Being a Super Intern:

Making people poop and other important things at night

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Road Map

• Triage common cross-cover calls with a focus on practical skills for assessment and treatment

1. Altered mental status
2. Nausea/vomiting
3. Constipation
4. Insomnia
It’s 9pm
and the pager goes off...
Doctor, your patient is ALTERED!
Case 1

- 65 yo M with COPD, cirrhosis, and Afib admitted for new PE
- Started on heparin drip, nebs, and oxycodone with IV morphine for breakthrough pain
- RN holding evening meds because pt now somnolent
- Opens eyes on command but quickly falls back asleep
Case 1: AMS

- **WATCHER**
- Cr 2.1, BUN 75, Na 127, other labs normal
- BP 100/60, HR 100s, RR 16, 92% on 4L
  - **CV:** Irreg irreg, II/VI SEM at RUSB, no LE edema
  - **PULM:** scattered wheezes, no crackles
  - **NEURO:** somnolent, arouses to voice, withdraws from pain symmetrically, no clonus
What is the best next step?

A. Narcan 0.4mg IV x 1
B. Stat CTA of the head, stroke protocol
C. Stat chem 7 and ABG
D. Start 2% saline at 30 cc/hr
E. Send ammonia level, start lactulose 30g po q4h
F. Neuro consult
What is the best next step?

A. Narcan 0.4mg IV x 1
B. Stat CTA of the head, stroke protocol
C. **Stat chem 7 and ABG**
D. Start 2% saline at 30 cc/hr
E. Send ammonia level, start lactulose 30g po q4h
F. Neuro consult
Who has an approach to AMS?

M: Metabolic Toxic
   HypoNa, hypoglycemia, uremia, hepatic enceph, steroids, EtOH/drugs, etc

I: Infectious

S: Stroke Seizure

T: Trauma

O: Hypoxia Hypercarbia
Evaluation for AMS

Metabolic
- ✓ Chem 7, Ca, Utox, serum/urine osms
- ✓ Asterixis
- ✓ Review meds + eMAR

Infectious
- ✓ Review VS, infectious workup
  *Rarely need to do an LP

Stroke
- ✓ NCHCT, CTA head if focal deficit
- ✓ Call neuro

Seizures

Trauma
- ✓ NCHCT

Oxygen: hypoxia or hypercarbia
- ✓ ABG
- ✓ CXR
Case 1: AMS

- Labs
  - Na 128, Cr 2.3, Glc 123
  - ABG 7.2/78/74 on 4L NC

- eMAR: morphine 4mg IV x1 at 6pm

- Treatment
  - Transferred to MICU for NIPPV
  - Morphine switched to hydromorphone
Case 2: AMS

- 87 yo F admitted for severe sepsis due to UTI
- Treated with ceftriaxone, awaiting SNF
- 9:15pm, RN pages you asking for a sleeping pill
- You call back and find out that pt “seems off”
Case 2: AMS

- **VS:** T 36.9, HR 80, BP 126/86, 98% RA

- **GEN:** awake, picking at blankets, trying to sit up

- **NEURO:** thinks she’s at home, year is 1925, then starts telling someone to get off the ceiling
Case 2: AMS

Now what?!?

DELIUM
Case 2: AMS → delirium

Delirium in Older Persons: Evaluation and Management

VIRGINIA B. KALISH, MD, National Capitol Consortium, Fort Belvoir, Virginia
JOSEPH E. GILLHAM, MD, Robinson Health Clinic, Fort Bragg, North Carolina
BRIAN K. UNWIN, MD, Carilion Clinic, Roanoke, Virginia

Table 2. Incidence and Prevalence of Delirium in Older Persons

<table>
<thead>
<tr>
<th>Setting</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incidence during hospital admission</strong></td>
<td></td>
</tr>
<tr>
<td>After hip fracture</td>
<td>28% to 61%</td>
</tr>
<tr>
<td>After surgery</td>
<td>15% to 53%</td>
</tr>
<tr>
<td>During hospitalization (medical inpatients)</td>
<td>3% to 29%</td>
</tr>
<tr>
<td><strong>Prevalence</strong></td>
<td></td>
</tr>
<tr>
<td>Intensive care unit</td>
<td></td>
</tr>
<tr>
<td>With mechanical ventilation</td>
<td>60% to 80%</td>
</tr>
<tr>
<td>Without mechanical ventilation</td>
<td>20% to 50%</td>
</tr>
<tr>
<td>Hospice</td>
<td>29%</td>
</tr>
<tr>
<td>Community (persons 85 years or older)</td>
<td>14%</td>
</tr>
<tr>
<td>At hospital admission</td>
<td>10% to 31%</td>
</tr>
<tr>
<td>Long-term care facility and postacute care</td>
<td>1% to 60%</td>
</tr>
</tbody>
</table>

Case 2: Delirium

1. Manage pain, urinary retention, constipation
2. Avoid opioids and sedating meds
3. Prevent complications → ORCA Delirium PowerPlan
   - Bedside commode, safety mat, sleep hygiene
   - Remove lines, tubes, restraints
   - Frequent reorientation
Case 2: Delirium

• Meds → 2 options
  1. Haloperidol 0.5-1mg po/IV qHS (or BID)
  2. Quetiapine 25-50mg po qHS (or BID)

✓ Start low, go slow
✓ Check QTc!!!
✓ Increased mortality risk in pts with dementia

Case 2: Delirium

- 87 yo F awaiting SNF
- Oxycodone 5-10mg q6h prn
- Low UOP
- I/O cath drains 1L of clear urine
- She feels SO much better (and promptly goes to sleep)!
Quick Take #1

• 78 yo M with metastatic lung CA admitted for pain
• You’re called for new onset seizure
• L arm started jerking 5 min ago → GTC seizure that lasted 60 sec → now unresponsive
• O2 sat dropped to 70s, now low 90s on 2L
What is the best next step?

A. Lorazepam 2mg IV x 1 now
B. Phenytoin load 20mg/kg IV x 1 now
C. Levetiracetam 1g IV x 1 now
D. Observe, order MRI brain w/ contrast
E. Stat ABG
What is the best next step?

A. Lorazepam 2mg IV x 1 now
B. Phenytoin load 20mg/kg IV x 1 now
C. Levetiracetam 1g IV x 1 now
D. Observe, order MRI brain w/ contrast
E. Stat ABG
Quick Take #1 – Cont’d

• Pt postictal but protecting airway, awaiting MRI

• RN pages again that pt having another GTC
What is the next step now?

A. Lorazepam 2mg IV x 1 now
B. Phenytoin load 20mg/kg IV x 1 now
C. Levetiracetam 1g IV x 1 now
D. MRI brain with contrast
E. Stat ABG
What is the next step now?

A. Lorazepam 2mg IV x 1 now
B. Phenytoin load 20mg/kg IV x 1 now
C. Levetiracetam 1g IV x 1 now
D. MRI brain with contrast
E. Stat ABG
• Pt gets lorazepam 2mg IV x 1 and seizure breaks
• MRI shows a new enhancing lesion in L temporal lobe
• It’s 6:59am and you’re about to sign out when you get paged the patient is **seizing again**
In addition to more ativan and dexamethasone 10mg IV x 1, what is the best next step?

A. Lorazepam gtt at 2mg/hr
B. Phenytoin load 20mg/kg IV x 1 now
C. Levetiracetam 1g IV x 1 now
D. MRI brain with contrast
E. Stat ABG
In addition to more ativan and dexamethasone 10mg IV x 1, what is the best next step?

A. Lorazepam gtt at 2mg/hr
B. **Phenytoin load 20mg/kg IV x 1 now**
C. Levetiracetam 1g IV x 1 now
D. MRI brain with contrast
E. Stat ABG
Acute seizure management

- For seizure <1-2 min that breaks spontaneously → observe
- For seizure >1-2 min or recurrent, give lorazepam 2mg IV x1
- For ongoing seizures, give phenytoin load OR levetiracetam
1. Use a framework (MISTO) to organize the DDx

2. Check QTc before treating delirium
   • Haloperidol 0.5-1mg po/IV qHS or BID
   • Quetiapine 25-50mg po qHS or BID

3. Use lorazepam for active seizure, phenytoin OR levetiracetam for recurrent seizure
Doctor, your patient is CONSTIPATED
Case 3

- 66 yo M admitted with LLE cellulitis and volume overload
- HD4: you get paged at 11 pm for mild abdominal discomfort, no BM since admission
- You’re admitting 2 patients in the ED...
What next?

A. Docusate 200mg po BID
B. Bisacodyl 10mg PR x 1
C. Senna 17mg po qHS
D. Tap water enema
E. Let the team deal with it in the morning
F. Get more information
What next?

A. Docusate 200mg po BID
B. **Bisacodyl 10mg PR x 1**
C. Senna 17mg po qHS
D. **Tap water enema**
E. Let the team deal with it in the morning
F. Get more information
Case 3

What’s the minimum amount of info you need by phone to evaluate constipation?
Last night...
Admit in ER

Patient wants to leave AMA

CHEST PAIN

Admit in ER

6pm

Surgery recs

FOOD

Code

Nausea

Pharmacy—clarify dose

12 am

Patient still wants to leave AMA

Can’t sleep

“Teaching”

Can you sign these orders?

Constipation

NG tube fell out

12 am

Write notes

Still can’t sleep

Patient did leave AMA

Delirium

Low K

“What’s the plan?”

Abdominal pain

6 am

Signout

Can’t wake up

IV fell out

Patient still wants to leave AMA

Pt fell out of bed
Case 3: constipation

1. Symptoms of a more serious condition?
   – New fever, VS changes
   – Risk factors for obstruction

2. If not, usually ok to treat empirically
   – Start from above or below?
Case 3: constipation

What’s your goal?

• BM now!
• By morning
• Sometime this month
## Case 3: constipation

<table>
<thead>
<tr>
<th>Slow Days</th>
<th>Stool softener: docusate = placebo!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>Bulking agents: <strong>metamucil</strong></td>
</tr>
<tr>
<td>24 hrs</td>
<td>Osmotic: PEG (<strong>mira</strong>lax, GoLytely), lactulose</td>
</tr>
<tr>
<td>Fast</td>
<td>Stimulant: <strong>senna</strong>, bisacodyl po</td>
</tr>
<tr>
<td>Min-hrs</td>
<td>Stimulant: bisacodyl PR, <strong>enemas</strong></td>
</tr>
<tr>
<td></td>
<td>Saline laxative: <strong>Mg citrate</strong></td>
</tr>
</tbody>
</table>
Case 4

- 38 yo M with sickle cell dz admitted for vasoocclusive crisis
- PMH includes ventral hernia with intermittent SBO
- Using PCA, scheduled senna and bisacodyl
- HD6: new abdominal discomfort and constipation, no improvement with bisacodyl PR or tap water enema
What is the best next step?

A. Methylnaltrexone 12mg SC x 1
B. Naloxone 5mg po x 1
C. Place NG tube, give GoLytely gtt at 50cc/hr
D. Gastrograffin enema x 1, repeat x 1 if no BM
What is the best next step?

A. Methylnaltrexone 12mg SC x 1
B. Naloxone 5mg po x 1
C. Place NG tube, give GoLytely gtt at 50cc/hr
D. Gastrograffin enema x 1, repeat x 1 if no BM
# Options for really bad constipation

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Indication</th>
<th>Clinical Pearls</th>
</tr>
</thead>
</table>
| Methylnaltrexone           | Opioid-induced ileus or constipation • Cancer, sickle cell | • Opioid antagonist  
• Does not cross blood-brain barrier → NO withdrawal |
| PEG (GoLytely) gtt         | DIOS in CF patients                 | • Need to place NG tube                                                        |
| Gastrografin enema         | Impaction                           | • Can causes electrolyte shifts (Mg, Phos)  
• Check lytes BID                                       |
Constipation
Take home Points

1. You do NOT need to do a bedside evaluation for every patient with constipation

2. Choose a therapy based on how quickly you want results

3. Consider advanced therapies for certain patients (eg, methylnaltrexone)
Doctor, your patient is NAUSEATED
Your 27th page of the night

RE: Pt KS – he’s vomiting. Again.
From: Imoverit, RN
Case 5: Pt KS

- 52 yo M with pancreatitis
- Admitted 3 days ago to the MICU → treated with IVFs and bowel rest
- Transferred to floor today
- Still NPO, VS stable, but nauseated
What do you do next?

A. Evaluate the patient
B. Ondansetron 8mg po x1 as you finish your ED admission
C. Ondansetron 8mg IV q8h prn nausea
D. Lorazepam 1mg IV q6h prn nausea
E. Find a bathroom and hide
What do you do next?

A. Evaluate the patient
B. Ondansetron 8mg po x1 as you finish your ED admission
C. **Ondansetron 8mg IV q8h prn nausea**
D. Lorazepam 1mg IV q6h prn nausea
E. Find a bathroom and hide
The emesis ladder

- **Zofran**
  - 8mg IV q8h

- **Reglan**
  - 5-10mg IV q6h

- **Compazine**
  - 5-10mg IV q6h

- **Phenergan**
  - 6.25-25mg po/PR q6h

*Side Effects*

Avoid IV if possible; start low!
Case 5: Nausea
Medication Side effects

**Zofran**
- Antiserotonin
- QTc prolongation

**Reglan + Compazine**
- Antidopamine
- Dystonic rxns → treat with IV benedryl

**IV Benedryl + Phenergan**
- Antihistamine
- Sedating effect, can cause a high
Case 6

- 84 yo F admitted for CAP
- PMH includes HTN, HLD, DM, and CVA
- Overnight on HD3, she develops new onset nausea and vomiting
Case 6: on the phone

• RN tells you:
  • Volume of emesis is low, no blood or coffee grounds
  • Afebrile, BP 90/54, HR 108, O2 sat 95% RA
  • Oriented, complains of epigastric discomfort
What is your next step?

A. Zofran 8mg IV x1, go to the bedside now
B. Zofran 4mg IV now, ask the RN to call back if no better in 30 min
C. Place NGT and order a stat Hct
D. Head CT without contrast
What is your next step?

A. Zofran 8mg IV x1, go to the bedside now
B. Zofran 4mg IV now, ask the RN to call back if no better in 30 min
C. Place NGT and order a stat Hct
D. Head CT without contrast
Case 6: Next steps

- On evaluation → tired appearing, mildly diaphoretic
- Afebrile, BP 88/54, HR 108, O2 sat 95% RA on 2L
Case 6: Nausea
When to evaluate in person?

**MI**
- CAD risk factors
- Ass’d symptoms
- Atypical presentation?

**CNS**
- Mental status changes
- Headache, blurry vision

**GI**
- Coffee ground emesis
- Hematemesis
- New onset abd pain
Case 6: nausea

- You call your senior and activate the STEMI pager
- Pt goes for emergent PCI and is transferred to the CCU
- Everyone thinks you’re the best intern EVER!
Nausea
Take home Points

1. Don’t need to do a bedside evaluation for every patient with nausea

2. HOWEVER, consider the possibility of a more serious illness (MI, CNS disease, GIB)

3. Avoid IV benedryl and phenergan
Doctor,
your patient CAN’T SLEEP
Case 6

- It’s 2am, you get your 67th page of the night
- 49 yo M with LLE cellulitis
- H/o anxiety, depression
- Requesting home zolpidem 10mg qHS

RE: Pt TD – can’t sleep. Pls order zolpidem. From: Marla, RN.
What next?

A. Give the patient a backrub
B. Order trazodone 50mg po qHS
C. Order diphenhydramine 25mg po x1
D. Order temazepam 15mg po qHS
E. Order zolpidem 10mg po qHS
F. Evaluate the patient
What next?

A. Give the patient a backrub
B. **Order trazodone 50mg po qHS**
C. Order diphenhydramine 25mg po x1
D. Order temazepam 15mg po qHS
E. **Order zolpidem 10mg po qHS**
F. Evaluate the patient
Environmental factors
• Turn off lights, treat pain, minimize VS o/n, reschedule meds

Is there concern for delirium?
• Needs further assessment and workup

Is this a chronic problem?
• Order home meds!
Case 6: treating insomnia

- Melatonin 3 or 6mg po qHS
- Trazodone 25-50mg po qHS
  - Antidepressant at higher doses, minimal side effects
  - Safe for elderly patients

Avoid benzos and diphenhydramine, especially in the elderly
Take Home Points
Insomnia

- Trazodone 25-50mg po qHS is your friend
- AVOID zolpidem (Ambien) UNLESS patient takes it at home
- Reschedule meds and VS during the day
Conclusions

• You are all super interns!
• Use a framework for AMS
• Constipation can often be triaged over the phone
• Consider risk factors for MI or GIB when assessing nausea
• Trazodone is a great sleep aid!
Quick Take #2

• 52 yo F with cirrhosis admitted for UTI
• Treated with cipro, continues on lactulose, rifaximin, propranolol, ondansetron, oxycodone
• On HD3, pt complains of chest discomfort, BP 75/50 with HR 140
• You order an EKG
Quick Take #2

Courtesy of Jason E. Roediger, CCT, CRAT
You call a code and order magnesium 2g IV stat, the patient stabilizes in the ICU. You decide the culprit was:

A. Combination oxycodone + cipro
B. Combination zofran + cipro
C. Combination lactulose + oxycodone + cipro
D. Combination rifaximin + oxycodone + zofran
You call a code and order magnesium 2g IV stat, the patient stabilizes in the ICU. You decide the culprit was:

A. Combination oxycodone + cipro
B. **Combination zofran + cipro**
C. Combination lactulose + oxycodone + cipro
D. Combination rifaximin + oxycodone + zofran