Drug Information

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Objectives

- Enhance the image of the career.
- Gain self-confidence therefore you can play your natural role again in the health system.
- Promote evidence based practice.
- Meet the patient’s needs while providing pharmaceutical care.
- Improve the patient adherence.
Drug Information:

Knowledge of facts through; reading, study, or practical experience on chemical substance that is used in
- Diagnosis
- Prevention
- and treatment of a disease

It covers all types of information including; objective and subjective information as well as information gathered by scientific observation or practical experience.
Definitions

- **Drug Information Service**

- It describes the activities undertaken by pharmacists in providing information to optimize drug use.

- It is those services which cover the activities of specially trained individual to provide accurate, unbiased, factual information in response to patient oriented drug problems that are received from health care professionals.
Questions

Your relative is pregnant in the third trimester (week 27), she has urgency and irritation during urination, her Gyn/Obs did urine culture and sensitivity which has shown group B strept. That was sensitive for:

- Penicillin
- Ampicillin
- Amoxiclav
Questions

Her physician has chosen (PO, Amoxiclav 1g every 12 hours for 7 days), your relative told you that her physician said that; in spite of her complete cure, during delivery she has to receive Ampicillin IV.

She asked you Why?
Questions

- Another lady who is 27 years old, pregnant had previous frequent miscarriage, came to your pharmacy with a prescription for aspirin 100mg once daily, Fe-Fol capsule once daily she.

- On the basis of what you have studied in toxicology / pharmacology what is your comment about aspirin?
Questions

- You spoke with the physician, she informed you that you do not understand, the medication is to prevent miscarriage as the patient has antiphospholipid syndrome!

- You want to find data about this condition; where can you find it?
A man comes to your pharmacy with a prescription for his 4-year old son the prescription contains:

- Dx: PAH
- Rx
  - Sildenafil 8 mg every 8 hours.

Discussing the matter with the physician he told you that he is very busy to discuss the matter and ordered you to just dispense the prescription.

Asking the father, he told you his son has problem in his lung and heart.

What are you going to do?
Where do we start?
Make Search Strategy and Start the Research

- You need to know where to look for the kind of information you need.
- You need also to have a sense of whether or not the information that you find is of good quality.
Classification of Scientific Literature

- **Tertiary Sources**: Textbooks
- **Secondary Sources**: Bibliographies, Reviews, Abstracting and Indexing Services
- **Primary Sources**: Patents, Conference Papers (Abstracts), Case Reports, Journal Articles, Correspondence, Thesis
The tertiary literature is composed of:

- Reference books (Applied therapeutics)
- Review articles
- Compendia (BNF, AHFS)
- Practice guidelines
Evaluating Tertiary Literature

Evaluate the Quality and Credibility:

- Does the author have sufficient credentials and/or experience.
- Is this the most recent edition.
- Are statements of fact appropriately supported by citations.
- Is the reference easy to use.
Evaluating Tertiary Literature

Advantages of Tertiary literature:
- convenient,
- Concise,
- compact and,
- Provides much information needed for a common practice.
Evaluating Tertiary Literature

- **Drawbacks:**
  - Information may be incomplete.
  - May not be enough detail.
  - Information may be out of date.
Secondary Databases (Abstracting)

- Medline
- International Pharmaceutical Abstracts
- Academic Search Premier
- ISI web of knowledge
- Biosis
- OVID
- EBSCO
- EMBASE
PubMed (Medline)

PubMed is a service of the U.S. National Library of Medicine that includes over 17 million citations from MEDLINE and other life science journals for biomedical articles back to the 1950s.

PubMed includes links to full text articles and other related resources.
Stepwise Approach in Handling Information Queries
Step 1

- Secure Demographics of the requestor.
Step 2

- Secure Demographics of the requestor.
- Obtain Background Information.
Step 3

- Secure Demographics of the requestor.
- Obtain Background Information.
- Determine and Categorize the actual Question.
Step 4

- Secure Demographics of the Requestor.
- Obtain Background Information.
- Determine and Categorize the Actual Question.
- Develop the Search Strategy and Conduct the Research.
Step 5

- Secure Demographics of the Requestor.
- Obtain Background Information.
- Determine and Categorize the Actual Question.
- Develop the Search Strategy and Conduct the Research.
- Perform Evaluation, Analysis and Synthesis.
Step 6

- Secure Demographics of the Requestor.
- Obtain Background Information.
- Determine and Categorize the Actual Question.
- Develop the Search Strategy and Conduct the Research.
- Perform Evaluation, Analysis and Synthesis.
- Formulate and Provide a Response
Step 6

- **Formulate and Provide a Response**
  - Present the competing viewpoints or considerations.
  - State the assessment of the literature or information reviewed and emphasize the superior viewpoint.
  - Compactly refute the major strengths and present weaknesses of the inferior viewpoint.
  - Defend the major weaknesses and promote the strengths of the superior viewpoint.
  - Restate the final assessment in support of the superior viewpoint.
In order to do 1 through 3

- You need to have communication skills.
To be able to do step 4

- You need to be familiar with different references:
  - Tertiary
  - Secondary
  - Primary
Search Strategy

- Sometimes a search will require all 3 levels of the pyramid.
- A tertiary source to familiarize yourself with the topic.
- Secondary to identify appropriate primary literature.
- Carefully evaluated primary literature.
Quite often

- **Tertiary Source will be sufficient for:**
  - Information for a patient consultation.
  - Availability of dosage strengths or forms or compatibility information.
  - Active ingredients of preparations.
  - US FDA approved or UK licensed indications.
To be able to do 5 & 6

- Read and evaluate clinical studies.
  - Introduction to clinical studies
  - Introduction to critical appraisal of clinical study
  - Evaluation of websites that provide health information.
Thank You
Does Ascorbic acid really reduce the duration of common cold?

In a Review by Thomas Chalmers (1975) seven placebo-controlled studies were analyzed. Ascorbic acid dose range 0.25 – 0.5 g Reduction in the duration of cold episodes with vitamin C were only 0.11 +/-0.24 (SE) days.

The author concluded that there is no valid evidence to indicate that vitamin C (in doses 0.25-0.5 g) is beneficial in the treatment of the common cold.
Does Ascorbic acid really reduce the duration of common cold?

- Hemila et al 1995;
- Used data from the same studies that were reviewed by Chalmers.
- They found that vitamin C but in higher doses (1-6 g/day) decreased the duration of the cold episodes by 0.93 +/- 0.22 (SE) days and the relative decrease in the episode duration was 21%.
What Do you infer?

- Vitamin C may reduce common cold however in high doses (1-6 g/ day). Small doses are ineffective?
- Is this dose practical for all types of patients?
- Go and read April issue of the newsletter.
Summary

- Definition: drug information.
- Different types of references.
- How can you evaluate a 3ry reference?
- Stepwise approach when you receive question.
- The requirements that you need to be able to do steps 1 through 6 in the approach.