

Development of palliative medicine teaching resource for medical students

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BACKGROUND:

Y Bwthyn Newydd (YBN), the specialist palliative care unit in Princess of Wales Hospital, is regularly attended by third and final year medical students on attachment. We have developed a two page teaching resource to distribute to students to enhance their learning experience on the unit.

The aim is for the tool to be used as a revision aid for exams and to help students prepare for foundation training when they are likely to encounter deteriorating and dying patients on wards.

The information on the resource was determined by resident doctors working within palliative medicine based on their own experiences in medical school and as foundation doctors on hospital wards.

Feedback was gathered from colleagues including consultants and clinical nurse specialists in palliative medicine to ensure the information was relevant and accurate.



SUMMARY OF RESULTS:

We gathered verbal feedback from 15 third and final year students over a period of 8 weeks. Feedback was unanimously positive. Students felt the tool was useful to consolidate their learning during the attachment and helped them to feel more confident in managing dying patients. They particularly found the guidance on appropriate selection of antiemetic helpful as well as the section on anticipatory prescribing at the end of life. Suggestions for improvement from the initial handout included the addition of 'recognising dying' and 'opioid toxicity' which we have included on the final document.

DISCUSSION AND CONCLUSION:

In YBN we are passionate to deliver a positive experience for students on their palliative medicine placements. The development of a concise teaching aid containing the most relevant information for students approaching exams and foundation training has received excellent feedback.

Whilst the primary aim was to create a resource for students to optimise their palliative medicine learning, an unanticipated outcome was that resident doctors on the unit also benefitted from the resource as they could use it as a tool to provide structured face to face teaching to students. This was particularly empowering for resident doctors in their earlier years of training who lacked confidence in teaching particularly on a specialist topic.

Using the tool to deliver teaching improved student experience on the specialist palliative care unit as they were able to engage in an interactive session revising medical practice they had witnessed on the unit. The trainer mutually benefitted from these sessions.

Our hope is that this tool can continue to evolve and be used by both students and trainers to optimise their placements in specialist palliative medicine.

PALLIATIVE MEDICINE FOR MEDICAL STUDENTS

Welcome to the Y Bwthyn Newydd Palliative Care Team! We are a multidisciplinary team based in an 8 bed specialist unit. Together we provide compassionate, holistic care for patients with life limiting illnesses - whether they are staying in our specialist unit, admitted to the main hospital, or being cared for in the community. Our focus is on improving quality of life as patients approach the end of life through prioritising comfort and symptom management and by providing psychosocial support.

RECOGNISING DYING

There are three main trajectories of dying as depicted in the graph. When considering death due to malignancy there is usually a period of deterioration in the last 12 weeks of life. Signs of deterioration include:

- decreasing functional ability
- increasing fatigue
- reduced appetite
- cachexia
- increasing burden of symptoms

This process escalates during the last days of life with daily deterioration until someone becomes bedbound and moribund. When patients become too weak to swallow they can gather secretions in their airways which can cause an audible bubbling sound on respiration. As death becomes more imminent changes in breathing pattern may be evident with periods of apnoea and some patients can become unsettled, restless and agitated.

When someone is identified as being in their last days of life consideration should be given to prescribing "anticipatory medications" for symptoms at the end of life.

Symptom	Medications	Starting dose	Additional notes
PAIN	Morphine	2.5mg hourly	Oxycodone is preferred for patients with renal impairment
NAUSEA + VOMITING	Haloperidol or Cyclizine	1mg 4 hourly 50mg TDS	Antiemetic selection dependent on cause of N+V
AGITATION	Midazolam	2.5mg hourly	Titrate according to response
RESPIRATORY SECRETIONS	Glycopyrronium bromide or Hyoscine hydrobromide	200 micrograms 4 hourly 400 micrograms 4 hourly	Hyoscine more sedating than glycopyrronium

Subcutaneous Anticipatory Medications for Symptoms in Last Days of Life

Continuous Subcutaneous Infusions

Also known as a syringe driver a CSCI device can deliver a continuous infusion of symptom control medications over a 24 hour period.

Indications for CSCI include:

- Patient too drowsy to tolerate oral medication
- Refractory vomiting
- Poor enteral absorption due to intraabdominal disease

Many patients will have CSCI devices in their own home.

Nausea and Vomiting

A good history is needed to establish the cause of vomiting to allow for selection of the most appropriate antiemetic

- Biochemical cause eg renal failure, hypercalcaemia, opioids → Haloperidol
- Vestibular or intracranial cause eg brain tumour → Cyclizine
- Gastric stasis eg peritoneal disease → Metoclopramide
- Refractory vomiting → Levomepromazine

ANALGESIA PRESCRIBING

Non Opioids	Weak Opioids	Strong Opioids	Specialist interventions:
Paracetamol NSAIDs	Codeine Tramadol	Morphine Oxycodone Alfentanil Hydromorphone Diamorphine Buprenorphine (TD) Fentanyl (TD)	Radiotherapy Interventional pain procedures

ADJUNCTS FOR ANALGESIA

- Neuropathic Pain → Gabapentin, Amitriptyline, Pregabalin
- Inflammatory pain → NSAIDs, Dexamethasone
- Refractory pain (specialist use) → Ketamine, methadone

Signs of **OPIOID TOXICITY** include drowsiness, confusion, vivid dreams, visual hallucinations and myoclonic jerks.
Management: Check renal function if appropriate as morphine can accumulate in renal failure. Consider switch to alternative opioid. Consider dose reduction but avoid abrupt cessation as this can induce pain crisis. Naloxone to be reserved for severe toxicity causing respiratory depression.

PO - SC Drug Conversions

To convert regular oral morphine to subcutaneous morphine for administration via CSCI:

Calculate 24 hour dose oral morphine
Divide by 2
Prescribe via CSCI over 24 hours
Prescribe 1/6th this dose as a breakthrough dose

PO Oxycodone 5mg	← PO Morphine 10mg
↓	↓
SC Oxycodone 2.5mg	SC Morphine 5mg

HOW TO CALCULATE BREAKTHROUGH DOSING

Worked example: A patient is on 30mg BD modified release morphine. What would be their breakthrough dose of immediate release morphine (Oramorph)?

Calculate total 24h dose: 30mg x 2 = 60mg per day

Breakthrough dose = 1/6 of 24h dose = 10mg Oramorph 1 hourly

URGENT PRESENTATIONS IN PALLIATIVE CARE

- SPINAL CORD COMPRESSION**
Presentation: New or worsening back pain, Limb weakness/numbness, Urinary retention/incontinence.
Interventions: Dexamethasone 8mg BD, Urgent MRI whole spine, Discussion with neurosurgery/oncology for consideration of spinal decompression surgery or radiotherapy.
Delays may cause permanent paralysis.
- HYPERCALCAEMIA**
Presentation: Confusion, fatigue, nausea, constipation, polyuria, dehydration, bone pain, abdominal pain.
Interventions: IV fluids, IV bisphosphonates (e.g. zoledronic acid).
- BOWEL OBSTRUCTION**
Presentation: Vomiting, abdominal pain and distension, no bowel movements or flatus.
Interventions: Antiemetics (do not use metoclopramide if complete obstruction), Analgesia, Octreotide to reduce vomiting if large volume.
Please note: This approach differs from an acute surgical presentation where management is with NG tube, IV fluids +/- surgery.

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