

Be familiar with the interactive activities throughout course modules. You could see variations of those same questions on your exams.

Week 1

- Which schedule drugs can APRNs prescribe?
 - DEA license will allow for prescribing of Schedules 2-5. There can be restrictions as noted in collaborative agreement. May be facility/state dependent.

- Who determines and regulates prescriptive authority?
 - **Determines:** Also known as independent prescribing. APRNs can prescribe without limitation and is state dependent. Includes "legend" (prescription) and controlled drugs, health/medical services, DME, etc.
 - **Regulates:** State board of nursing, regulated by health professional board. Federal government controls drug regulations but has no control over prescriptive authority.

- How does limited prescriptive authority impact patients within the healthcare system?
 - Limited prescriptive authority creates numerous barriers to quality, affordable, and accessible patient care. For example, restrictions on the distance of the APRN or PA from the physician providing supervision or collaboration may prevent outreach to area of greatest need. An increase in patient waits.

- What are the key responsibilities of prescribing?
 - The ability to prescribe medications is both a privilege and a burden. Have a documented provider-patient relationship, do not prescribe medications to family or friends or yourself, Document a thorough history and physical examination, include any discussions you have with the patient about risk factors, side effects, or therapy options, have documented plan regarding drug monitoring or titration, if you consult additional providers not that you did so. Use the references provided in the following boxes to assist in safely and rationally choosing one medication over another. Be sensible, accept responsibility, do not fear it, know constraints and limitations, always learn and update, keep Rx pads in safe place, confirm allergies, verify medication list with patient, do not let insurance dictate quantity of Rx, Charting is key (particularly with off label use), Provide use and rationale.

- What should be used to make prescribing decisions?
 - The best way to keep your patients (and yourself) safe is to be prudent and deliberate in your decision-making process. Cost, availability, current

practice guidelines, medication interactions including interactions with food, side effects, need for monitoring, how drug is metabolized (hepatic or renal), special populations (pregnancy, nursing, older adults)

- Be familiar with pharmacokinetic and pharmacodynamic changes of older adults and how that would translate to baseline information needed to prescribe.
 - Pharmacokinetic is the study of drug absorption, distribution, metabolism, and excretion in the body. The ability of older adults to metabolize drugs is commonly decreased. Drug dosages may need to be reduced to prevent drug toxicity.
- Beer's Criteria
 - What is it?
 - Guidelines for prescribing medications to patients 65 & older. Drugs on the list should be avoided in patients over 65 expect when the benefits significantly outweigh the risks. The Beers Criteria includes five lists that describe certain medications and situations and include: potentially inappropriate medication (PIM) us in older adults, PIM use in older adults due to medication-disease or medication-syndrome interactions that may exacerbate the disease or syndrome, medications to be used cautiously in older adults, clinically significant drug interactions that should be avoided in older adults, medications to be avoided or dosage decreased in the presence of impaired kidney function in older adults
 - Why is it important?
 - It provides a list of medications that are potentially harmful in elderly. List that identifies drugs with a high likelihood of causing adverse effects in older adults. Beers Criteria are recommendations; ultimately prescribers must determine whether a medication is appropriate for use or not. These guidelines are not intended to limit the use of medications or apply to all older adults. Safe and judicious prescribing is crucial in the older adult to optimize pharmacotherapy
- Impacts/outcomes of polypharmacy
 - Polypharmacy greatly increases the risk for interactions. Drug interactions with mild side effects to life-threatening consequences. Elderly is at a higher risk of polypharmacy due to taking five or more medications daily
- CYP450 inhibitors – liver enzymes. It's not just a single molecular entity but rather a group of 12 closely related enzyme families
 - Examples
 - Valproate, Isoniazid, Sulfonamides, Amiodarone, Chloramphenicol, Ketoconazole, Grapefruit juice, Quinidine

- What do they do?
 - Slows down metabolism of medications. Inhibitors are medications that inhibit activity of one or more of the CYP450 enzymes.
Medications that inhibit an enzyme can potentially slow that enzymes activity required for metabolism of other medications, thereby increasing the levels of medications dependent on that enzyme for biotransformation. This inhibition prolongs the pharmacological effects, which may result in toxicity. Factors that affect the inhibition include the dose and the capacity to bind to the enzyme
- What do they cause if not used correctly? (Aka: What would the patient experience?)
 - Toxicity, drug build up.
- Examples of CYP450 inducers
 - Examples
 - barbiturates, St Johns wart, carbamazepine, rifampin, alcohol, phenytoin, griseofulvin, phenobarbital, sulfonylureas
 - What do they do?
 - Inducers are xenobiotics that elevate the CYP450 enzyme activity by increasing the enzyme synthesis. This action leads to additional sites available for biotransformation. The increased number of sites enhances the medication metabolism, decreasing the concentration of the "parent drug" while increasing the metabolite production. The half-life of the inducing drug may cause a delay before enzyme activity increases. A decrease in concentration of a medication metabolized by CYP2C9 (responsible for 10% of drug metabolism) usually occurs within 24 hours after the administration of the medication.
 - What do they cause if not used correctly? (aka: What would the patient experience?)
 - Lead to toxicity
- What happens when someone has a poor metabolism phenotype?
 - Slow or increase absorption, slow the metabolism, keep drug in body longer and increase toxicity. Poor metabolisms affect a high or low therapeutic index: increase drug toxicity, Ex: Plavix: Clots and increase platelets
- What does the U.S. Food and Drug Administration regulate when it comes to medications?
 - Regulates what the pharmacies can sell, requires special alerts and management guidelines, for drugs that cause serious adverse effects.