Developing the Assessment – Drug-Related Problems and Problem Lists

Dr. Abdallah Abukhalil

Collect
Assess
Plan
Implement
Follow-up:
Monitor and
Evaluate
Patient-
Centered
Care
Collaborate • Communicate • Document •

Objectives

- Demonstrate how to classify drug-related problems by working through a case
- Create a drug-related problem list when reviewing a patient case
- Create an assessment for a drug-related problem that's been identified
- Explain how conducting a medication reconciliation can help with identifying drug-related problems

Recall: I-S-E-C

Indication (appropriateness)	• What is the medication treating? • Is there a condition that needs treatment?
Safety	• Is the medication dosed appropriately or safe for this patient?
Effectiveness	• Is the medication providing any benefit or at the correct dose?
Convenience, Adherence, Monitoring	• Is the patient adhering to the regimen? Is monitoring needed?

Definition: Drug Related Problem

An undesirable event experienced by a patient that involves, or is suspected to involve, a drug product and prevents the patient from reaching therapeutic goals

Drug-Related Problem

(Hepler/Strand)

=

Drug Therapy Problem

(Center for Medicaid & Medicare Services)

=

Medication-Related Problem

(American Pharmacist Association)

An IMPORTANT Distinction

Drug-Related Problem vs. ***Medical Problem***

<u>Medical Problem</u>

- Condition or illness that the patient is/should be treated for
- Treatment may or may NOT include drugs

<u>Drug-Therapy Problem</u>

- Condition or illness that involves modification of drug therapy
- This could be addition, discontinuation, or dose change of a medication
- Will always include a drug associated with the problem

DRP & Medical Problem Examples

- A patient with severe osteoarthritis is requiring knee replacement surgery

- A patient with diabetes has elevated blood glucose and needs additional medication therapy

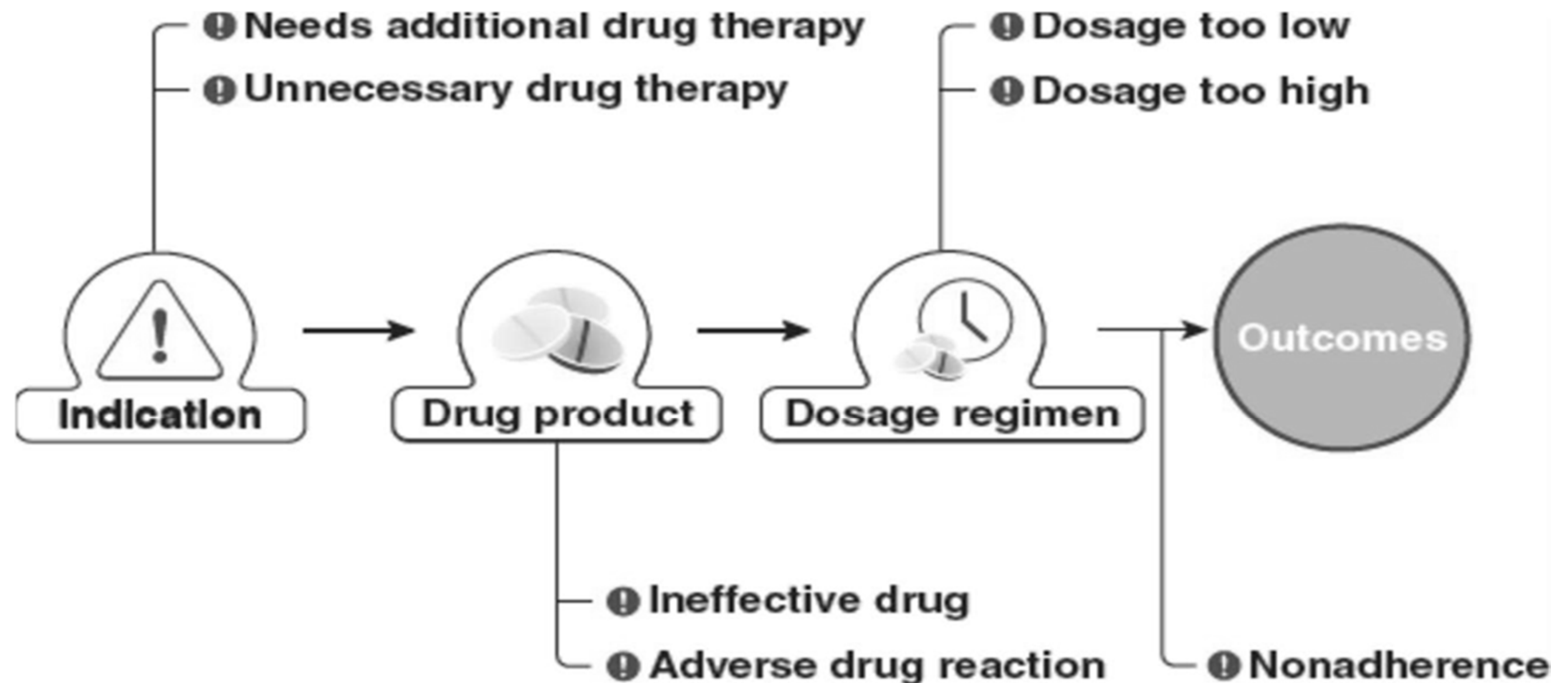
Not all medical problems will be linked to a medication but ALL drug-related problems with be linked to a medical condition

Identifying DRPs

- **Software**
  - Drug-Drug Interactions
  - Gaps in Therapy
  - High Risk Medications in the Elderly

- **Patient Interview**
  - Adverse Reactions/ Side Effects
  - Cost
  - New Symptoms

Identifying DRPs at different stages of the patient's medication use process



Source: Chapter 5. Drug Therapy Problems, Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services, 3e. Cipolle RJ, Strand LM, Morley PC. Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services, 3e; 2012

Classes of Drug Related Problems

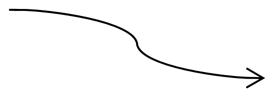
- **Indication**
  1. Unnecessary Drug Therapy
  2. Needs additional Drug Therapy
- **Safety**
  3. Adverse Drug Reaction
  4. Dosage too High
- **Effectiveness**
  5. More effective drug available
  6. Dosage too Low
- **Adherence/Convenience/Monitoring**
  7. Nonadherence
  8. Needs monitoring

Indication (appropriateness)

Safety

Effectiveness

Adherence & Monitoring



Additional miscellaneous DRP that may be used (efficacy, safety, adherence)

Let's Break it Down - Indication DRPs

Unnecessary Drug Therapy

- No medical indication
- Duplicate therapy
- Treating with multiple drugs when only 1 drug is needed
- Indication can be treated with non-drug therapy
- Drug is treating another drug's ADR
- Drug Abuse/Overuse

Needs Additional Drug Therapy

- Untreated condition needing drug therapy
- Preventive/prophylactic medication needed
- Synergistic/potentiating

Safety DRPs

Adverse Drug Reaction

- Undesirable effect
- Unsafe drug for patient
- Drug interaction
- Dosage administered or changed too rapidly
- Allergic reaction
- Contraindications present

Dosage Too High

- Wrong Dose
- Frequency inappropriate
- Duration inappropriate
- Drug interaction
- Incorrect administration
- Needs monitoring to assess dose

Effectiveness DRPs

More Effective Drug Available

- Needs a different drug product
- Condition refractory to drug
- Dosage form inappropriate
- Not effective for condition

Dosage Too Low

- Wrong dose
- Frequency inappropriate
- Drug interaction
- Duration inappropriate
- Needs monitoring to assess dose
- Incorrect administration

Adherence or Convenience DRPs

Nonadherence

Drug Problem Identification Steps

1. First, identify the major category the drug problem falls under
   a) Indication?, Safety?, Efficacy?, Convenience?; **Think – ISEC**

2. After identifying the category, choose between 1 of the 2 potential DRPs it falls under

   a) Indication – Needs new therapy or unnecessary therapy
   b) Safety – Medication unsafe for patient or dose too high
   c) Efficacy – More effective medication or dose too low
   d) Convenience – patient non-adherent or drug needs monitoring

Examples –Identify the DRP

1. Mrs. Jones comes to your pharmacy looking for a medication to help with her pain. She states that she has been using acetaminophen for 4 weeks without relief. She has been taking the maximum daily dose.

2. Mr. Edwards calls the pharmacy regarding a recommendation that you made for his arthritis. His knees feel better, but he seems to have an upset stomach and heartburn every time he takes the ibuprofen you recommended.

Examples –Identify the DRP

3. Mr. Thomas shows up at your pharmacy he asks you to check his blood pressure. You oblige and find that it is 160/95mmHg. His goal is less than 140/90mmHg. He is currently taking Lisinopril 40mg PO daily which is the maximum daily dose.

4. Mr. Rodgers has been taking Excedrin Extra Strength® for headaches and the product contains aspirin, caffeine, & acetaminophen. The patient also started taking aspirin OTC additionally but did not realize that the Excedrin product already had aspirin in it.

Rationale for Classification

Focus efforts

- Standardized Process

Clarifies responsibilities

- Helps to determine which members of the multidisciplinary team should attack or address the problem
- Not all DRPs can be resolved by a pharmacist

Next step is to resolve the DRP

Initiate New Therapy	Substitute with Therapeutic Alternative	Discontinue Drug
Recommend Appropriate Monitoring	Assess Medication Adherence	Modify Medication Dose

What happens when there are multiple DRPs?

- Pharmacists must ***PRIORITIZE*** the DRPs
- Problems are usually numbered from most important to least important
- They can also be classified as **primary vs. secondary vs. tertiary problems**
- **For the purposes of this class – prioritize problems as primary, secondary, or tertiary**

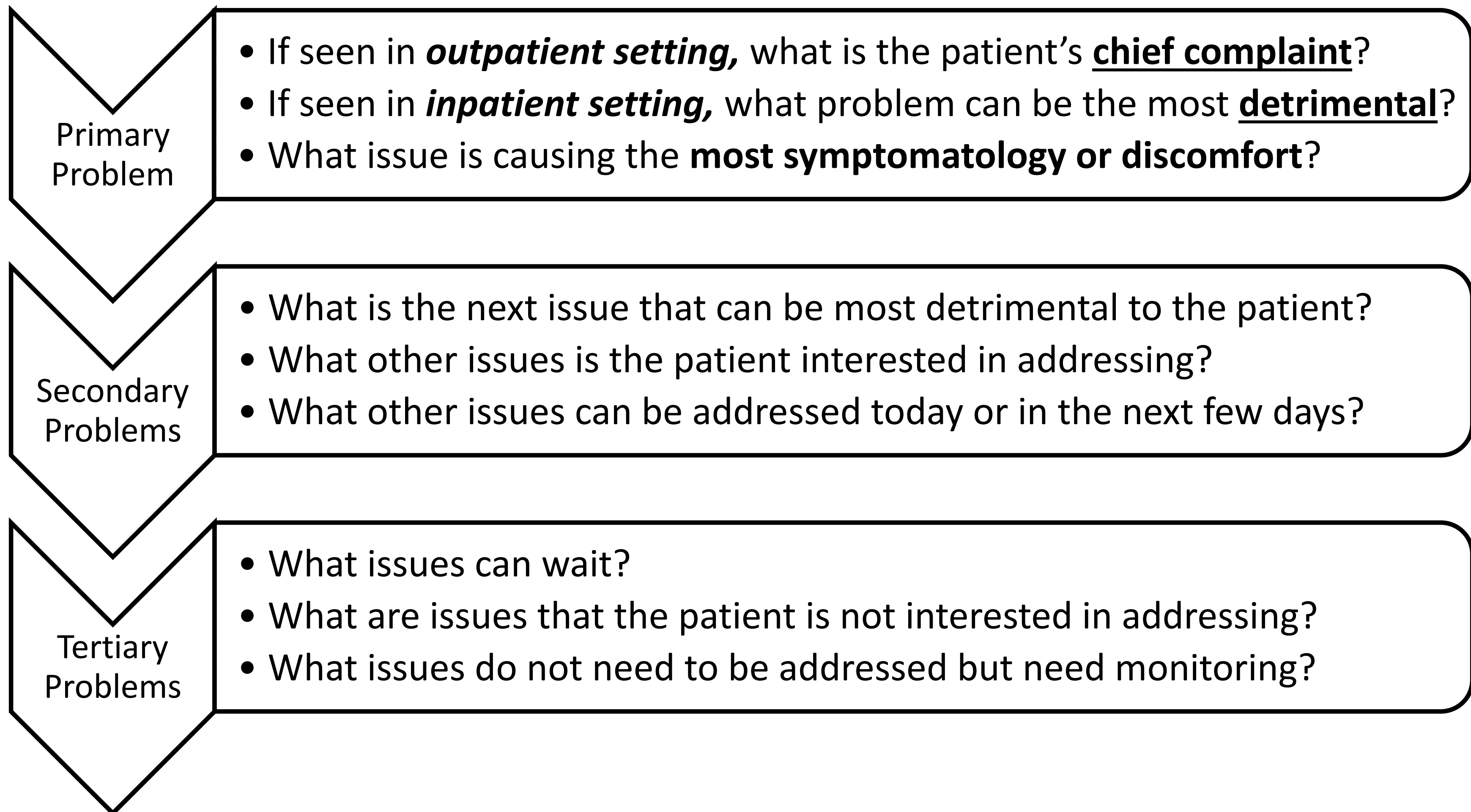
What happens when there are multiple DRPs?

- In general…
  - Primary problem should be addressed immediately
  - Secondary problems may be addressed that day after the primary problem
  - Tertiary problems may be addressed at next follow up (i.e. at the next appointment)

- **Note Well:** There is only **<u>ONE</u>** primary problem, but there can be multiple secondary problems, and multiple tertiary problems

Prioritizing DRPs

When prioritizing problems, the general rule of thumb:



Examples of Primary Problems

Scenario #1 – Physician's Office	Scenario #2 – Intensive Care Unit	Scenario #3 – Community Pharmacy
A patient comes to the physician's office with complaints of a headache and would like a painkiller to treat it	A patient is going to be treated for pneumonia and the medical team is reviewing an antibiotic to use	A patient complains of flaky, dry, itchy skin and is seeking advice from a pharmacist on what to do

Secondary Problem Examples

Scenario #1 – Physician's Office	Scenario #2 – Intensive Care Unit	Scenario #3 – Community Pharmacy
After addressing the patient's chief complaint today, the doctor notices the patient's blood pressure is elevated	After selecting an antibiotic to treat the patient's pneumonia, the pharmacist recommends a medication for prevention of deep vein thrombosis (i.e. blood clots)	After selecting the right OTC medication for the flaky skin, the patient talks about how his recent blood sugars have been too high

Tertiary Problem Examples

Scenario #1 – Physician's Office	Scenario #2 – Intensive Care Unit	Scenario #3 – Community Pharmacy
The patient expresses interests in trying medication to quit smoking but is not ready to start just yet	While the patient is being hospitalized for pneumonia, the pharmacist begins to make a list of vaccinations the patient will need before being discharge	The patient states his insurance will change in the next month and will need a therapeutic alternative to his current heart failure medication

There is one exception to this rule…

- At times, patients in the outpatient setting may have a chief complaint but have other *serious life-threatening problems*
- Sometimes the primary problem is a serious pressing or life-threatening issue that **needs immediate medical attention**

Examples of Exceptions

- Patient's chief complaint is runny nose but blood pressure (BP) is ***very elevated at 220/98 mmHg***
  - A BP this high can increase risk of stroke or serious organ damage
- Patient's chief complaint is dry skin and her blood glucose (BG) is ***very high at 520 mg/dL***
  - A BG this high can increase risk of diabetic ketoacidosis
- Patient's chief complaint is headache but patient also mentions he has been vomiting blood the past 2 days
  - Vomiting blood can be from internal bleeding

Tying it all together…

- In these instances, although the patient has a chief complaint there are much more **urgent matters to address**
- The patient may be asymptomatic with an elevated BP or BG level but still needs to seek medical attention
- The patient may lack understanding of knowing that a certain symptom requires a visit to the emergency room

Writing the Assessment

- Recall that the "A" in SOAP note is your assessment
- An assessment should include:
  1. Your prioritized DRPs
  2. A characterization of each DRP
  3. A statement of what action to fix that DRP
  4. A short explanation of rationale/evaluation

Characterization

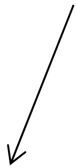
- Briefly describe what is going on with the problem
- Utilize terms such as:
  - New-onset, worsening, improving, mild, moderate, severe, uncontrolled
- Helps give the reader a better idea about the current condition
- Examples
  - diabetes vs. new-onset diabetes
  - uncontrolled hypertension vs. hypertension
  - improving asthma vs. asthma

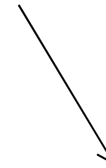
Statement of Action

- The second part of each problem should have a statement discussing how to fix the DRP
- Refer back to how the problem was identified and what can be done to fix it
- Examples:
  - DRP requiring additional therapy
  - DRP requiring discontinuation of drug due to unnecessary therapy
  - DRP requiring discontinuation of drug causing ADR
  - DRP should be substituted with more effective therapy

Examples

Uncontrolled pain requiring more effective therapy





Characterization of Problem

Action needed to fix problem

Worsening arthritis requiring alternative therapy due to adverse drug reaction

Uncontrolled hypertension needing additional therapy

Worsening headaches needing discontinuation of unnecessary therapy

Evaluation/Rationale

- The last part in the assessment is writing a rationale/evaluation for each problem
- Rationale should be brief, clear, and succinct
- DO NOT write the specific medication dose or directions
- Instead, you are talking about WHY you are choosing a drug or drug class
- Discuss WHY you have eliminated one class from your options and chose another class or medication over the other

Questions to Understand Patients' Medication Experiences

- **What has been your experience with medications for condition X?**
- **Do you have any objections to taking medications to manage your conditions?**
- **How do you feel about condition X?**
- **Are your medications working for you?**
- **What do you expect from you medications?**
- **What is it like for you to take medications?**
- **Do you have any concerns about your medications?**

Examples

Uncontrolled pain requiring more effective therapy

- Mrs. Jones pain appears uncontrolled despite taking the maximum daily dose of Tylenol
- A more effective medication is needed such as NSAIDs or tramadol as these provide better anti-inflammatory properties

Worsening arthritis requiring alternative therapy due to adverse drug reaction

- Mr. Edwards complains of upset stomach and heartburn which is a major ADR of ibuprofen
- Since ibuprofen and NSAIDs cause GI upset an alternative agent such as Tylenol may be preferred

Examples

Uncontrolled hypertension needing additional therapy

- Mr. Thomas' blood pressure remains uncontrolled despite taking the maximum daily dose of lisinopril
- Thus, an additional medication such as amlodipine would be preferred as it has less ADRs or electrolyte disturbances compared to thiazide diuretics

Worsening headaches needing discontinuation of unnecessary therapy

- Mr. Rodgers' continues to take Excedrin for headaches but also started taking aspirin which is duplicate therapy since Excedrin products also contain aspirin
- Thus, the additional aspirin should be discontinued as it is unnecessary and poses a risk of increase ADRs

WHY Do This?

- Systematic approach to care
- DRPs populate your ASSESSMENT and PROBLEM LIST for your SOAP Notes & Care Plans
- **Finding what's wrong is easier if you have clues about what *might* be wrong**

What about medication reconciliation?

- ***Medication reconciliation (med rec)*** is the comparison of two or more medication lists to provide the most up-to-date medication list for a patient

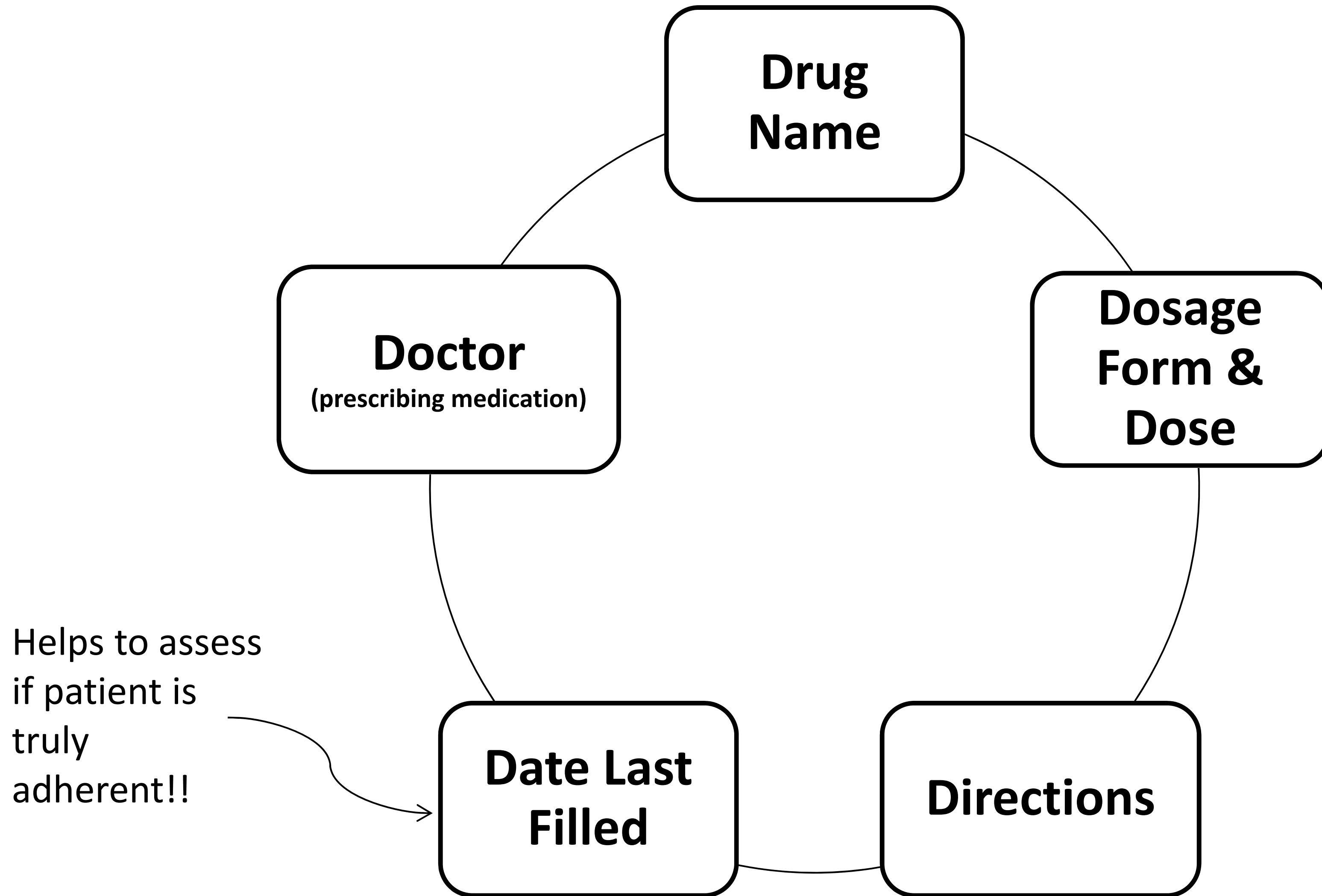
- A med rec is generally conducted during ***transitions of care***
  - Between two physicians
  - Hospital admission
  - Changing community pharmacies
  - Being discharged

- Med rec's can often lead to discovery of ***medication discrepancies*** and some discrepancies can be a DRP

Most Common Discrepancies Found

Wrong Dose	• Can lead to a **dose too low** • Can lead to a **dose too high**
Wrong Drug	• **More effective drug may be available** • **Unnecessary drug therapy** • Wrong drug can cause **adverse drug reaction**
Incorrect Drug Formulation	• **More effective drug may be available** • Different formulation could lead to a **dose too low or too high**
Wrong Directions	• Also leads to **dose too low or too high** • May lead to an **adverse drug reaction**
Drug Omissions	• Can lead to an indication **needing additional therapy**

Remember to 6 D's to a Med Rec



Assessing MTPs – Drug Interactions

- Number of medications

- How long on therapy

- Any new symptoms
- Dose increase
- New medications

- Current Monitoring/ Specialists

- Multiple Prescribers

Assessing MTPs – Drug Interactions

- QT Prolongation
- www.crediblemeds.org
  - Risk of Torsades de Pointes
  - ECG Monitoring
  - Unexplained fainting, dizziness

- Serotonin Syndrome
  - Flushing, tremors, fevers, mental confusion, diarrhea, tachycardia, sweating, agitation/ restlessness

Questions for Assessing DRPs

Category	Symptoms	Questions
Anticholinergic Effects	Blind as a bat, Dry as bone, Red as a beet, Mad as a hatter Vision changes, constipation, urinary retention, hot flashes, flushing, mental status changes	Any falls? Any changes in vision? Constipation? When did it start? Trouble urinating? Feeling hot or flushing? Any changes in mood or thinking?
CNS Depression	Fatigue, drowsiness, falls	Any falls? Do you have trouble waking up in the morning? Do you fall asleep after taking any medications?
Bleeding Risk	Unusual bruising, nose bleeds, blood in urine, black/ tarry stool	Any bruises that spread or don't go away? Any bleeding that does not stop?

Resolving DRPs

MTP experience-rooted MTP	Potential Resolution Strategy
Afraid not to have medication	Acknowledge concerns of uncontrolled condition, Educate on preventativeactions of medication, negotiate weaning off unneeded medication
Afraid of medication	Acknowledge concerns of safety, Negotiate to stop medication if may consider possibility to discontinue medication if possible
Fear of potential adverse effects	Acknowledge concerns, education on medication, offer alternatives
Adjusts medication to fit lifestyle	Listen to understand patient's lifestyle and rationale for altering prescribed directions, consider alternatives to fit lifestyle
Equates increasing number of medications with worsening health status; Does not like to take medication	Equates increasing number of medications with worsening health status; Does not like to take medication
Increasing medication dose means failure	Listening and reflection, Encourage non-drug options and lifestyle changes may consider possibility to discontinue medication if possible
Doubts need of medication	Education on health condition and medication including preventative and protective effects of medication

Summary

- To properly identify drug-related problems, pharmacists must look at the drug's ***indication, safety, effectiveness, adherence, & monitoring***
- Drug-related problems need to be labeled using one of the eight DRP categories
- Multiple drug-related problems will need prioritization (primary vs. secondary vs. tertiary)
- Conducting a medication reconciliation can lead to finding several drug-related problems needing prioritization