Overview

▪ Introduction to Health Sciences information resources
▪ PubMed Exercise
▪ CINAHL Exercise
EBHC Cycle

1. Formulate clinical/health services question
2. Search for the evidence
3. Appraise the evidence
4. Incorporate best evidence into decision-making
5. Evaluate the process

Factors:
- Patient preferences
- Clinician experience
Information Overload

Medical Articles per Year

- Biomedical: 5,000 per day
- MEDLINE: 1,500 per day
- Trials: 95 per day
- Diagnostic?: 50 per day
The LD₅₀ of toxicity data is 2 kilograms per kilogram.
Knowledge Half-Life

Half of what you learn in medical school will be out of date in 10 years and the trouble is no one knows which half.

Dr. Burwell, Dean of Medicine, Harvard University
Clinical Questions

Family physicians have 3.2 questions for every ten patient visits

Formulating Questions

- In Health Sciences, foreground questions are framed by a PICO, PICOT, PIOx.

- P = population/patient/problem
- I = intervention/exposure/prognostic factor/diagnostic test...
- C = comparison, if appropriate (placebo/gold standard/no Tx)
- O = outcomes (clinically relevant, patient-oriented)

For more see: http://libcasts.library.dal.ca/Kellogg/EBP/Module%201_Clinical%20Question/
An EBP model for information resources and retrieval

Of studies, syntheses, synopses, summaries, and systems: the “5S” evolution of information services for evidence-based healthcare decisions

Evid Based Med 2006;11:162-164
http://ebm.bmj.com/content/11/6/162.2.extract

Accessing preappraised evidence: fine-tuning the 5S model into a 6S model

6S Model

- Systems
- Summaries
- Synopses of Syntheses
- Syntheses
- Synopses of studies
- Single Studies
6S Model

- Start here!
- Systems
- Summaries
- Synopses of Syntheses
- Syntheses
- Synopses of studies
- Single Studies

Using evidence in clinical practice
Systems are very detailed, often patient-specific, linking the patient’s conditions to current best practices.

Currently not very common outside of specialty clinics and/or highly automated departments.
Summaries integrate the best available evidence to provide full range of evidence addressing all management options for a given health problem, not just one aspect of the problem (as found in single-study resources that make up the lower three categories in the 5S Model).
6S Model: Summaries

- **Search:**
  - Evidence-based textbooks, such as:
    - SmartMedicine (formerly ACP PIER)
    - BMJ BestPractice
    - Dynamed
    - eMedicine
    - Essential Evidence PLUS

Diagram:
- Single Studies
- Synopses of studies
- Syntheses
- Synopses of syntheses
- Systems
- Summaries
Exercise

- How effective is terbinafine in the treatment of fungal toe nail infections (onychomycosis)?

- P = onychomycosis in adults
- I = terbinafine
- C = None
- O = cure
Exercise

- $P =$ onychomycosis in adults
- $I =$ terbinafine
- $C =$ None
- $O =$ cure

- Dynamed
- ACP Smart Medicine (PIER link)
6S Model: Synopses of Syntheses

- Very brief descriptions of original reviews, often with recommendations for practice/decision-making

Diagram:
- Single Studies
- Synopses of studies
- Syntheses
- Summaries
- Systems

Synopses of syntheses
6S Model: Synopses of Syntheses

- **Search:**
  - Cochrane Summaries
  - DARE (Cochrane)
  - Health-evidence.ca
  - *Evidence-Based Medicine* (journal)

![Diagram of 6S Model](image-url)
6S Model: Syntheses

- Systematic reviews/Meta-analyses
- Meta-narratives
- Realist reviews
- Scoping reviews
6S Model: Syntheses

- **Search:**
  - Cochrane Database of Systematic Reviews
  - DARE (Cochrane)
  - HTA’s (Cochrane)
  - BMJ Updates
  - PubMed – Systematic review filter (Clinical Queries tool)
  - Embase
  - TRIP
6S Model: Synopses of Single Studies

- Very brief descriptions of original articles
- Often read as if they are a lit review for the topic
- Eg. CATs (Critically Appraised Topic)
6S Model: Synopses of Single Studies

Search:
- ACP Journal Club
- Evidence-Based Medicine
- Evidence-Based Mental Health
- Evidence-Based Child Health
- PubMed
- TRIP
6S Model: Single Studies

- The original journal articles that present the report on one aspect or management of a health problem.
- Clinical trials, cohort studies, etc. – clinician must do own critical appraisal
6S Model: Single Studies

Search:
- PubMed database
- Embase
- Cochrane Central Register of Controlled Trials
- PsycINFO
- Clinical Trials.gov
- TRIP
Robin
Why do cold medications have warnings for pregnant women?

Cold medications and pregnancy

For more on PubMed searching see: http://libcasts.library.dal.ca/Kellogg/PubMed/index.php
CINAHL Example

- Treating breast cancer with a drug combination
- Skin cancer using the Clinical filters

- For more on CINAHL searching see:
  http://libcasts.library.dal.ca/Databases/CINAHL/index.php
Questions And Contact Info

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See LibGuides for Health Sciences Librarians @ Dal!

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