Exceptional Care of the Dying Patient

Without Hospice Support

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Disclosures

There are no conflicts of interest or relevant financial interests to disclose.

No industry ties.

Objectives

- Recognize the dying patient
- Anticipate patient/family concerns at end of life
- Discuss treatment of common end of life symptoms

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Training

- End of life (EOL) care is often neglected in training
- Lack of knowledge about the physical changes/expected course during the dying process

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How Patient Die

- Life = 100% Mortality
- <10% die suddenly
- >90% die after prolonged illness

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What to expect?

- Declining level of alertness, confusion, withdrawal
- Changes in breathing pattern
- Agitation
- Not wanting foods or liquids
- Secretions in airway "death rattle" when no longer swallowing
- Mottling of the skin
- Decreased urine output
- Glassy, half opened eyes

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Recognition

- Important for family and care team planning
  - Most families are unfamiliar with the dying process
    - Not sure what is "normal"
    - Time of increased stress for families
- Discuss with family in terms of "hours to days" and "days to weeks"
  - Unforeseen changes
  - Nursing knows the patient ***trajectory*** best!

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How much time do we have?

- If anuric and no dialysis, or stopping dialysis, 10-12 days expected
- Can live weeks without any nutrition or hydration in an obtunded state
- People die when they are ready
- Death is a solo journey

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Nutrition/Hydration

- Not dying because your not eating, not eating because your dying
  - Typically no hunger at end of life
- Fluids and food are not processed in the same way
  - IV hydration can increase discomfort, respiratory distress, and worsen edema
- Low caloric needs – survival can be weeks

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Common Symptoms

- Pain
- Dyspnea
- Delirium
- Secretions

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Goals of Pain Management

- Provide adequate pain and symptom control
- Decrease distress caused by pain in the patient and family
- Provide an acceptable sense of control
- Optimize quality of life (QOL)

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Is my patient having pain?

- Nonverbal signs: grimacing, moaning, brow furrowing, *agitation*
  - Use patient's reaction to cares/turning
  - Avoid focusing on vital signs
- PAINAD score
  - Breathing, vocalization, facial expression, body language, consolability
- Involve family – if present

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PAINAD

Items	Score = 0	Score = 1	Score = 2	Score
Breathing (independent of vocalization)	Normal	• Occasional labored breathing • Short period of hyperventilation	• Noisy labored breathing • Long period of hyperventilation • Cheyne-Stokes respirations	
Negative vocalization	None	• Occasional moan or groan • Low level of speech with a negative or disapproving quality	• Repeated troubled calling out • Loud moaning or groaning • Crying	
Facial expression	Smiling or inexpressive	• Sad • Frightened • Frown	• Facial grimacing	
Body language	Relaxed	• Tense • Distressed pacing • Fidgeting	• Rigid • Fists clenched • Knees pulled up • Pulling or pushing away • Striking out	
Consolability	No need to console	• Distracted or reassured by voice or touch	• Unable to console, distract, or reassure	
Total				

Note. Total scores range from 0 to 10 (based on a scale of 0 to 2 for each of five items), with a higher score indicating more behaviors indicating pain (0 = no observable pain to 10 = highest observable pain).
Adapted from Warden, V., Hurley, A.C., & Volicer, L. (2003). Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. Journal of the American Medical Directors Association, 4, 9-15.

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Treatment of Pain at EOL

- Medication selection
  - Avoid morphine in patient reduced CrCl
- Route of medication
  - Concentrated oral solutions – most medications “SL”
  - IV medications
- Medication administration
  - Medicate prior to turning if pain with movement – anticipate “incident” pain

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Opioid Selection – WHY it matters…

- One size **DOES NOT** fit all!!!
  - Allergies
  - Renal impairment
  - Liver impairment
  - Individual receptor prevalence
- Consider your patient…

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Commonly used Opioids in Palliative Medicine

- Hydromorphone
- Oxycodone
- Morphine
- Fentanyl

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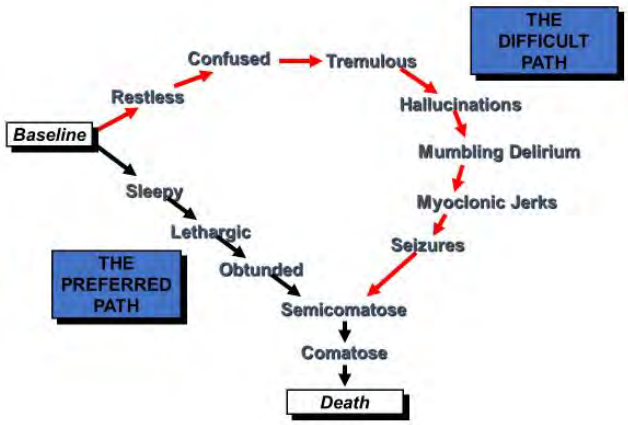
The Dying Process



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Routes of Administration

- Oral
- Transmucosal
  - Buccal
  - Sublingual
- Rectal
- Transdermal
- Parenteral
  - Intravenous
  - Intramuscular
  - Subcutaneous

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Short-acting PO/SL opioids

- Onset: 20-30 minutes
- Peak effect: 60-90 minutes
- Duration of effect: 2-4 hours
  - If normal renal/hepatic function

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IV opioids

- Onset: 5-10 minutes
- Peak effect: 15-20 minutes
- Duration of effect: 2-4 hours

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Opioids are not equivalent…

	PO/SL	IV	PO/SL	IV
Morphine	30	10	2.5 mg q 4 hrs	1 mg q 2 hrs
Oxycodone	20	—	2.5 mg q 4 hrs	—
Hydromorphone	7.5	1.5	1 mg q 4 hours	0.2 mg IV q 2 hrs

Factor conversion from oral Morphine to oral hydromorphone is 4:1

Factor conversion from oral Morphine to oral Oxycodone is 3:2

Factor conversion from oral Morphine to IV hydromorphone is 20:1

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Principles of Equianalgesia

- If a switch is being made from one opioid to another it is recommended to start the new opioid at ~50-75% of the equianalgesic dose
  - IMPORTANCE: the tolerance a patient has towards one opioid, may not completely transfer (incomplete cross-tolerance) to the new opioid
    - Different receptor prevalence

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Conversion Example

- 64 y/o FM with metastatic non-small cell lung cancer admitted with sepsis and associated ARF
  - 5 mg of IM morphine q4hrs PRN
  - 2 mg IV morphine q1hr PRN

- Change the opioid
- Transition to oral opioid with IV opioid for rescue

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Conversion continued…

- Conversion:
  - 2 mg IV MS x $\frac{\text{1.5 mg IV hydromorphone}}{\text{10 mg IV MS}}$ = 0.3 mg IV hydromorphone

- Dose reduction for incomplete cross tolerance:
  - 0.3 mg IV hydromorphone x 0.75 = 0.225 mg IV hydromorphone

- Dose most appropriate for administration:
  - 0.225 mg IV hydromorphone = 0.2 mg IV hydromorphone
  - 0.2 mg IV hydromorphone = 1 mg oral hydromorphone
    = 2 mg oral oxycodone (25% reduction)
    = 3 mg oral morphine (25% reduction)

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Dyspnea

- Use opioids for breathlessness or increased work of breathing
- Fast breathing is not always uncomfortable
  - Do not titrate to respiratory rate
- If awake and alert may offer O2 for comfort
  - If obtunded, O2 may cause/worsen agitation

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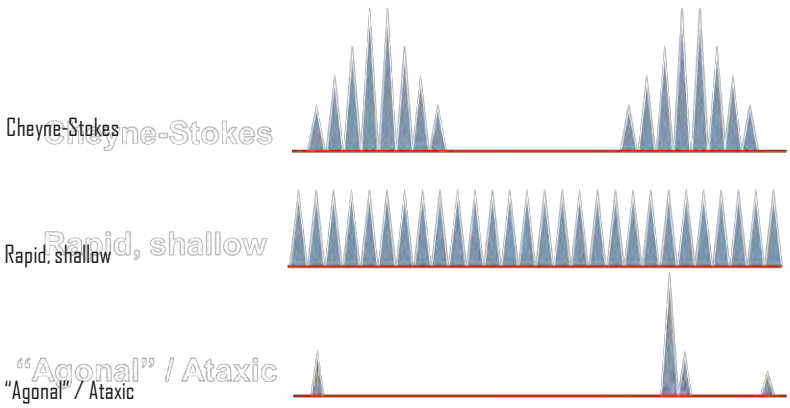
Breathing PATTERNS – hours/days



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Delirium

- Delirium is an abrupt change in mental status that includes confusion, inattention and altered levels of consciousness.

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Delirium

- "Terminal delirium"
  - Antipsychotics typically used
  - Ativan is used but beware of paradoxical reaction!

- Agitated delirium or is it pain?
  - Treat for pain adequately, note response
  - If no response to opioids, use the PRN antipsychotic

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Secretions

- Pool at glottis when no longer swallowing
  - Not uncomfortable for patient

- Anticipate secretions as patient moves through dying process
  - Stop/minimize fluids
  - Reposition patients to be more upright
  - Glycopyrrolate IV does not cause sedation
  - Atropine SL
  - Avoid deep suction

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Case Presentation…

57 y/o male

4th admission in 3 months

- Extensive upper/lower extremity peripheral arterial disease
- S/P bilateral AKAs
- S/P L 2nd, 3rd, & 4th digit amputations
- POD #8 R AKA revision for abscess
- POD #3 RUE angioplasties
- Osteomyelitis R femur
- R index finger gangrene now POD #1 from amputation
- Malnutrition
- Worsening bilateral lower lobe pneumonia
- Encephalopathy
- PPS = 20-30%.

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Palliative Performance Scale

PPS

%	Ambulation	Activity Level & Evidence of Disease	Self-care	Intake	Level of Consciousness
100	Full	Normal *No disease*	Full	Normal	Full
90	Full	Normal *Some disease*	Full	Normal	Full
80	Full	Normal with effort *Some disease*	Full	Normal or reduced	Full
70	Reduced	Can't do normal job or work *Some disease*	Full	As above	Full
60	Reduced	Can't do hobbies or housework *Significant disease*	Occasional assistance needed	As above	Full or confusion
50	Mainly sit/lie	Can't do any work *Extensive disease*	Considerable assistance needed	As above	Full or confusion
40	Mainly in bed	As above	Mainly assistance	As above	Full or drowsy or confusion
30	Bed bound	As above	Total Care	Reduced	As above
20	Bed bound	As above	As above	Minimal	As above
10	Bed bound	As above	As above	Mouth care only	Drowsy or Coma
0	Death				

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Background information

- Health Care Directive had been completed naming his wife as his surrogate decision maker
- No POLST
- No medical decision-making capacity
  - Unable to receive information
  - Unable to evaluate, deliberate, or mentally manipulate the information presented to him
  - Unable to consistently communicate a treatment preference

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Goals of Care

- "Suffering"
- "No quality of life"
- At "peace" with dying
- Decision is made for "comfort care"

No ETI	No ABX
No CPR	Vital signs once daily
No ICU	Diet for comfort/pleasure feeding
No vasopressors	All meds not directly related to comfort d/c
No labs	Unlikely to survive to hospital discharge
No imaging	
No IV fluids	

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Orders for EOL Symptom Management

PAIN Management

- Acetaminophen 650 mg SUPP PR q4hr PRN mild pain/fever

- CrCl is 32 mL/min so avoid morphine
  - Previous order morphine 4 mg IV q2hr PRN severe pain
  - Morphine 4 mg IV = 6 mg SL oxycodone or ~ 0.4 mg IV hydromorphone when reducing by 25% to account for incomplete cross tolerance
  - New orders:
    - Oxycodone oral concentrate 6 mg SL q2hr PRN pain/SOB at end of life
    - Hydromorphone 0.4 mg IV q20min PRN pain/SOB as a rescue medication if no perceived benefit from the oral oxycodone
    - With regard to dosing, if symptoms are not adequately controlled with the current dosing, could increase dose of medication by 50% to 100%

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Orders for EOL Symptom Management…

SHORTNESS OF BREATH

- Same pharmacologic recommendations as previous slide

- Nonpharmacologic recommendations include:
  - Positioning (sitting up)
  - Increasing air movement via a small bedside fan
  - Use of bedside relaxation techniques

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Orders for EOL Symptom Management…

AGITATION / RESTLESSNESS / DELIRIUM

- Haloperidol oral solution 2 mg SL q2hr PRN (QTc 430 ms)
  - If necessary, increase dose to 3 mg
  - If necessary, consider scheduling dose q6h or q8h
- An alternative option – olanzapine dissolving tablet 5 mg q6hr PRN
  - Max dose per 24 hrs is 20 mg

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Orders for EOL Symptom Management…

ANXIETY

- Lorazepam oral solution 1 mg SL q4hr PRN
  - This does not treat air hunger
  - Should only be used after a trial of antipsychotic as lorazepam can cause "paradoxical" worsening of confusional states

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Orders for EOL Symptom Management…

SECRETIONS / CONGESTION

- Glycopyrrolate 0.2 mg IV q2hr PRN
- Atropine 1% ophthalmic 2 drops SL q2hr PRN
- Hyoscyamine dissolving tablet 0.125 mg SL q3hr PRN
- Avoid scopolamine due to onset time
- Repositioning to assist postural drainage of secretions
- Avoid deep suctioning

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Orders for EOL Symptom Management…

OPIOID INDUCED CONSTIPATION

- Senna 2 tabs PO qHS PRN
  - Could schedule this or increased to 2 tabs BID
  - Max dose 8 tabs daily
  - Could use Senna syrup if needed

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THANK YOU!!

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