ▶ Mr. Cormier's visit to your clinic (79 yo)
 - ▶ Known for COPD and is a smoker
 - ▶ 5 hospitalisations in 12 months for AECOPD
 - ▶ Recent upper GI bleed 2nd ulcer
 - ▶ Progressive Dyspnea worsened
 - ▶ Quality of life is affected
 - ▶ What can you do?
- 

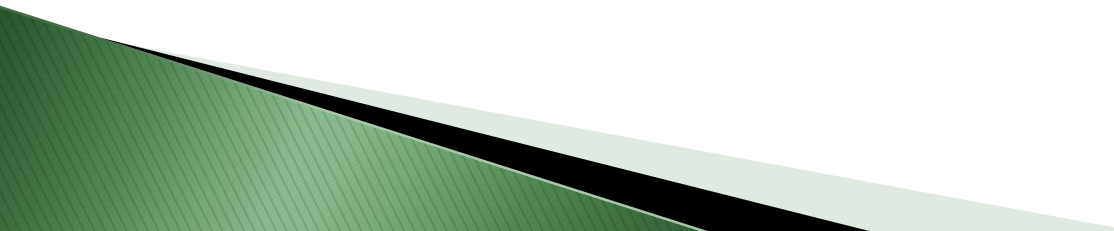
...clinical case

- ▶ One year later, Dx of adenocarcinoma of the lung with local and bone metastases.
 - ▶ Bedridden
 - ▶ Poor feeding
 - ▶ He is short of breath, tachypneic, is coughing and spitting.
 - ▶ He often looks like he is suffocating.
 - ▶ His family is panicking.
 - ▶ What do you do?
- 

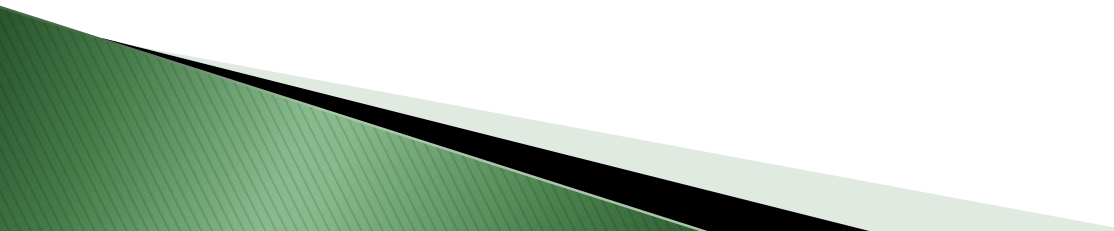
Presentation Goals

- ▶ Recognize and assess a patient complaining of dyspnea
 - ▶ Establish a treatment plan that addresses underlying causes and symptoms.
 - ▶ Describe the use of non pharmacological measures
 - ▶ Describe the role of opioids in the management of dyspnea
 - ▶ Determine when the use of a distress protocol would be appropriate
- 

Prevalence

- ▶ Varies depending on underlying condition
 - ▶ COPD: 95%
 - ▶ Dementia: 70%
 - ▶ Cancer: 50–70%
 - ▶ Congestive Heart Failure: 60%
 - ▶ ALS: 50%
 - ▶ Stroke: 37%
- 

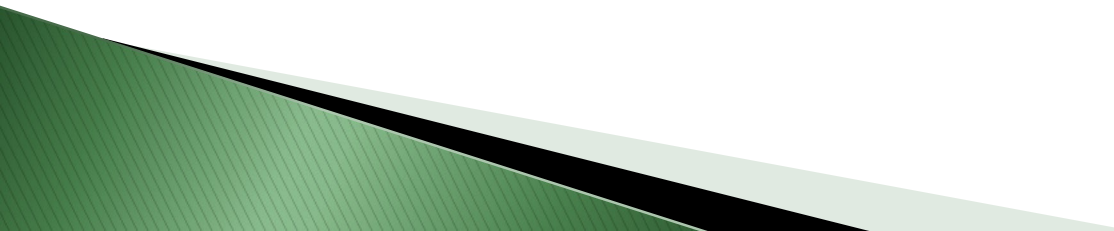
Who is the most dyspneic?

- ▶ 1. A 67 yo man with lung cancer?
 - ▶ 2. An 83 yo woman with COPD and O₂ sat. 89%?
 - ▶ 3. A 72 yo woman with heart failure and pulmonary oedema?
 - ▶ 4. An 81 yo man with myelodysplastic syndrome and Hb 74?
 - ▶ 5. A 59 yo woman having a panic attack?
- 

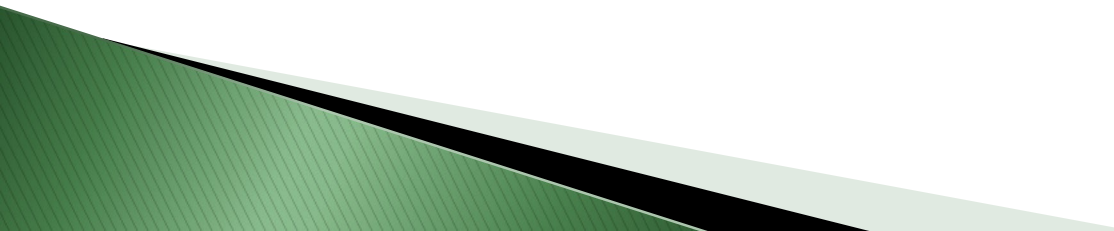
How to evaluate dyspnea?



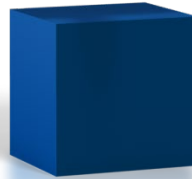
How To Measure Dyspnea?

- ▶ Respiratory Rate?
 - ▶ Oxygen Saturation?
 - ▶ Arterial Blood Gas?
 - ▶ Visual rating scale?
 - ▶ All of the above?
 - ▶ None of the above?
- 

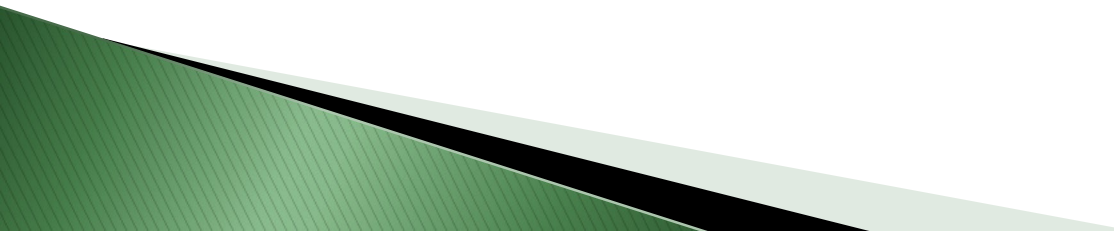
Definition of Dyspnea

- ▶ An uncomfortable, **subjective** awareness and or difficulty breathing
 - ▶ Affecting ability to function or quality of life
 - ▶ The severity does not always correlate well with the severity of the underlying condition
- 

Expressions of dyspnea

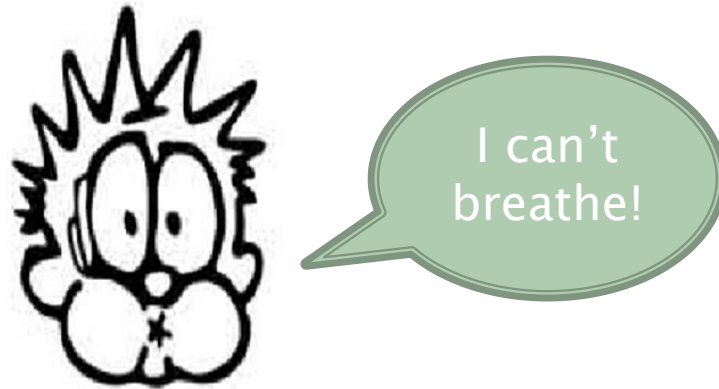


Expressions of Dyspnea

- ▶ Short of breath
 - ▶ Can't catch their breath
 - ▶ Breathlessness
 - ▶ Tightness
 - ▶ Feeling winded
 - ▶ Puffing
 - ▶ Hard to breathe
 - ▶ Air hunger
 - ▶ Suffocating
- 

Dyspnea

- ▶ Like pain, dyspnea is a SUBJECTIVE sensation.



- ▶ The only reliable measure of dyspnea is the patient's self-report. No tests correlate well with the sensation of being short of breath.

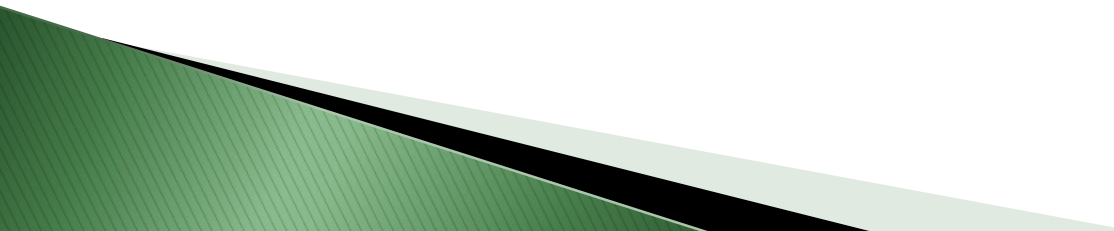
Evaluating the Severity of Dyspnea

- ▶ Doctors: 28%
- ▶ Nurses: 35%
- ▶ Volunteers: 43%

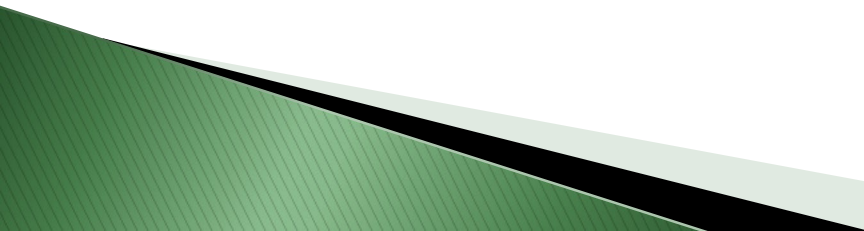
- ▶ Always rely on the patient!



Pathophysiology

- ▶ The result of respiratory supply-and-demand mismatch
 - ▶ 1. Increased respiratory effort (obstruction)
 - ▶ 2. Increased muscular effort (decreased capacity, weakness, cachexia)
 - ▶ 3. Increased ventilation demands (anemia, fever)
- 

Evaluating Dyspnea

- ▶ Always screen for dyspnea
 - ▶ Trajectory (rapid, gradual)
 - ▶ Type (intermittent, continuous)
 - ▶ Severity/Intensity (scale)
 - ▶ Alleviating and exacerbating factors
 - ▶ Concurrent symptoms
 - ▶ Contributing psycho–socio–spiritual factors
 - ▶ Impact
- 

Dyspnea Causes

- ▶ Airway obstruction
- ▶ Pleural effusion
- ▶ COPD
- ▶ Pneumonia
- ▶ Lung cancer and metastases
- ▶ Lymphangitic carcinomatosis
- ▶ Pulmonary Emboli
- ▶ Pneumothorax
- ▶ Aspiration

Pulmonary Causes

...Causes

- ▶ Cardiac causes (CHF, pericardial effusion)
- ▶ Systemic causes (anemia)
- ▶ Neurological causes (ALS, muscle wasting)
- ▶ Metabolic causes (anemia, acidosis)
- ▶ Psychological causes (Anxiety, hyperventilation)

Extra-thoracic causes

Evaluating Dyspnea

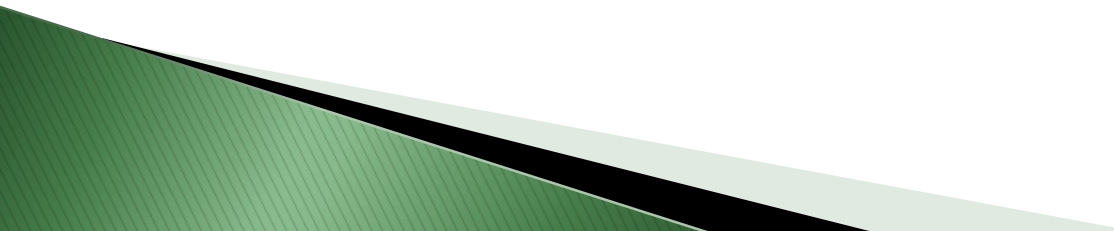
- ▶ Physical Exam
- ▶ Investigations depending on appropriateness
 - Chest X-Ray
 - CBC
 - O2 saturation
 - CT scan
 - Cardiac echo
 - Bronchoscopy
 - Spirometry
 - Arterial Blood Gas



Non Pharmacological Measures



Non Pharmacological Measures

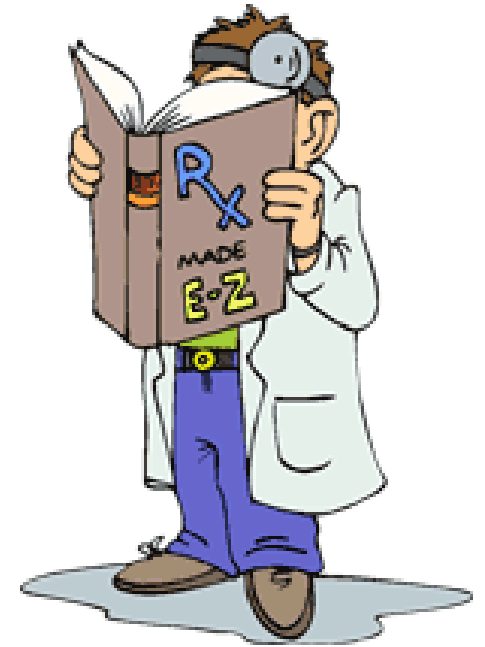
- ▶ Be a calming presence for patient and family
 - ▶ Fan
 - ▶ Position, upright
 - ▶ Limit the number of people in room
 - ▶ Loosen or remove tight clothing
 - ▶ Lower room temperature
 - ▶ Position by a window
 - ▶ Open curtains
 - ▶ Avoid air irritants
 - ▶ Respiratory exercises
- 

Pharmacological measures

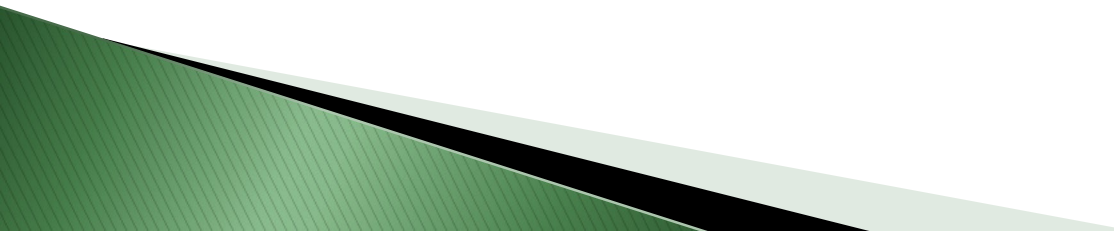


Pharmacological Measures

- ▶ Oxygen
- ▶ Opioids
- ▶ Adjuvant therapies
 - Bronchodilators and inhaled steroids
 - Steroids
 - Phenothiazine
 - Benzodiazepines
 - Diuretics
 - SSRIs (Sertraline, Mirtazapine)
 - Non-invasive ventilation



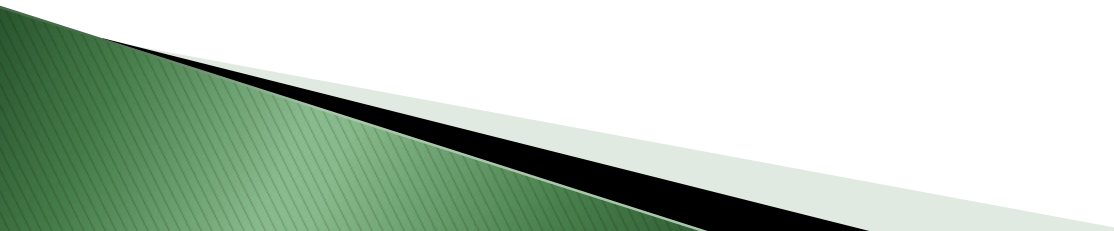
Opioids

- ▶ Decrease sensation of shortness of breath
 - ▶ Act on the respiratory center
 - ▶ Clinical studies have confirmed that opioids are safe and useful at appropriate doses and when judiciously titrated
 - ▶ Effective not only in advanced cancer patients but also in ALS, and terminal cardiac or pulmonary diseases
- 

Opioids in dyspnea

- ▶ Same model as for pain control
- ▶ Regular dose with Breakthrough (BT) dose prn
- ▶ Start with low dose ex: morphine 2,5–5mg po q 4h and 2,5mg po q 1h prn
- ▶ Titrate gradually and even slower in non-cancer patients
- ▶ Do not forget a laxative and anti-emetic
- ▶ A patient already on opioids can have a 25% increase in their dose.

Starting opioids

- ▶ Morphine 5 mg po q 4h
 - ▶ Hydromorphone 1 mg po q 4h
 - ▶ Oxycodone 5 mg po q 4h
 - ▶ A breakthrough dose can be given q1–3h prn
 - ▶ Exertional dyspnea may only require a prn dose
- 

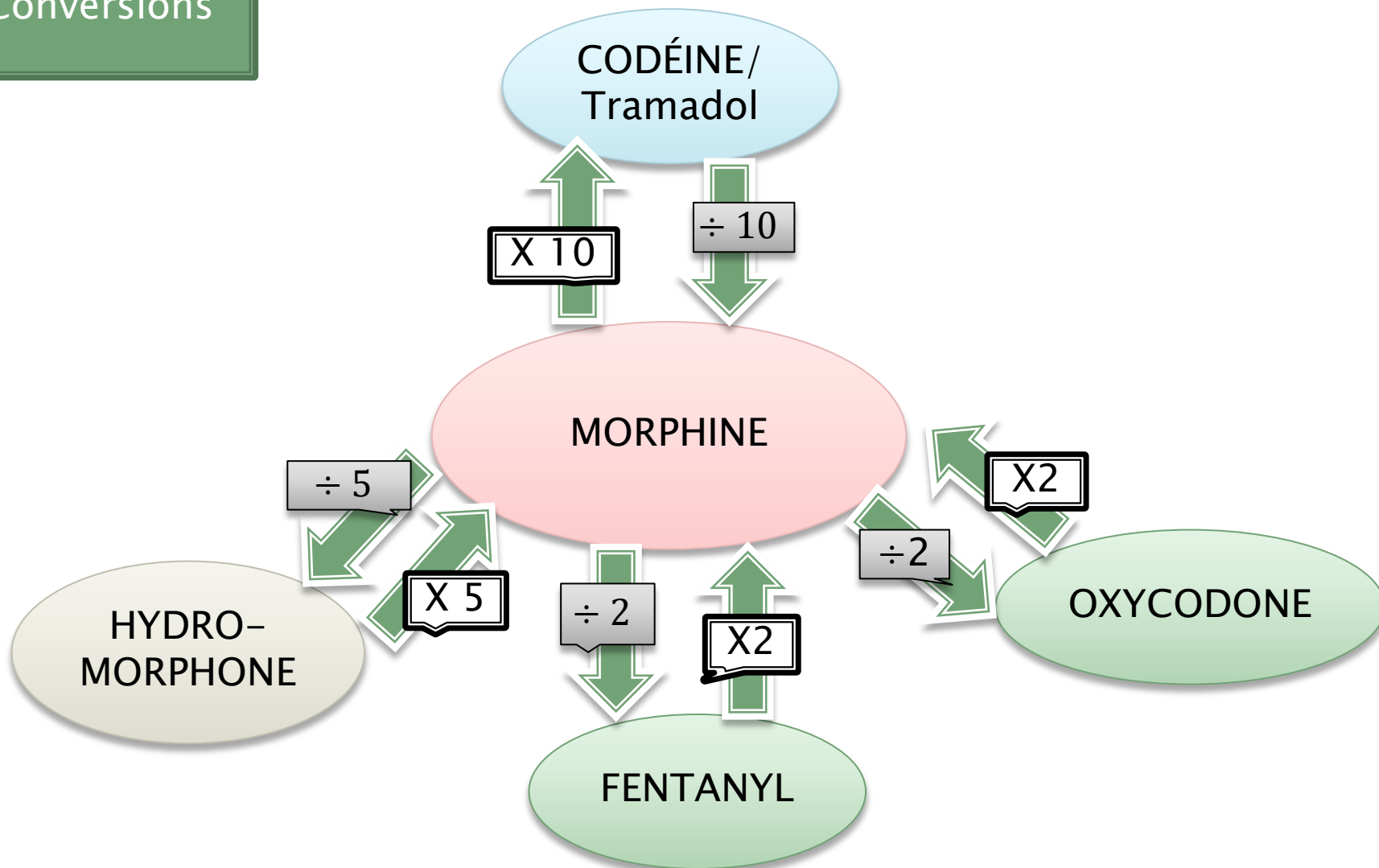
Breakthrough doses

- The breakthrough dose =10% of the total dose in 24 hours
Or you can use half the dose q 4h
Ex: Morphine 20mg q 4h reg = 120mg/24h
10%= Morphine 12 mg q 1-2h prn
Or, half the q 4h dose is 10 mg q 1-2 h prn
- The same molecule is used for breakthrough as the regular dose.
(exception: Fentanyl)
- If a patient requires more than 3 breakthrough doses per 24 hours,
we should consider increasing our regular dose.

Important info on Opioids

- ▶ PO to SC is 2:1
 - Morphine 20mg po = Morphine 10mg sc
 - Hydromorphone 2mg sc = hydromorphone 4mg po
- ▶ PO to IV is 3:1
- ▶ If we switch opioids we must first convert and then decrease the dose by 20–50%
- ▶ Be mindful of dose limits when using combination medication (ex. Tramacet)
- ▶ Codeine and Tramadol have “limits”

Conversions



Terminal Respiratory Congestion

- ▶ “Death rattle”
- ▶ Caused by the accumulation of secretions in patients who are too weak to expectorate
- ▶ Glycopyrrolate (Robinul): 0,2–0,6 mg sc q 2h prn
- ▶ Hyoscine hydrobromide (Scopolamine):
- ▶ 0,2–0,6 mg sc q2h prn or patch q72h
- ▶ *Atropine 1% 1–2 drops SL q2h prn

Acute respiratory distress

Benzodiazepine (Midazolam–Versed)

die or weight <70kg-----5mg sc

>die or weight > 70kg-----10mg sc

Opioid *If morphine*

0–3mg sc q4h-----5mg sc

≥ 4mg sc q4h-----1,5x la dose sc q4h
(max 50mg)

If hydromorphone

0–1mg sc q4h-----1mg sc

>1mg sc q4h-----1,5x the dose sc q4h
(max 10mg)

Anticholinergic

Robinul or Scopolamine-----0,6mg sc

Rx2

q15min

Conclusion

- ▶ Dyspnea is according to patients description
 - ▶ Dyspnea is linked to many diseases
 - ▶ Opioids are the most useful drugs in the tx of dyspnea, start low and go slow.
 - ▶ O₂ is useful in hypoxic patients
 - ▶ Non pharmacological management is essential
- 