Controlled Substance Issues in Geriatric Patients, Including Palliative Care

Gregory W. Ayers, M.D., FACP, FAAHPM, HEC-C, HMDC

Disclosures

- Director of Palliative Medicine - Princeton and Brookwood Baptist Medical Centers
- Chairman - Medical Ethics Committee, Princeton and Brookwood Medical Centers
- Regional Medical Director for Alabama - Kindred Hospice
- Alabama State Committee of Public Health - Chair
- Alabama State Board of Medical Examiners - Board Member
- Medical Association of the State of Alabama - Board Member
- Cadenza Health, partner
- Physician Reviewer, Carelon Post Acute Services/Elevance Health

2

Objectives

- Discuss prescribing issues in geriatric patients
- Improve awareness of the Beers Criteria
- Describe some common problems with controlled substances in hospice and palliative medicine
- Improve communication skills

"When you're retired, you'll have plenty of time to do more reading...mostly prescription labels."

Geriatric Prescribing

- 87% were prescribed at least one medication
- 36% were prescribed 5 or more medications
- 38% also took OTC medications
- In one sample of Medicare nursing home patients, patients were prescribed an average of 14 medications
- Use of herbal and dietary supplements is rising
- 30% of geriatric hospital admissions are related to medication-related adverse events

5

Geriatric Prescribing

- Individuals >65 years account for 1/3 of all prescription medications (but, they only represent approximately 13% of the population)
- Polypharmacy is common (generally defined as the use of at least 5 medications)
- Drug misuse and abuse in the elderly can cause cognitive and physical impairment: increases risk for falls, MVAs, and may result in a declining ability to perform ADLs
- Substance abuse: abusers are stereotyped as being young, so we miss it in this population

6

Polypharmacy

- Geriatric population is at greater risk for adverse drug events (ADEs) - metabolic changes and decreased drug clearance associated with aging
- Increases the potential for drug-drug interactions
- Independent risk factor for hip fractures
- At risk of developing "prescribing cascades" (an ADE is misinterpreted as a new medical condition and additional pill(s) is/are prescribed to treat this problem
- Use of multiple medications is associated with medication noncompliance

7

8

Beers Criteria

» Medications considered potentially inappropriate for use in older patients, mostly due to high risk for adverse events

» Some are available as over-the-counter products

» These are medications to avoid, and they fall into 5 categories:

1. Most older adults
2. Older adults with certain conditions
3. In combination with other treatments because of the risk for harmful "drug-drug" interactions
4. Use with caution because of the potential for harmful side effects
5. Drug dose adjustment or avoidance based on kidney function

9

Beers Criteria

- Evidence-based
- Updated periodically
- American Geriatrics Society website: www.americangeriatrics.org

From THE AMERICAN GERIATRICS SOCIETY

A POCKET GUIDE TO THE

2023 AGS BEERS CRITERIA®

This clinical tool, based on the 2023 AGS Updated Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults (AGS Beers Criteria®), has been developed to assist healthcare providers in improving medication safety in older adults. Our purpose is to inform clinical decision-making concerning the prescribing of medications for older adults in order to improve safety and quality of care.

Originally conceived of in 1991 by the late Mark Beers, MD, a geriatrician, the Beers Criteria catalogues medications that cause side effects in the elderly due to the physiologic changes of aging. The 2023 American Geriatrics Society (AGS) Beers Criteria® (AGS Beers Criteria®) for Potentially Inappropriate Medication (PIM) Use in Older Adults is the seventh overall update and fourth since AGS became the criteria's steward in 2011. As with previous updates, the AGS and its expert panel have attempted to preserve the spirit and intent of the original Beers Criteria by providing an explicit list of PIMs that are best avoided by older adults in most circumstances or under specific situations, such as certain diseases, conditions, or care settings.

The full document, along with accompanying resources and an appendix of medications removed from the criteria tables, can be found in its entirety online at geriatricscareonline.org.

INTENDED USE

The criteria are intended to be applied to adults 65 years old and older in all ambulatory, acute, and institutionalized settings of care, except hospice and end-of-life care settings.

The intention of the AGS Beers Criteria® is to: (1) reduce older adults' exposure to Potentially Inappropriate Medications (PIMs) by improving medication selection; (2) educate clinicians and patients; and (3) serve as a tool for evaluating quality of care, cost, and patterns of drug use in older adults.

- This should be viewed as a guideline for identifying medications for which the risks of use in older adults often outweigh the benefits.
- The criteria are a blunt instrument, and we are unable to delineate all specialized use cases and possible exceptions to the criteria.
- This list is not meant to supersede clinical judgment or an individual patient's values and needs.
- Prescribing for older adults is often a complex endeavor involving the consideration of many factors, particularly the preferences and goals of the patient and family.
- These criteria are not meant to be applied in a punitive manner.
- These criteria also underscore the importance of using a team approach to prescribing and the use of non-pharmacological approaches and of having economic and organizational incentives for this type of model.
- The criteria are not applicable in all circumstances (i.e., patients receiving palliative and hospice care). If a provider is not able to find an alternative and chooses to continue to use a drug on this list in an individual patient, designation of the medication as potentially inappropriate can serve as a reminder for close monitoring and periodic review.

The primary target audience is the practicing clinician. Although the AGS Beers Criteria® may be used internationally, it is specifically designed for use in the United States and there may be additional considerations for certain drugs in specific countries.

AGS THE AMERICAN GERIATRICS SOCIETY
Geriatrics Health Professionals.
Leading change. Improving care for older adults.

Table 1 Continued

Organ System, Therapeutic Category, Drug(s)[a]	***Recommendation,*** Rationale, *Quality of Evidence (QE[b]), Strength of Recommendation (SR[b])*
Benzodiazepines ■Alprazolam ■Chlordiazepoxide (alone or in combination with amitriptyline or clidinium) ■Clobazam ■Clonazepam ■Clorazepate ■Diazepam ■Estazolam ■Lorazepam ■Midazolam ■Oxazepam ■Temazepam ■Triazolam	***Avoid*** The use of benzodiazepines exposes users to risks of abuse, misuse, and addiction. Concomitant use with opioids may result in profound sedation, respiratory depression, coma, and death. Older adults have increased sensitivity to benzodiazepines and decreased metabolism of long-acting agents; the continued use of benzodiazepines may lead to clinically significant physical dependence. In general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults. May be appropriate for seizure disorders, rapid eye movement sleep behavior disorder, benzodiazepine withdrawal, ethanol withdrawal, severe generalized anxiety disorder, and periprocedural anesthesia. *QE = Moderate; SR = Strong*
Nonbenzodiazepine benzodiazepine receptor agonist hypnotics ("Z-drugs") ■Eszopiclone ■Zaleplon ■Zolpidem	***Avoid*** Nonbenzodiazepine benzodiazepine receptor agonist hypnotics ("Z-drugs") have adverse events similar to those of benzodiazepines in older adults (e.g., delirium, falls, fractures, increased emergency room visits/hospitalizations, motor vehicle crashes); minimal improvement in sleep latency and duration. *QE = Moderate; SR = Strong*
Meprobamate	***Avoid*** High rate of physical dependence; very sedating. *QE = Moderate; SR = Strong*

Organ System, Therapeutic Category, Drug(s)[a]	***Recommendation,*** Rationale, *Quality of Evidence* (*QE*[b]), *Strength of Recommendation* (*SR*[b])
Megestrol	***Avoid*** Minimal effect on weight; increases risk of thrombotic events and possibly death in older adults. *QE = Moderate; SR = Strong*

Meperidine	***Avoid*** Oral analgesic not effective in dosages commonly used; may have higher risk of neurotoxicity, including delirium, than other opioids; safer alternatives available. *QE = Moderate; SR = Strong*

13

TABLE 4. 2023 American Geriatrics Society Beers Criteria® for Potentially Clinically Important Drug–Drug Interactions That Should Be Avoided in Older Adults

Object Drug or Class	Interacting Drug or Class	***Recommendation,*** Risk Rationale, *Quality of Evidence* (*QE*[a]), *Strength of Recommendation* (*SR*[a])
RAS inhibitor (ACEIs, ARBs, ARNIs, aliskiren) or potassium-sparing diuretics (amiloride, triamterene)	Another RAS inhibitor or potassium-sparing diuretic	***Avoid routinely using 2 or more RAS inhibitors, or a RAS inhibitor and potassium sparing diuretic, concurrently in those with chronic kidney disease Stage 3a or higher.*** Increased risk of hyperkalemia. *QE = Moderate; SR = Strong*
Opioids	Benzodiazepines	***Avoid*** Increased risk of overdose and adverse events. *QE = Moderate; SR = Strong*
Opioids	Gabapentin Pregabalin	***Avoid; exceptions are when transitioning from opioid therapy to gabapentin or pregabalin, or when using gabapentinoids to reduce opioid dose, although caution should be used in all circumstances.*** Increased risk of severe sedation-related adverse events, including respiratory depression and death. *QE = Moderate; SR = Strong*

This table is not a comprehensive list of all drug-drug interactions relevant for older adults.

[a]Quality of evidence and strength of recommendation ratings apply to all drugs and recommendations within each criterion unless stated otherwise.

[b]Data are limited for selective peripheral alpha-1 blockers (e.g., tamsulosin, silodosin, and others) but may apply as well.

14

Disease or Syndrome	Drug(s)[a]	***Recommendation,*** Rationale, *Quality of Evidence* (*QE*[b]), *Strength of Recommendation* (*SR*[b])
Central nervous system		
Delirium	Anticholinergics* Antipsychotics[c] Benzodiazepines Corticosteroids (oral and parenteral)[d] H2-receptor antagonists ▪ Cimetidine ▪ Famotidine ▪ Nizatidine Nonbenzodiazepine benzodiazepine receptor agonist hypnotics ("Z-drugs") ▪ Eszopiclone ▪ Zaleplon ▪ Zolpidem Opioids	***Avoid, except in situations listed under rationale statement.*** Avoid in older adults with or at high risk of delirium because of potential of inducing or worsening delirium. Antipsychotics: avoid for behavioral problems of dementia or delirium unless nonpharmacologic options (eg, behavioral interventions) have failed or are not possible and the older adult is threatening substantial harm to self or others. If used, periodic deprescribing attempts should be considered to assess ongoing need and/or lowest effective dose. Corticosteroids: if needed, use lowest possible dose for the shortest duration and monitor for delirium. Opioids: emerging data highlights an association between opioid administration and delirium. For older adults with pain, use a balanced approach, including use of validated pain assessment tools and multimodal strategies that include nondrug approaches to minimize opioid use. *QE = H2-receptor antagonists: Low. All others: Moderate; SR = Strong*
Dementia or cognitive impairment	Anticholinergics* Antipsychotics, chronic use or persistent as-needed use[c] Benzodiazepines Nonbenzodiazepine benzodiazepine receptor agonist hypnotics ("Z-drugs") ▪ Eszopiclone ▪ Zaleplon ▪ Zolpidem	***Avoid*** Avoid because of adverse CNS effects. See criteria on individual drugs for additional information. Antipsychotics: increased risk of stroke and greater rate of cognitive decline and mortality in people with dementia. Avoid antipsychotics for behavioral problems of dementia or delirium unless documented nonpharmacologic options (e.g., behavioral interventions) have failed and/or the patient is threatening substantial harm to self or others. If used, periodic deprescribing attempts should be considered to assess ongoing need and/or lowest effective dose. *QE = Moderate; SR = Strong*

15

Beers Criteria

- **Avoid the concurrent use of opioids with either benzodiazepines or gabapentinoids - increased risk of overdose, severe sedation, respiratory depression, and death**
- **Updates for 2023**

16

Prescribing in Geriatrics

Medical decision-making is of greater complexity:

- Determine that a dangerous drug is indicated
- Choose the best drug
- Determine a dose and schedule appropriate for the patient's physiologic status
- Monitor for effectiveness and toxicity
- Educate the patient about possible side effects
- Know indications for seeking consultation

17

Prescribing in Geriatrics

Unique challenges

- Drug trials often exclude those with advanced age
- Pharmacokinetics changes with age:
  - increased volume of distribution
  - Decreased drug clearance/metabolism (renal and hepatic function declines)

18

Adverse Reaction Predictors

- >4 prescription medications
- >4 active medical problems
- Hospital admission
- Alcohol use
- Lower MMSE scores
- Greater number of medications added during a hospital admission

Choosing Wisely

American Geriatrics Society

AGS

Five Things Physicians and Patients Should Question

1. **Don't recommend percutaneous feeding tubes in patients with advanced dementia; instead offer oral assisted feeding.**
2. **Don't use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia.**
3. **Avoid using medications to achieve hemoglobin A1c <7.5% in most adults age 65 and older; moderate control is generally better.**
4. **Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.**
5. **Don't use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present.**

4 Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.

Large scale studies consistently show that the risk of motor vehicle accidents, falls and hip fractures leading to hospitalization and death can more than double in older adults taking benzodiazepines and other sedative-hypnotics. Older patients, their caregivers and their providers should recognize these potential harms when considering treatment strategies for insomnia, agitation or delirium. Use of benzodiazepines should be reserved for alcohol withdrawal symptoms/delirium tremens or severe generalized anxiety disorder unresponsive to other therapies.

Question:

Due to the heightened risk of anxiety in chronic pain patients, benzodiazepines should always be considered as an adjuvant to opioid therapy to improve pain and anxiety control.

A. True
B. False

FALSE

Board Rule 540-X-4-.09 Risk and Abuse Mitigation Strategies

1. All controlled substances have a risk of addiction, misuse, and diversion
2. Provide patients with risk education prior to initiation and continuation of controlled substances
3. Utilize medically appropriate risk and abuse mitigation strategies
4. Utilize the "Morphine Milligram Equivalency" ("MME") and "Lorazepam Milligram Equivalency" ("LME") standard for calculations. Examples of conversion tools are on the ALBME website. The Board does not endorse any particular tool.
5. PDMP query requirements
6. Exemptions
7. **Avoid concomitant benzodiazepine therapy with opioids**
8. Two (2) AMA PRA Category 1 credits continuing medical education (CME) in controlled substance prescribing every two (2) years
9. A violation of this rule is grounds for the assessment of a fine and for the suspension, restriction, or revocation of a physician's Alabama Controlled Substances Certificate or license to practice medicine.

Another Question:

An 86-year-old man with metastatic lung cancer was given lorazepam by the intern on call because neither she nor the patient could sleep. The patient then became agitated shortly after getting the medication. He has now refused all other medications, cussed out the chaplain, and slapped a nurse in the face.

What is your first course of treatment?

a. Double the lorazepam dose

b. Add quetiapine

c. Increase the morphine

d. Add diphenhydramine

e. Stop the lorazepam

f. Tell the nurse to duck next time

25

Follow-up question:

The patient remains agitated and is a threat to himself and others. You need an additional agent to relieve his symptoms of agitated delirium. After stopping the lorazepam, you should initiate which treatment for terminal agitated delirium?

a. Haloperidol
b. Quetiapine
c. Risperidal
d. Ambien
e. Propofol

26

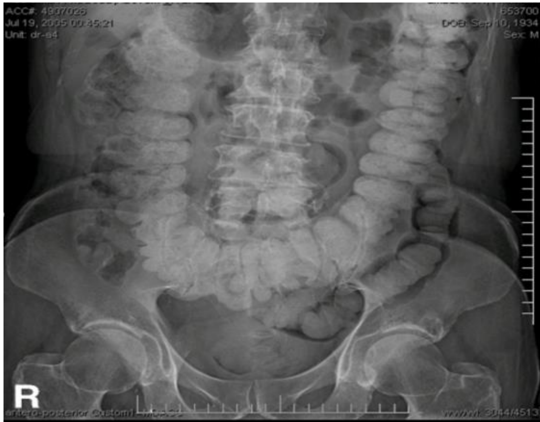
Some Issues with Controlled Substances in Hospice Care

27

Myth

"Roxanol" (concentrated morphine) is given and absorbed sublingually.

28



30

Opioid-induced Constipation (OIC): Mechanisms

1. Suppress forward peristalsis
2. Increase ileocecal and anal sphincter tone
3. Reduce sensitivity to distention
4. Increase fluid absorption
5. Reduce intestinal secretions

Treatment

- Softeners
  - Docusate - cheap, but a waste of time and money
- **Osmotics**
  - **Lactulose**
  - **Sorbitol**
  - **Polyethylene glycol**
  - **MOM**
- Bulk/Fiber - cause cement-like bowel casts. Do NOT use.

- **Stimulating**

Senna > bisacodyl
Metoclopramide

- Opioid antagonists
  - last choice, but very effective if needed
  - **$$$$$!!!**

*A Combination of a stimulant + osmotic is first-line

** **Don't forget prevention!**

34

Opioid Induced Neurotoxicity

Opioid induced neurotoxicity/neuroexcitability (accumulation of active metabolites (e.g. morphine-3-G):

- Hallucinations
- Delirium
- Agitation
- Myoclonus
- Hyperalgesia
- Rarely, seizures

35

An 82 y/o woman with end-stage CHF and evidence of cardiorenal syndrome (Cr 3.17) is hospitalized. The family wants to focus on making the patient comfortable. She already has a PICC line, so a morphine drip was started for comfort and hospice discharge planning was begun. Two days later, the patient becomes agitated. The nurse reports that the patient was initially very comfortable and pain-free but slowly became more agitated.

She is now confused, agitated, thrashing around in her bed, and moaning. There is frequent twitching of her eyebrows and arms. Vitals are normal. The morphine infusion is now at 4 mg/hour. Her urine output is negligible (<30cc over the past 24 hours). The patient's daughter is in the room and is very upset. She asks you whether you can increase the morphine to better manage her mother's suffering.

What do you do next?

a. Stop the morphine and start Ativan.

b. Increase the morphine infusion by 50% to 6 mg/hour.

c. Give some Haldol.

d. Continue the morphine drip and start Ativan with a goal of heavy sedation

e. Change the morphine to a different opioid and add Ativan.

36

Opioids in Renal Failure

- Avoid: (because of toxic metabolites)
  - **Morphine**
  - **Meperidine**
  - **Codeine**
- Use, but be careful:
  - Hydromorphone
  - Oxycodone
- Considered safe:
  - Fentanyl
  - Methadone

What about Methadone in Hospice and Palliative Care?

- Less opioid escalation with methadone
- **NMDA receptor antagonist**
- μ agonist with some δ agonist activity
- Inhibits reuptake (weak) of norepinephrine and serotonin
- Less affinity for μ receptors = less side effects
- Can reverse tolerance from other opioids
- Effective for neuropathic pain (NMDA)
- Cheap

38

What about Methadone in Hospice and Palliative Care?

- Lipophilic; excellent oral absorption (80%)
- Lacks active metabolites
- Safe in renal failure
- Hepatic metabolization
- Dirt cheap

39

Methadone

- Excellent choice in patients with:
  - Morphine allergy.
  - Neuropathic pain.
  - Problems with adverse effects of other opioids.
  - Pain refractory to other opioids.
  - Uncontrolled pain.
  - Hyperalgesia.
  - Diversion issues.
  - Drug cost problems.

41

CAUTION

- **Use should be very limited:**
  - Long and unpredictable half-life - titrate very slowly (every 5-7 days)
  - Dose increases should be limited to 10% OR 2.5mg increments every 8 hours.
  - The dose of methadone varies inversely with the previously required morphine dose: be EXTREMELY careful with rotation from other opioids
  - Need to dose reduce methadone by **80-90%** due to incomplete cross-tolerance with other opioids

42

Journal of Clinical Oncology, 1998

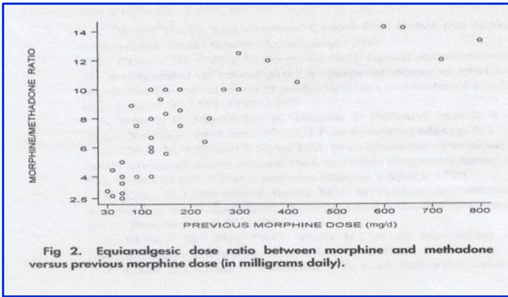


Fig 2. Equianalgesic dose ratio between morphine and methadone versus previous morphine dose (in milligrams daily).

43

Methadone conversion ratios

Total MME	Conversion ratio
<90 mg	**1:4**
90-300mg	**1:8**
300-1000mg	**1:12**
>1000mg	**1:20**

44

CAUTION: Methadone

- QTc prolongation at high doses
- Drug interactions: many! CP450
  - <u>Methadone inhibits its own metabolism at higher doses</u>
- **<u>NEVER use for breakthrough (PRN) dosing!!!</u>**

methadone 5 mg = 1 tab, Tab, Oral, Q6hr, PRN, For: Pain, Start date 10/26/19 20:32:00 CDT Ordered

- Use as a TID regimen **<u>for pain</u> (not for SUD)**
- **<u>Never use in opioid naïve patients</u>**
- Half-life is much longer than duration of analgesia

45

Drug interactions

<u>CP-450 inhibitors:</u> (raise methadone levels)

Macrolides (erythromycin)
Imidazoles (ketoconazole)
Quinolones (ciprofloxacin)
SSRI (fluvoxamine)
Benzodiazepines (diazepam)
Protease inhibitors (ritonavir)
Acute alcohol ingestion

<u>CP 450 inducers:</u> (lower methadone levels)

Anticonvulsants (phenobarb, dilantin)
Rifampin
Corticosteroids
Chronic alcoholism

46

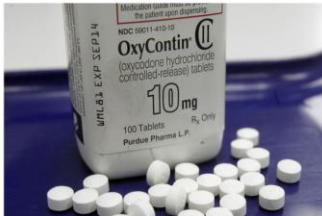
Drug Disposal

» What happens to controlled substances after a patient's death?
» Who may dispose of controlled substances after a patient's death?

47

"That's my inheritance": When hospice patients die, their opioid pills remain

By KATHERINE HAFNER
THE VIRGINIAN-PILOT | JAN 25, 2018 | 11:02 AM



48

Responsibility

- Hospices have a duty to educate patients and families about the importance of safe disposal of unwanted controlled substances, and how to use the options available to them.
- New law now permits (but does not require) a qualified hospice program's licensed physicians, physician assistants, and nurses to dispose of controlled substances which were lawfully dispensed to the person receiving hospice care in the following situations:
  - » **After death of the patient**
  - » **The hospice patient no longer requires the controlled substance because the plan of care of the hospice patient has been modified**

49

Strategies

- Make a plan for disposal with the family at the outset of care
- Provide a limited supply of pills
- Perform PDMP checks
- Perform routine pill counts during home visits
- Utilize a lock box, if necessary
- Utilize urine drug screens
- Facilitate destruction of unused medications

50

Disposal Education

- Flushing or dumping down a drain is not the best way to dispose of medication.
- Disposal in Household Trash

Remove the medicine from its original container and mix it with an undesirable substance, such as used coffee grounds or kitty litter.

Place the mixture in a sealable bag, empty bag, or other container to prevent medicine from leaking or breaking out of a garbage bag.

- Medication "Take-Back" Programs

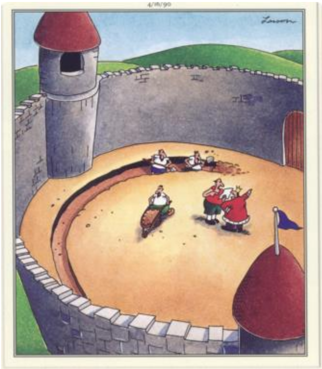
Collection boxes overseen by law enforcement or pharmacies

51

52

Communication with Patients and Families

53



Suddenly, a heated exchange took place between the king and the moat contractor.

54

Benefits

- Improve patient-provider interactions
- Improve patient satisfaction
- Reduce the risk of medical errors
- Improve patient perception of the quality of healthcare received
- Decrease patient complaints
- Improve teamwork and collaboration

55

Needed for Diagnostic Accuracy

- Most diagnostic decisions come from the history-taking component of the visit
- Interruptions by the clinician may reduce accuracy
- History-taking can become too structured (think medical students)
- Physicians conduct thousands of patient interviews over a typical career - extensive experience teaches diagnostic pattern recognition

56

Patient Satisfaction

- Improves as the length of the visit increases
- Improves compliance with treatment
- Improves outcomes
- Quality of time spent NOT quantity, is a factor
- Improves with the demonstration of empathy by the provider
- **Breakdown in communication is a root cause of many malpractice claims (>80%)**

57

Delivering the news…

- Sit down
- Use open-ended questions
- Avoid medical jargon
- Pay close attention to the tone/inflection of your voice
- Ask targeted “How” or “What” questions. Avoid “Why”.
- Force correction - very powerful
- Communicate using empathy
  - Mirroring (repeat their last 1-3 words)
  - Always label any observed emotions
  - Observe for nonverbal communication

58

Question

In our interactions with patients (and families), empathy helps us communicate our appreciation of patients’ problems and issues. Empathy is the art of seeing the world as someone else sees it. When you have empathy, it means you attempt to understand why other people's actions and feelings make sense to them. A useful strategy during your patient visit that will convey empathy to your patients includes:

A. Sitting down
B. Asking open-ended questions
C. Avoiding medical jargon
D. Labeling observed emotions
E. Using the forced correction technique

59

Examples

- Tell me about how you take your current medications.
- What else can you think of that might show up in your urine on a drug screen?
- How did ____ end up in your urine?
- How did ____ not show up in your urine?
- So, it sounds like you probably drink 2 cases of beer per day?

60

Examples

- I've got some bad/terrible news for you...
- I'm sorry, but I can no longer write pain medications for you.
- Seems like this will put you in a tough spot...
- Sounds like you're upset over this news...
- You probably think that I'm just looking for a reason to stop your _____.
- You probably think the only reason we test your urine is...
- It seems that you don't think I'm treating you fairly...

61

More examples

- How am I supposed to keep you safe if I continue to write this dangerous medicine?
- How can I continue to prescribe these dangerous medications to you when....
- How can I continue to prescribe you a medication that could end up putting you in the hospital or killing you?

62

Ask for help!!!

Alabama Board of Medical Examiners
P.O. Box 946
Montgomery AL 36101-0946

www.albme.gov
(334) 242-4116
Toll Free: 1-800-227-2606

63