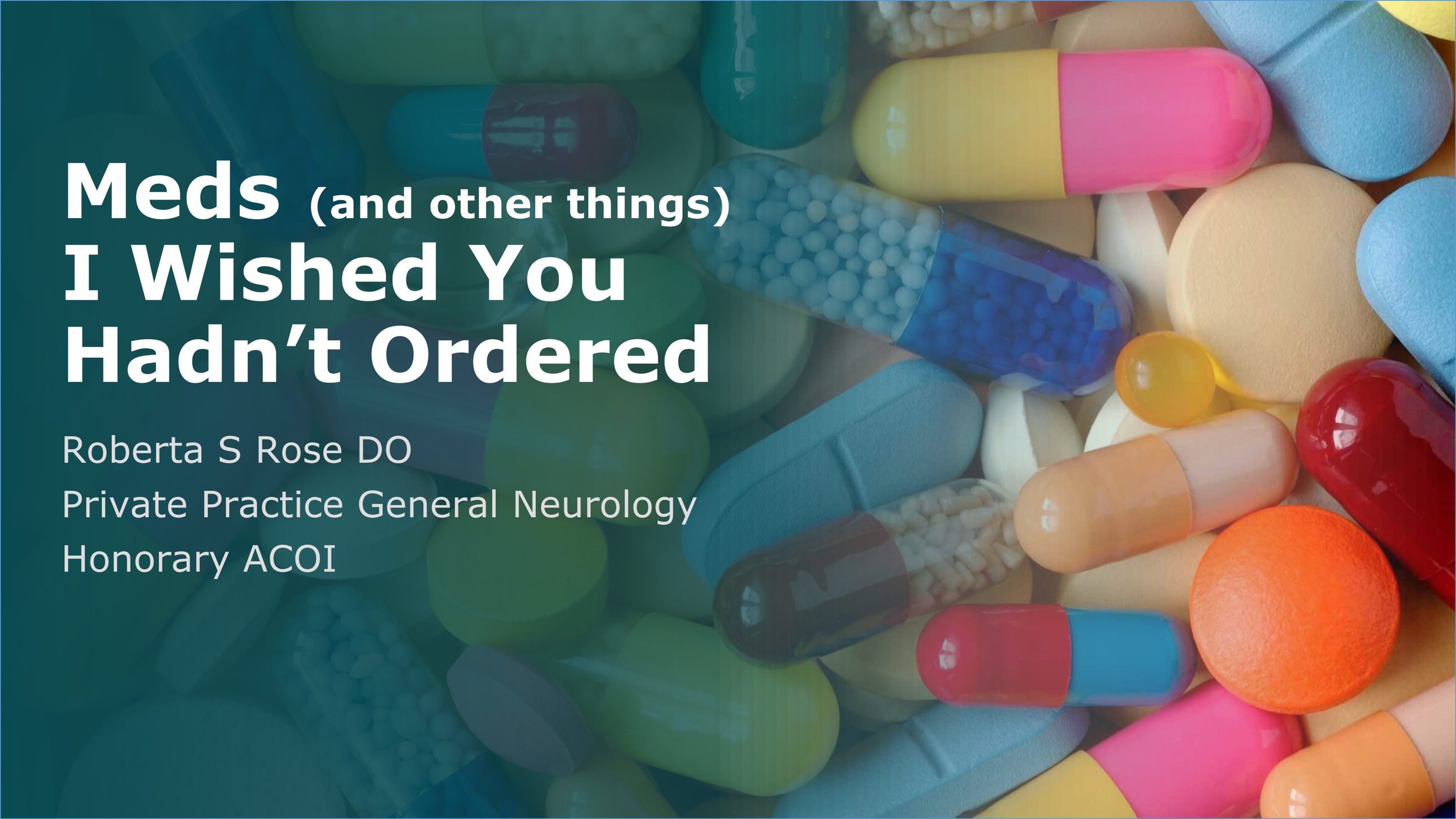
Meds (and other things) I Wished You Hadn't Ordered



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Case 1: AMS

- **RL is a 79y/o W/M 6/22/18 sent to ED from rehab due to AMS**
  - Unable to recall the events of the day, increasing confusion. Reported he felt so bad that he "might as well be dead" Baker act was ordered. Pt was admitted and neurology consulted.
  - **PMH**: CAD s/p CABG, HTN, DM, syst heart failure, sleep apnea, chronic LBP with chronic narcotic use, carotid stent, COPD, and CKD
  - **Labs**:
    - 6/22 BUN 95 CR 2.1 GFR 28.28
    - 6/23 BUN 87 CR 2.0 GFR 31.64 HgBA1C 11.3
  - He was previously admitted 6/13/18 with AMS and cellulitis Narcan helped his mentation and it was reported that he lives alone and probably wasn't taking all his medications.
  - At DC BUN 38 CR 1.4 GFR 46.04

Med List Admit 6/13:

- allopurinol 150mg q D
- below were added:
- ASA 81mg daily
- breoellipta
- Bumetanide 2mg BID
- Carvedilol 3.125 BID
- Duloxetine 60m BID*
- FAmotidine 20mg daily
- Furosemide 40mg daily
- Homolog sliding scale
- Hydralazine 25mg TID
- hydrocodone 10/325 TID
- Isosorbide mononitrate 30mg q day
- Lyrica 200mg TID*
- mag Oxide 400mg q day
- Metformin 1000mg BID
- Montelukast 10mg daily
- Plavix 75mg q day
- Tamsulosin ER 0.4mg q day
- Trajenta 5mg q day

Med List as of 6/22:

Includes all of the meds from the 13th plus below:

- Meloxicam 7.5mg BID
- Cyclobenzaprine 5mg TID
- Finasteride 5mg q day
- Medrol dose pack
- Carvedilol changed to 6.25mg
- Cephalexin 500mg BID
- Linzess
- Losartan

- ~~Hydralazine 25mg TID~~ (was DC'd)

- ~~Isosorbide mononitrate 30mg q day~~ (was DC'd)

The meds in yellow* are at max dose and need dose adjustment due to CKD

Case 1: Examination

- Patient was lethargic but responsive and mildly confused. Neurologic examination was non-focal. Meloxicam was DC’d, Duloxetine was reduced to 60mg daily. Lyrica was held for 24 hours then reduced to the appropriate renal dose 50mg q 8hr. IV fluids were given at a slow rate.

- After 36hrs, He was awake alert and oriented, questioning why he was given all the meds he’d been given. The baker act was rescinded, he was ready to return to rehab so neurology signed off the case. 2 days later he was DC’d: BUN 35, CR 1.1 GFR >60

Case 1: Hospital Course

- In my progress note: “polypharmacy needs to be addressed by the patient’s PCP and cardiologist. Restart diuretics at a lower dose, maintain Duloxetine and Lyrica at adjusted dosage, and remain off Meloxicam.

- **DC med list: minor other med changes were made, however, Meloxicam 7.5mg BID and Duloxetine 60mg BID were resumed…**

- Review of records revealed that an admission 4/6/2018 was for “adverse med effect” acute on chronic kidney disease with an initial BUN 69 CR 1.9.

NOTE: 1 year earlier he was on half the duloxetine, same Lyrica and NO meloxicam and he had normal renal function.

Case 1 Review: The Problem With Poly Pharmacy

- According to National Institute on Aging, adults age >65 take more meds than any other group. 83% of adults in their 60's and 70's have used at least 1 prescription medication in the past 30 days and 1/3 of those have used 5 or more.

- NIH.gov/dangers of poly pharmacy Aug 24,2021:
  - Inappropriate polypharmacy (excessive or unnecessary), increases risk of falls, cognitive impairment, harmful drug interactions and drug-disease interactions. It also creates burden for patients and caregivers. Why are they taking a drug, when is the correct time of day, recognizing side effects, etc.
  - 75% of older adults have multiple chronic conditions (MCC). **Deprescribing may be the best treatment to help patients and caregivers make decisions regarding palliative care**, particularly in those with advanced disease ie: heart failure, dementia, MCC.

Case 2: Dizzy, HA, Fatigue, Tremor and Anxious

- **JH is a 50 y/o female presented for neurologic consolation for the above complaints which have been getting worse over many months.** She admits that she is concerned she could have MS.
  - **PMH**: positive only for vitamin D and B12 deficiency
  - VS stable
  - Complete physical and neurologic examination failed to reveal any obvious abnormalities.
  - All new patients to my office are asked to bring all of their medication and supplement bottles. the following were just some of her supplements.

Case 2: Follow Up

- The 20+ bottles of supplements containing both vitamin and herbal remedies, recommended by her MD PCP, chiropractor, and a nutritionist, including but not limited to:
  - B12 & folate totaling over 5000mg/day
  - Over 9000iu vit D3/day
  - SAMe, lithium, and DHEA (which include side effects of dizziness, headache, rash, anxiety to name a few)

"I wanted to be as healthy as I could be."

Case 2: Follow Up

- 1 month after stopping all the supplements, her B12 level was 1956 and vit D was 99.
- At her return visit, her anxiety and tremor were gone, her energy level was improving, she was no longer dizzy. She offered that no one had ever asked her what she was taking and only added more.
- I recommended repeating her vitamin D and B12 levels at 6 months and this could be ordered by her MD PCP. She requested that I order it for her because she no longer trusted that individual.
- Follow up is pending at this time.

Case Review

- Polypharmacy and hypervitaminoses are real issues leading to numerous hospitalizations, excessive, unnecessary testing and significant morbidity.
  - **Case 1 specifically had 5 readmissions in 1.5 years due to renal failure caused by inappropriate medication use and dosing.**
  - **In August of 2018, he was actually discharged on Meloxicam 15mg BID.**
  - B12 excess can cause HA, N/V, diarrhea, tingling, fatigue, weakness, tremor…
  - D excess: confusion, apathy, vomiting, dehydration…

Case Review, Continued

- Adverse drug events cause 770,000 injuries or deaths and cost $1.56 to $5.6 Billion each year in the US.

- Over 25% of inpatient medication errors are due to inaccurate medication lists while errors due to prescription histories occur in up to 67% of cases.

- Lists need to be regularly updated: at the time of admission, at discharge or transfer, and communicated with the PCP during ambulatory care.

- **How many readmissions are due to inaccurate medication lists?**

In Conclusion

- Currently, there is no FDA oversight to supplements so companies can make unsubstantiated claims. Just because it is "natural," doesn't mean it is harmless.

- The Dietary Supplement Listing Act of 2022 would require supplements to be registered with the FDA and to list their ingredients; however, we would need another bill for supplements to be tested for safety and effectiveness (before going to market).

- **Deprescribing: open the discussion with your patients and their caregivers.**