Drug Information Resources

Amy Chatfield, MLS
August 29, 2018
PHRD 511

Learning objectives (8/29 and 9/5)

After these classes, you will be able to...
• Differentiate between primary, secondary, and tertiary drug information resources
• Conduct two steps of the stepwise approach to drug information
• Use drug compendia available at USC to access tertiary information resources
• Name the compendia through which specific tertiary sources are accessed
• Compare and contrast tertiary resources to develop preferences
• Identify best uses of tertiary drug information resources
Agenda

• Drug information and pharmacists
• Stepwise approach
  • Classifying questions
  • Tertiary sources
    • Labels
    • Monographs
    • Handbooks
    • Interactive tools
• Using tertiary sources, incl’d drug compendia, at USC

Pharmacist’s roles in drug information

• Experts in drug formulation, action, use, and managing misuse
• Other health care professionals
  • Focus on other aspects of care besides drug use
  • Little knowledge of other aspects of drugs that affect safe use
    • Drug interactions, drug-food interactions, age-related dosing changes, etc.
  • Very little knowledge on supplements & vitamins (52% of US adults take these)¹

The stepwise approach to drug information questions


How do I receive and expand the question?

- In school, scenarios are lengthy to provide details you would need to get when receiving & expanding the question
- These types of details are clues for you
  - Questions about drug class X often include ethnicities of patients
  - Questions about dosing often include age of the patient
  - Questions about adverse effects often include a list of all diseases and drugs the patient has or is taking
Classify the question?

- Classify into category of drug information
- Drug sources are organized into common categories
  - Within monographs
  - Single handbooks cover one category, e.g. Stockley’s Drug Interactions; Drug Interactions Facts
- Determine the category/categories to quickly select the correct place(s) within a monograph or correct handbook(s).

Common categories of drug information

1. Adverse effects
2. Availability
3. Boxed warning (formerly Black Box warning)
4. Compatibility
5. Compounding
6. Contraindications
7. Dosing or Administration
8. Drug interaction
9. Identification
10. Indications or Use
11. Nomenclature
12. Patient and Therapy Management
13. Patient Counseling or Education
14. Pharmacokinetics
15. Pharmacology or Mechanism of Action
16. Poisoning or toxicology
17. Pregnancy or Lactation
18. Stability or Storage

I don’t know what these mean! Check out *Contemporary Drug Information: An Evidence-Based Approach*; use a dictionary; find an exercise from a prior PHRD class on the Year 1 subject guide, 511 tab.
Types of information used by pharmacists

Original articles reporting on an experiment

Databases that include citations; add indexing to make finding easier; and include abstracts

Summary of prior and existing knowledge on this topic.
- Labels or inserts
- Monographs
- Handbooks
- Interactive sources (type in 2 drugs, learn if they interact)

Labels vs all other tertiary sources

- To get drug approved in US, company does tests, writes reports, submits to FDA
- Results and important points are summarized by company and FDA; and approved by FDA
  - Label
  - If more detail needed for safe use—insert and label
- After drug approved in US, people use it
- The experiences people have are written about in articles
- Experts are employed by a company to find articles, evaluate them, and summarize information alongside existing knowledge.
  - Monographs
  - Handbooks
  - Interactive tools
Tertiary source: Drug Monographs

- Monographs are building blocks of DI
- One source that provides quick access to summarized information on a drug, in all categories.
- Highly summarized, not much detail.
  - Drug X and drug Y interact– five sentences on why/how.
  - Some monographs have specialized editors and create very detailed areas: AHFS DI is great at adverse reactions
- Monographs collected together into one book or e-book.
  - LexiDrugs, DrugDEX, AHFS Drug Information, Drug Facts and Comparisons, Clinical Pharmacology: all names of monograph books
- Monograph books arranged alphabetically by drug title, or by drug’s therapeutic class

Tertiary source: Handbooks

- One source that provides quick access to summarized information about one category of drug information
- Detailed information about one category: pregnancy & lactation, interactions, dosing.
- Meyler’s Side Effects of Drugs, Pediatric Dosage Handbook, The Teddy Bear Book (pediatric injectable drugs)
- Watch what your preceptor does to answer drug questions; listen in lecture for citations; lectures in therapeutics courses
Tertiary source: interactive databases

- Input information, the database “crunches” it, then retrieves an answer
  - You could do this by reading monographs & handbooks but it’s sometimes quicker to let the computer do it
  - Especially if you have 3 or more drugs
- Drug interactions: oral and topical
- IV interactions: for IV and injection drugs
- Drug identification: input size, shape, color, imprints
Log in to all compendia using your USC NetID and password. CP is licensed by the School of Pharmacy for Pharmacy only.

Lexi-Comp

- LexiComp- focus on hospital pharmacist. Transitioning between care settings; different life stages; international drugs.
- 7 monograph books:
  - LexiDrugs
  - Pediatric & Neonatal LexiDrugs
  - Geriatric LexiDrugs
  - AHFS Essentials
  - AHFS DI (Drug Information)
  - Lexi-Drugs International Concise
  - Natural Products database

11 Handbooks:
- Briggs Drugs in Pregnancy and Lactation
- Drug Allergy and Idiosyncratic Reactions
- Facts and Comparisons Off-Label
- Infectious Disease
- Lexi-Tox
- Patient Education—Adult
- Patient Education—Pediatric
- Patient Education— Disease and Procedure
- Patient education- Natural products
- Lab Tests and Diagnostic Procedures
- Pharmacogenomics
- Pregnancy and Lactation In-Depth

Interactive tools: oral interactions checker, IV compatibility, drug identification; find drugs by adverse reaction, indication, or contraindication.
Getting to content in LexiComp

- Search drug name
- Results are limited to five monographs and seven handbooks
- Go directly to the section of the book by clicking the drug name.

Lexi-Drugs
- [Lexi-Drugs](https://www.lexicomp.com)
- [Pediatric and Neonatal Lexi-Drugs](https://www.lexicomp.com)
- [AHFS Essentials (Adult and Pediatric)](https://www.lexicomp.com)
- [Pharmacogenomics](https://www.lexicomp.com)

Micromedex

Micromedex- for academic medical center pharmacists. Drug comparisons, emerging/new therapies.

2 monograph sources:
- Quick Answers
- In Depth Answers

Interactive tools: drug interactions (oral); Trissell’s IV Compatibility; drug identification

Handbooks:
- CareNotes- patient education
- Consumer Drug Information
- DiseaseDex- summaries of disease
- Drug Consults- researched answers to questions
- Herbal Medicines
- Index Nominum- foreign drugs
- Martindale- foreign drugs
- PoisonDex
- P&T Quik reports- monographs on brand-new drugs
- Red Book- drug prices
Getting to content in Micromedex

- Search for drug name → automatically go to Quick Answers monograph
- Use tabs on top to move between monograph sources or see all results from all books
- Click all results. Filter related results by drug, disease, or toxicology to see handbooks in that area
- Some popular handbooks have links in the top bar

Facts and Comparisons E-Answers

Facts and Comparisons- for quick access to quality information in a clinic. Very similar to LexiComp.

2 monograph sources:
- Drug Facts and Comparisons
- Facts and Comparisons A-Z Drugs

Tools: drug identifier; interactions (oral); calculators; comparative resources; drug reports by disease/symptom

Handbooks:
- Natural Products Database
- Facts and Comparisons Off Label
- Briggs Drugs in Pregnancy and Lactation
- Facts and Comparisons REMS (risk evaluation and mitigation strategy)
Getting to content in Facts and Comparisons E-Answers

- Search drug name
- Creators decided to limit results to one monograph

- There may also be content in other handbooks on your drug
- From homepage of F&C, Drug Indexes
- Click title of book, then generic names to see A-Z generic name index

Clinical Pharmacology: features

- Connecting chemistry and biology with clinical drug use
- 1 monograph source, not named (“monograph from Clinical Pharmacology”)
- Handbooks: Drug Class Overviews; Harriet Lane Pediatric Care; Lab Reference Values; Patient Education; Labels
- Interactive tools: interactions, compatibility, product comparison, adverse reaction, clinical comparison
- Lists: (15!) Confused Drugs; Do Not Crush; Do Not Split; Boxed Warnings; more.
Get to content in Clinical Pharmacology

Search by drug name to see monograph and labels

The handbook I want isn’t in a compendia

- Pharmacy Year 1 subject guide, Drug Information tab
- Chart with common drug information categories and recommended handbooks (or monograph sources with detailed lists). Links to compendia.

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Preferred Source</th>
<th>Secondary Resource(s)</th>
</tr>
</thead>
</table>
                                                                      • Stockley's Drug Interactions Pocket Companion 2016 |
| Pregnancy and Lactation | Drugs in Pregnancy and Lactation (formerly known as Briggs' Drugs In Pregnancy and Lactation) | • LactMed
                                                                      • Drugs for Pregnant and Lactating Women. Upper level: QZ 39 W423d 2009
                                                                      • Micromedex |
Prep for next week

- Get Clinical Pharmacology off-campus username and password
  - Need to create own username and password to use from off-campus
  - Go to https://mypharmacyschool.usc.edu/kb/clinical-pharmacology/
  - Follow link and instructions for Off-Campus Access
- Use CP, LexiComp, and Micromedex each once. Try to find:
  - A monograph for Lisinopril
  - One handbook that has an entry for Lisinopril
  - Use one interactive tool
- Bring your computer next week to CHP G24
  - 1-2 pm
  - 2-3 pm