

You can use morphine

Module 10

Learning objectives

- Explain the place of morphine in the World Health Organization pain ladder.
- Describe the side effects of morphine and how to deal with them.
- Explain how to deal with break through pain.
- Calculate and adjust the dose of morphine.
- State the legal requirements for prescribing morphine.
- Describe the signs of morphine overdose.

- Life before Death film; ‘Fight for the right’

Morphine



Morphine; essential pain relief

- Thomas Sydenham 1624 – 1689
- *‘Among the remedies which it has pleased Almighty God to give to man to relieve his sufferings, none is so universal and so efficacious as opium’*



Morphine; essential pain relief

- medical use of narcotic drugs (opioids) is indispensable for the relief of pain and suffering
- morphine should be available at all times in adequate amounts and appropriate dosage forms for the relief of severe pain
- low national consumption of opioids is a matter of great concern

Economic & Social Council of the United Nations 2005-25

Morphine; essential pain relief

- “Freedom from pain should be seen as a right of every cancer patient and access to pain therapy as a measure of respect for the right”

WHO, 1990



Global imperative for opioids

- cancer
- HIV/AIDS
- chronic pain

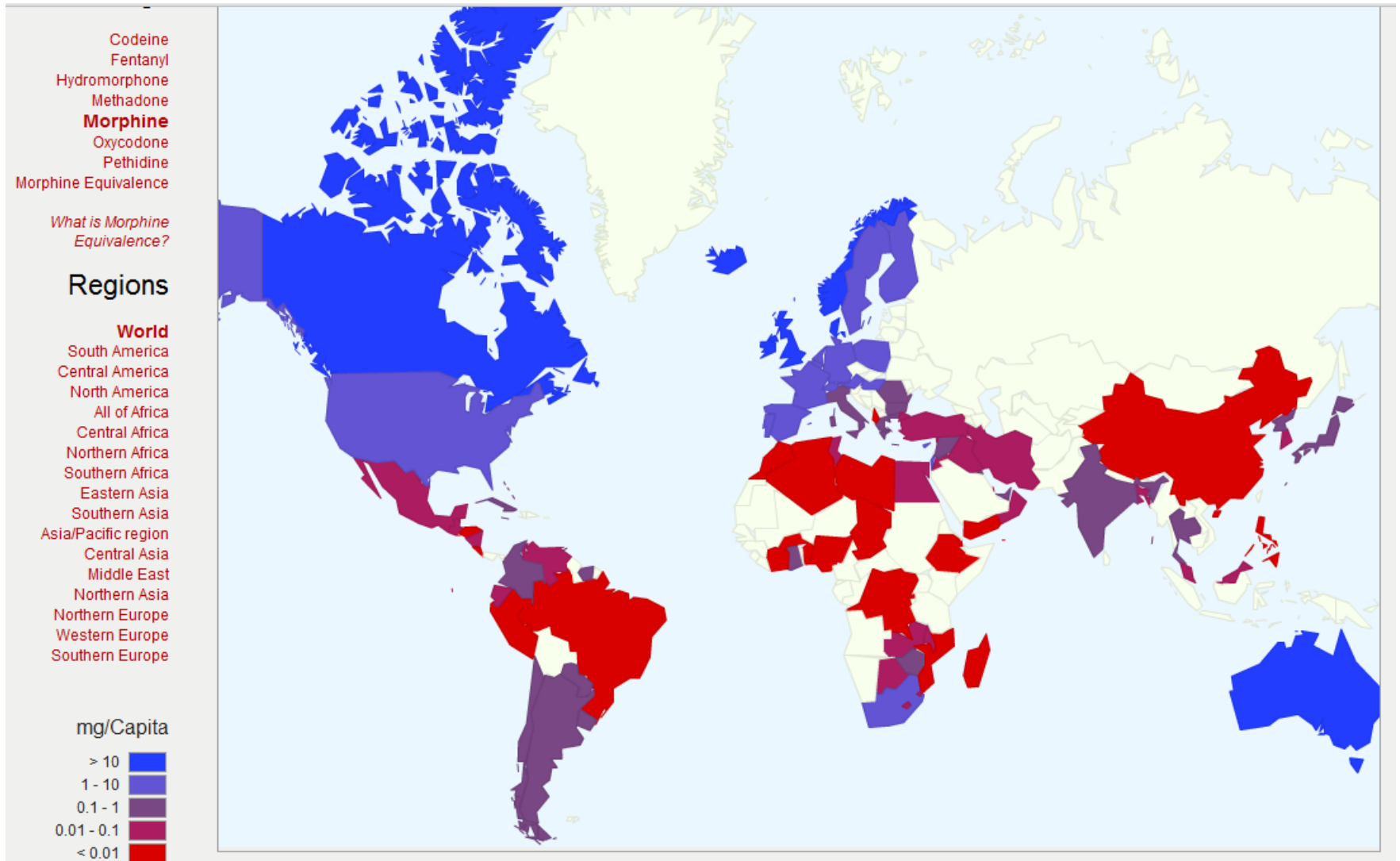


Oral morphine availability

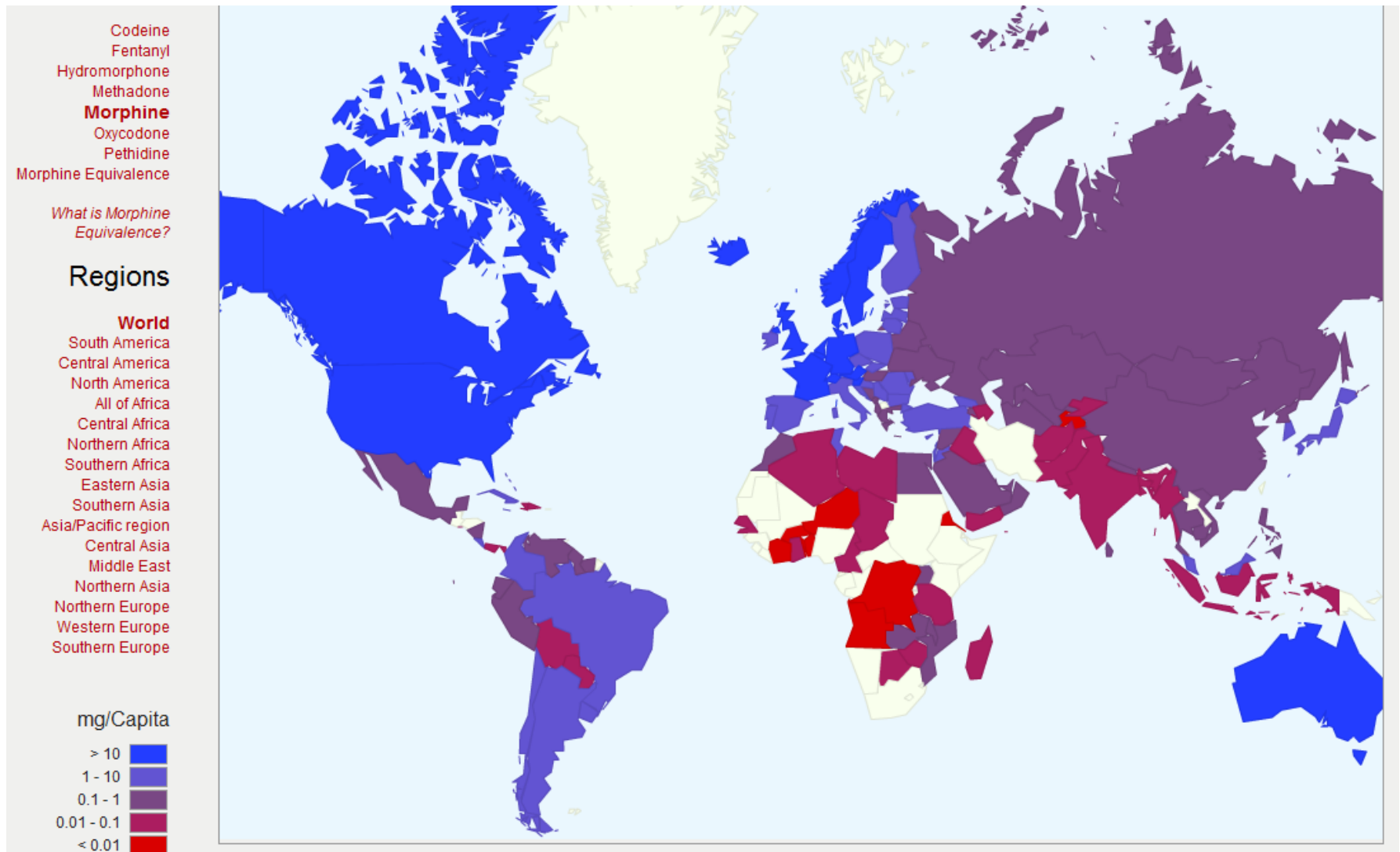
- WHO uses national morphine consumption statistics as rough indicator of programmes to improve cancer pain relief
- developing world
 - 80% share population
 - 6% consumption oral morphine



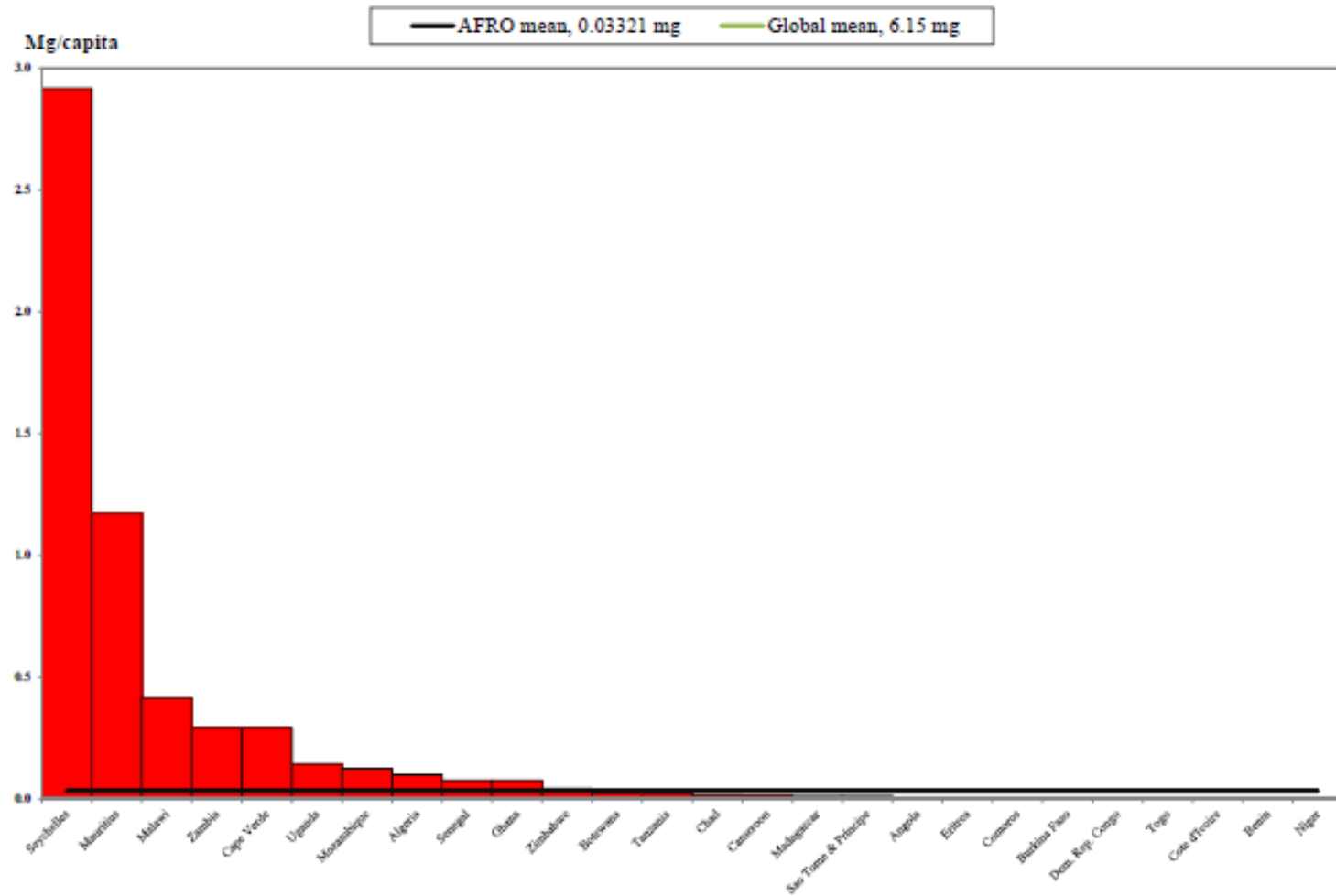
Morphine consumption mg/per capita 1989



Morphine consumption mg/per capita 2009



AFRO Consumption of Morphine, 2009



Sources: International Narcotics Control Board; World Health Organization population data
 By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2011

What are the barriers?



- barriers to accessing oral morphine:
 - excessively strict national drug laws and regulations
 - fear of addiction
 - poorly developed health care systems
 - lack of knowledge

A report for World Hospice and Palliative Care Day 2007
Published by Help the Hospices for the Worldwide Palliative Care Alliance



Survey of health care workers, and hospice/PC staff in Asia, Africa and Latin America

Beliefs about morphine

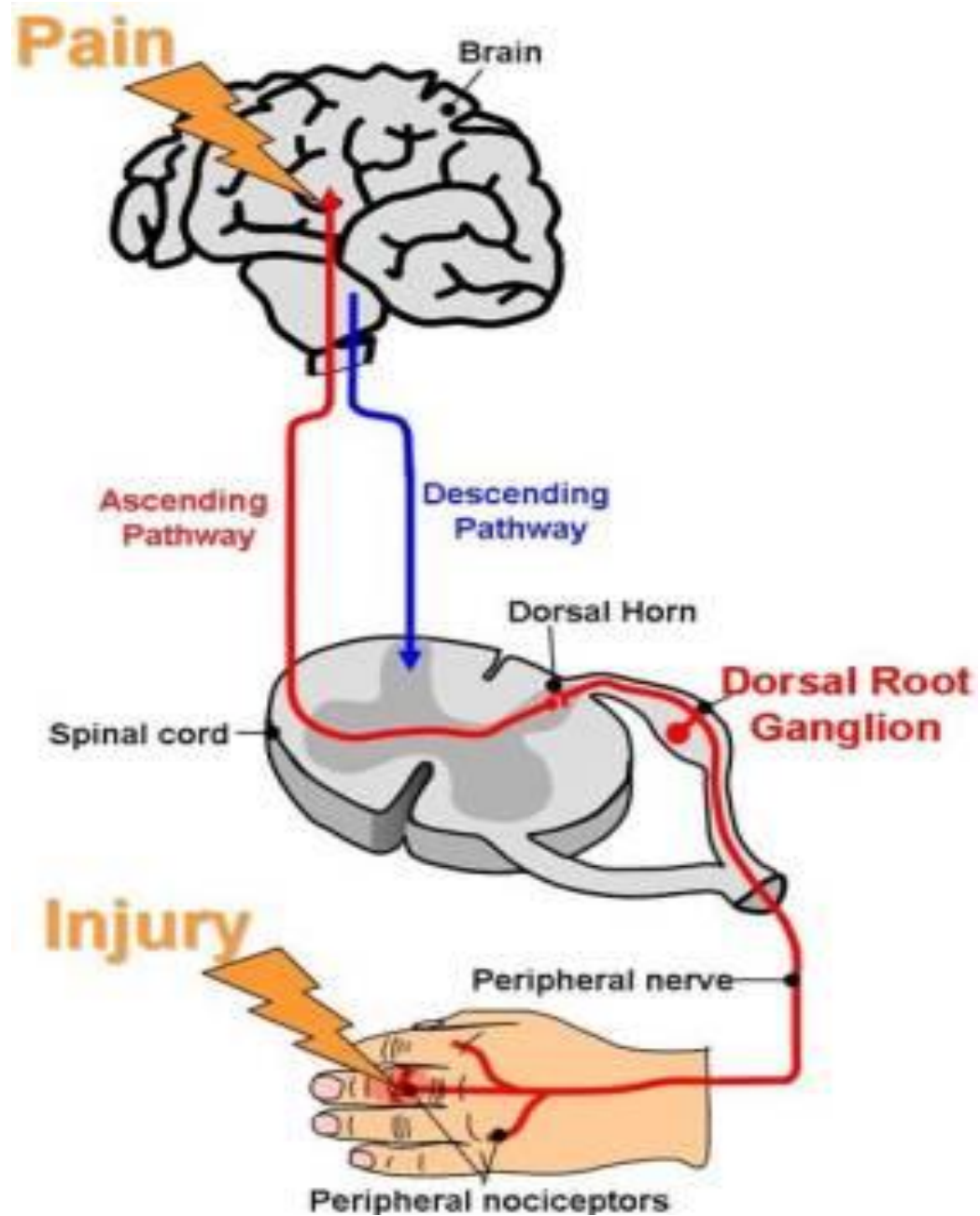
1. there is a maximum dose of morphine that can be given safely
2. tolerance to morphine occurs rapidly, so delay giving it till absolutely necessary
3. patients taking morphine are at risk of becoming addicted
4. morphine masks the signs and symptoms of disease progression

Beliefs about morphine

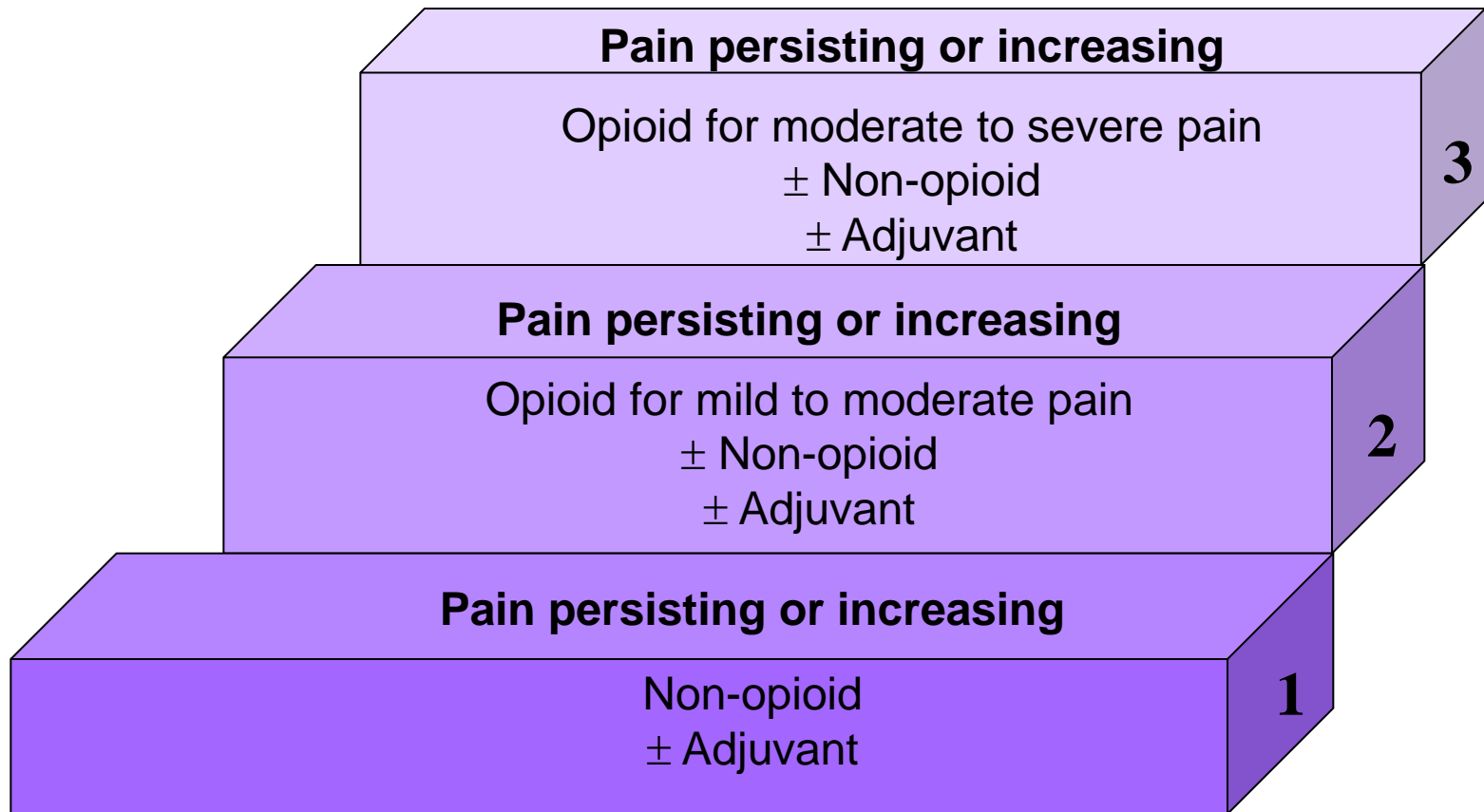
5. oral morphine commonly causes reparatory depression
6. oral morphine is liable to misuse or diversion if a supply is given tot he patient
7. morphine an expensive medication
8. oral morphine is difficult to access in this hospital / state

Role play

- You are wanting to change your colleagues habit of prescribing IM pethidine for his sickle cell patients. He is unhappy with the use of oral morphine as he knows you are using an addictive drug. He comes to your office to discuss his concerns



WHO analgesic ladder



Morphine

Side effects

- constipation 95%
 - no tolerance develops
- drowsiness 33%
 - 2-3days
- nausea 33%
 - 2-3days
- urinary retention *occais*

Morphine

Side effects

- constipation 95%
 - anticipate
 - dietary advice
 - encourage fluid intake
 - use softener / stimulant laxative combination
 - bisacodyl 10mg od – tds, cremaffin 10-20mls
 - *no tolerance develops*

Morphine

Side effects

- drowsiness 33%
 - usually short lived
 - good communication
 - careful dose titration

Morphine

Side effects

- nausea 33%
 - mechanism
 - stimulation chemoreceptor trigger zone
 - reduced colonic motility
 - management
 - good communication
 - haloperidol 1.5-3mg
 - *tolerance usually develops*

Morphine

Toxicity

- delirium
- myoclonus
- respiratory depression – very rare with oral dosing

Morphine side effects

- True and false exercise p69TTM

Morphine prescribing

Pain management guidelines MPCU

Step	Analgesics	Comments	Adjuvants
Step 1 (non-opioid)	Paracetamol 1g 6 hourly OR NSAID: <ul style="list-style-type: none"> Ibuprofen 400mg 8 hourly Diclofenac 50mg 8 hourly 	<ul style="list-style-type: none"> Continue with step 1 analgesic when moving to step 2 and 3 of the WHO analgesic ladder. 	<ul style="list-style-type: none"> Amitriptyline 12.5-25mg nocte for neuropathic pain (can be increased to 50-75mg if tolerated). Clonazepam 0.5-1mg nocte for neuropathic pain second line.
Step 2 (weak opioid)	Morphine 2.5-5mg 4 hourly during the day with a double dose at night OR Codeine Phosphate 30-60mg 6 hourly OR Tramadol 50-100mg 6 hourly	<ul style="list-style-type: none"> Low dose Morphine is considered a step 2 analgesic and is recommended first line if available as it is cheaper than Codeine or Tramadol. Discontinue step 2 analgesics when moving to step 3 of the ladder. 	<ul style="list-style-type: none"> Dexamethasone 4-8mg od for swelling/ oedema e.g. liver capsular stretch. Hyoscine Butylbromide (buscopan) 10-20mg tds po for smooth muscle spasm.
Step 3 (strong opioid)	Morphine 7.5-10mg 4 hourly during the day with a double dose at night. Increase the dose as required to control the patient's pain.	<ul style="list-style-type: none"> The elderly and/or those with renal impairment may require a dose adjustment. For children see separate guideline. 	<ul style="list-style-type: none"> Diazepam 5-10mg nocte for painful skeletal muscle spasm.

Morphine prescribing

Titration

- Use the ladder as a guide choosing the step according to the severity
 - eg moderate pain step 2 or severe pain step 3
- Use breakthrough medication at the same dose as the 4 hourly
 - eg oral morphine 10mg 4 hourly plus 10mg for breakthrough pain

Morphine prescribing

Titration

- Re-assess and review and consider titration of oral morphine dose if pain still uncontrolled
 - use number of breakthroughs as guide to overall dose
 - increase 4 hourly dose by 30 to 50%
 - remember to consider non-opioids ad adjuvants and manage side effects

Morphine prescribing

■ Example:

- A patient is taking 20mg NR(normal release) morphine every four hours:
- He has also taken three breakthrough doses of 20mg in the last 24 hours
- **Total daily dose** = $120 + 60 = 180\text{mg}$
- **Regular dose** = $180/6 = 30\text{mg}$ NR morphine every four hours
- **Breakthrough dose** = $180/6 = 30\text{mg}$ NR morphine as required

Morphine calculations

- Practice writing morphine calculations using Resource 7

- These resources are developed as part of the THET multi-country project whose goal is to strengthen and integrate palliative care into national health systems through a public health primary care approach
 - Acknowledgement given to Cairdeas International Palliative Care Trust and MPCU for their preparation and adaptation
 - part of the teaching materials for the Palliative Care Toolkit training with modules as per the Training Manual
 - can be used as basic PC presentations when facilitators are encouraged to adapt and make contextual



THE UNIVERSITY of EDINBURGH
Global Health Academy

