



Welcome!

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እንኳን ደህና መጣሽ።!

ਸਤਿ ਸ੍ਰੀ ਅਕਾਲ!

Introductions  
“Tour” of handouts

# Information Empowerment

Information Seeking & Data  
Resources in the Research Context



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April 2017

# Finding information.....

**What type of information are you looking for?**

**How do you search?**

**Where do you search?**

**Information challenges?**

**What is your “favourite” resource?**





**YOU ARE  
HERE**

**Hinari**  
Research for Health

 **World Health Organization**



UNITED NATIONS DEVELOPMENT PROGRAMME  
**Human Development Reports**



**THE COCHRANE**  
Independent high-quality evidence



**World Health Organization**

**thMap**  
Local Information

**PubMed.gov**

US National Library of Medicine  
National Institutes of Health



**Red Book® Online**

**National Center for Health Statistics**



**POPLINE**  
by K4Health

**Google**  
Scholar

**YOU ARE  
HERE**



**BioMed Central**  
The Open Access Publisher



**PubMed.gov**

US National Library of Medicine  
National Institutes of Health



**UNITED NATIONS  
HUMAN RIGHTS**  
OFFICE OF THE HIGH COMMISSIONER

**unicef** 

**The State of the World's Children 2016**

**THE LANCET**

**BBC  
NEWS**

**The New York Times**

**THE WORLD FACTBOOK**



 **OECD**  
BETTER POLICIES FOR BETTER LIVES

**Overload:**  
Too many data (e.g. written, verbal and nonverbal) for the clinician to organize, synthesize, draw conclusions from, or act

**Erroneous:**  
Information is incorrect.

**Information Chaos**

**Underload:**  
necessary information is lacking.

**Conflict:**  
Unable to determine which data correct.

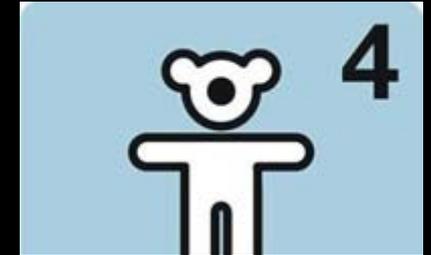
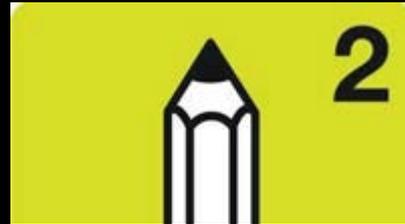
**Scatter:**  
Information located in multiple places.

# Bottom Line

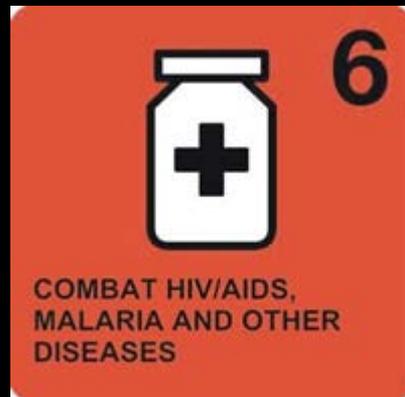
**“What is your question??”**

**Matching information resource to  
information need.....**





Identify your specific information needs  
as you conduct your research....



Part 1:

## **Going to the Source:**

***Identifying and navigating scholarly literature***



# 1. Review of Evidence Based Practice in the Clinical Setting

Before we move to evidence based practice in the research cycle, let us review EBP in the clinical setting.

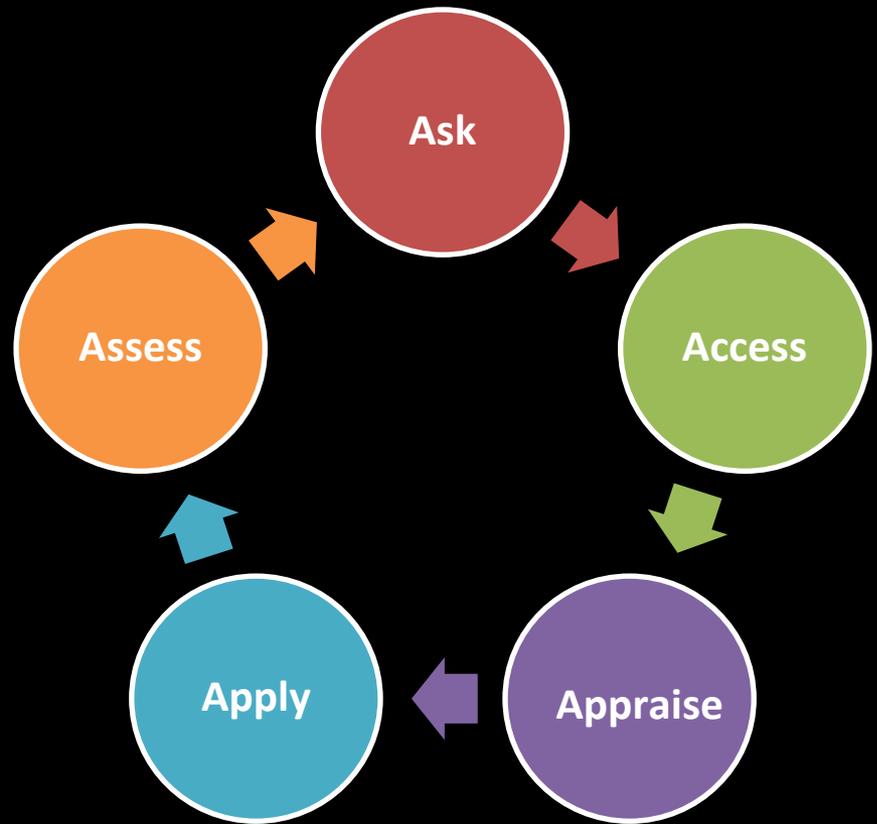
Consider .....

Application in the clinical setting and application in research setting



# The 5 Step EBP Process

1. **ASK:** Formulate an answerable clinical question
2. **ACCESS:** Track down the best Evidence
3. **APPRAISE:** Appraise the evidence for its validity and usefulness
4. **APPLY:** Integrate the results with your clinical expertise and your patient values / local conditions
5. **ASSESS:** Evaluate the effectiveness of the process



# Step 1: **ASK** (questions, PICO) a focused (answerable) clinical question



## Background Questions

- General questions - disorder
  - What is the disorder?
  - What causes it?
  - How does it manifest?
  - Treatment options?
- Information Resources
  - Books
  - Narrative reviews
    - General overview of a topic

## Foreground Questions

- Specific questions - patient
  - Intervention / prevention
  - Etiology, risk
  - Diagnosis
  - Prognosis
- Information Resources
  - Journal articles
  - Synopses of articles
  - Systematic Reviews
    - Answer specific questions

# Step 1: **ASK**

## PICO Format



**P** = Patient, population or problem (*Who are the patients or populations? What is the disease?*)

**I** = Intervention (*What do you want to do with this patient – treat, diagnose, observe?*)

**C** = Comparison intervention (*What is the alternative to the intervention – placebo, different drug, nothing?*)

**O** = Outcome (*What are the relevant outcomes – morbidity, mortality, death, complications?*)

# PICO exercise – The Case

*“There has been a special clinical conference to discuss the use of macrodantin vs. bactrim in treating young teen-age girls with UTI. Bellevue Hospital recommends bactrim, Tisch Hospital recommends macrodantin. You must come up with an evidence-based recommendation for what the hospitals should use.”*

Source: NYU School of Medicine, Frederick L. Ehrman Medical Library. (2006) PICO and Formulating the Clinical Question: A Guided Exercise.

<https://library.med.nyu.edu/library/instruction/handouts/pdf/picohandout.pdf> . Accessed: 24 April 2017

# PICO format

**P** = Patient, population or problem

**P = adolescent girls**

**I** = Intervention

**I = macrodantin**

**C** = Comparison intervention

**C = bactrim**

**O** = Outcome

**O = efficacy of treatment**

# The Question

In adolescent girls, is macrodantin more effective than bactrim in treating UTI?

# Step 2: **ACCESS** the best evidence through available resources

Access

## CIRHT Information Resources Guide

CIRHT - Center for International Reproductive Health Training

Search

**Overview**

- Research & Clinical Databases
- EBM & Critical Appraisal
- Open Access Journals
- E-books and Publications
- Data Sources
- Mobile Resources
- Organizations
- Global Burden of Disease (GBD)
- Resource Training
- Scientific Writing Resources
- Access Elsevier Journal Subscriptions
- Learning Videos (under construction)

**Welcome!**

Welcome to the resource guide for Centre for International Reproductive Health Training partners, students, faculty, clinicians and scholars.

The information sources presented in this resource guide are openly accessible to you. We hope you find them useful. Your feedback and comments are most welcome!

In this resource guide you will find:

- RSS feeds to keep current in the biomedical and health sciences literature
- Research and clinical (point of care) databases
- Selected open access journals
- Freely available online health sciences books
- Health and epidemiology data sources
- Evidence-based medicine (EBM) guides and resources
- Selected freely available health-related mobile resources

**\*NEW and NOTEWORTHY\***

- Integrating Family Planning into Medical Education: A Case Study of St. Paul's Hospital Millennium Medical College (SPHMMC)
- The Lancet Maternal Health Series
- WHO World Health Statistics 2016: Monitoring health for the SDGs
- Every Woman Every Child
- WHO Global Strategy for Women's, Children's and Adolescents' Health, 2016-2030
- Maternal Health Task Force  
A project of the Women and Health Initiative at the Harvard T.H. Chan School of Public Health

**Librarian**



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Contact:  
Global Health Coordinator

**PubMed Articles: FAMILY PLANNING and AFRICA**

- Supportive supervision for volunteers to deliver reproductive health education: a cluster randomized trial. [↗](#) [i](#)

Website [↗](#) | Feed [↗](#)

**PubMed Articles: MATERNAL MORTALITY and ETHIOPIA**

- Maternal and fetal outcomes of uterine rupture and factors associated with maternal death secondary to uterine rupture. [↗](#) [i](#)
- Skilled Antenatal Care Service Utilization and Its Association with the Characteristics of Women's Health Development Team in Yeky District, South-West Ethiopia: A Multilevel Analysis. [↗](#) [i](#)

Website [↗](#) | Feed [↗](#)

**Keeping Current**

- CIRHT on Twitter
- CIRHT on Facebook
- ACOG News Releases
- FIGO News
- FP2020 News
- WHO News
- Sustainable Development Goals - News
- Global Health NOW

**The Lancet Global Health**

- [Editorial] Community health workers: emerging from the shadows. [↗](#) [i](#) Apr 30, 2017

<http://guides.lib.umich.edu/cirht>

## Step 3: **APPRAISE** the evidence for its validity and usefulness



- Appraisal involves validity, quality, precision of the study, and applicability
- General appraisal questions:
  - Are the results valid (measure question being asked)?
  - Are the results reliable (reproducible)?
  - What are the results?
  - Will the results help in the population of interest?

# Step 3: **APPRAISE**

## Critical Appraisal Tools



- Critical Appraisal Tools provide:
  - A structured approach for assessing quality and relevance
  - A consistent list of questions with fixed response options
  - Question lists tailored to specific types of research methodologies
- Use a tool appropriate to the type of study

# Step 3: **APPRAISE**

## Critical Appraisal Tools



## Selected Tools

### Critical Appraisal Skills Programme (CASP)

<http://www.casp-uk.net/casp-tools-checklists>

Follow @CASPUK 2,124 followers

Critical Appraisal Skills Programme

### Critical Appraisal Skills Programme (CASP)

*Making sense of evidence*

HOME CRITICAL APPRAISAL WORKSHOPS **CASP TOOLS & CHECKLISTS** ABOUT CASP More

## CASP CHECKLISTS

This set of eight critical appraisal tools are designed to be used when reading research, these include tools for Systematic Reviews, Randomised Controlled Trials, Cohort Studies, Case Control Studies, Economic Evaluations, Diagnostic Studies, Qualitative studies and Clinical Prediction Rule.

These are free to download and can be used by anyone under the [Creative Commons License](#).

**CASP Checklists** (click to download)

<a href="#">CASP Systematic Review Checklist</a>	<a href="#">CASP Qualitative Checklist</a>
<a href="#">CASP Randomised Controlled Trial Checklist</a>	<a href="#">CASP Case Control Checklist</a>
<a href="#">CASP Diagnostic Checklist</a>	<a href="#">CASP Cohort Study Checklist</a>
<a href="#">CASP Economic Evaluation Checklist</a>	<a href="#">CASP Clinical Prediction Rule Checklist</a>

# Step 3: **APPRAISE** Critical Appraisal Tools



## Selected Tools

Centre for Evidence-Based Medicine Critical Appraisal Worksheets

<http://www.cebm.net/critical-appraisal/>

The screenshot shows the CEBM website with a dark blue header. The CEBM logo and 'CENTRE FOR EVIDENCE-BASED MEDICINE' are on the left. Logos for CEBM and the University of Oxford are on the right. A navigation bar contains links for HOME, ABOUT, EDUCATION & TRAINING, EVENTS, RESOURCES, RESEARCH, and BLOG. A search bar is on the right. The main content area is titled 'Critical Appraisal tools' and includes social media icons (Twitter, Facebook, 146, Tumblr, +, 65). The text explains that critical appraisal is the systematic evaluation of clinical research papers to establish: 1. Does this study address a clearly focused question? 2. Did the study use valid methods to address this question? 3. Are the valid results of this study important? 4. Are these valid, important results applicable to my patient or population? It notes that if the answer to any is 'no', one can skip reading the rest. Below this is a photo of a woman using a magnifying glass over a document. Further down, it says 'This section contains useful tools and downloads for the critical appraisal of different types of medical evidence. Example appraisal sheets are provided together with several helpful examples.' The section is titled 'Critical Appraisal Worksheets' and 'English'. A list of worksheets is provided: Systematic Reviews, Diagnostics, Prognosis, and Randomised Controlled Trials. On the right, there is a video player titled 'VIDEO: CEBM 20 YEARS ON' featuring Professor Carl Heneghan. Below the video is a 'RECOMMENDED CONTENT' section for 'CATMaker and EBm Calculators' with a logo for CATmaker.

**CEBM** CENTRE FOR EVIDENCE-BASED MEDICINE

CEBM UNIVERSITY OF OXFORD

HOME ABOUT EDUCATION & TRAINING EVENTS RESOURCES RESEARCH BLOG search website... Q

### Critical Appraisal tools

Twitter Facebook 146 Tumblr + 65

Critical appraisal is the systematic evaluation of clinical research papers in order to establish:

1. Does this study address a [clearly focused question](#)?
2. Did the study use valid methods to address this question?
3. Are the valid results of this study important?
4. Are these valid, important results applicable to my patient or population?

If the answer to any of these questions is "no", you can save yourself the trouble of reading the rest of it.

This section contains useful tools and downloads for the critical appraisal of different types of medical evidence. Example appraisal sheets are provided together with several helpful examples.

### Critical Appraisal Worksheets

#### English

- [Systematic Reviews](#) Critical Appraisal Sheet
- [Diagnostics](#) Critical Appraisal Sheet
- [Prognosis](#) Critical Appraisal Sheet
- [Randomised Controlled Trials](#) Critical Appraisal Sheet

**VIDEO: CEBM 20 YEARS ON**

CEBM 20 years on.

Professor Carl Heneghan  
Director, CEBM

Carl Heneghan reflects on two decades of promoting the practice and teaching of EBM.

**RECOMMENDED CONTENT**

CATMaker and EBm Calculators

CATmaker

# Step 4: **APPLY** the evidence in the context of your expertise and patient values

Apply



Evidence based practice (EBP) is...

...the integration of best evidence from current research, patient preferences and values, and clinical expertise to clinical questions in a timely fashion.

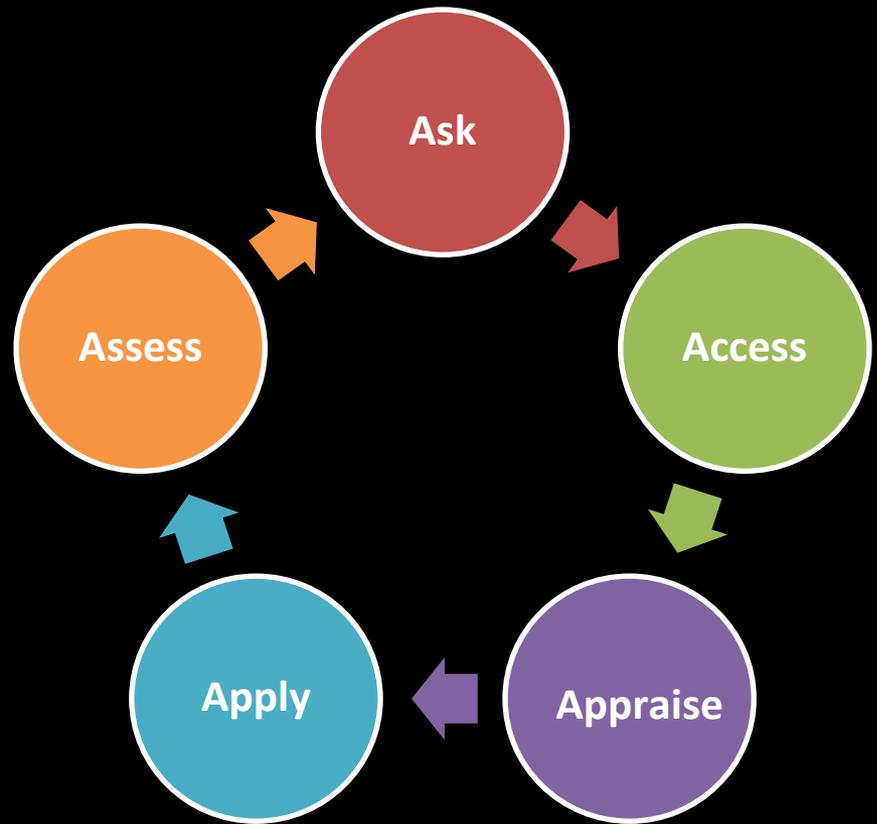
Sackett DL, Straus SE, Richardson WS, Rosenberg W, Haynes RB. Evidence-based Medicine: How to Practice and Teach EBM. 2<sup>nd</sup> Ed. Churchill Livingstone: Edinburgh, 2000.

# Step 5: **ASSESS** your EBP process and identify potential improvements



The 5 Step EBP Process is a **cycle**:

- Keep knowledge and skills **current** (lifelong learning practices)
- Learn from your experiences to **save time** to find the **best** quality of information

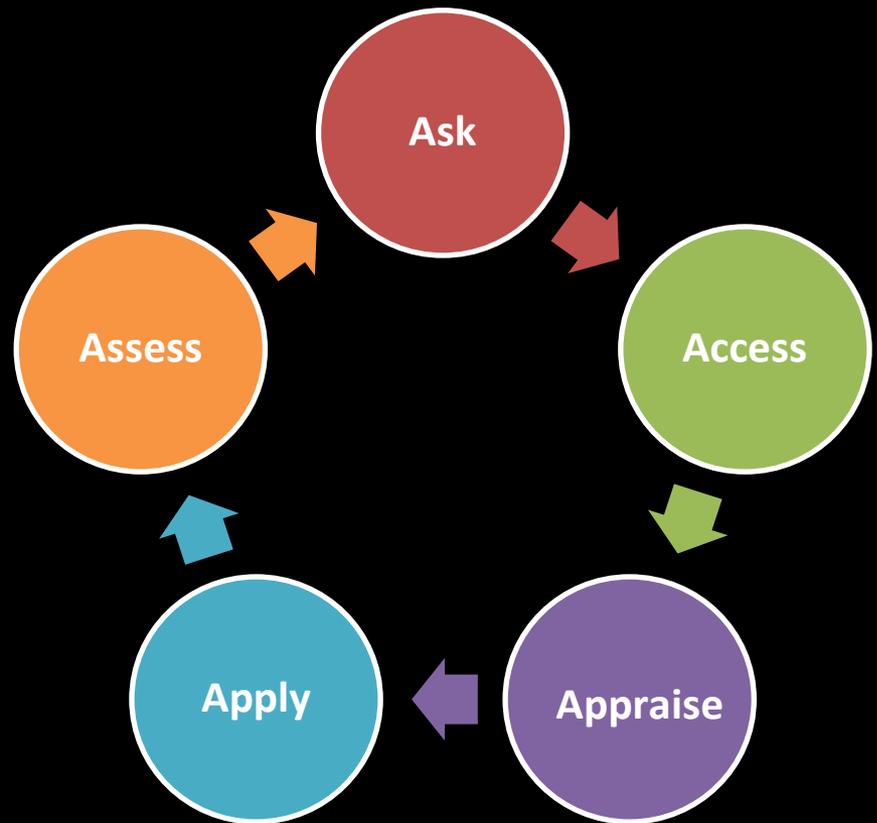


## 2. The Research Cycle



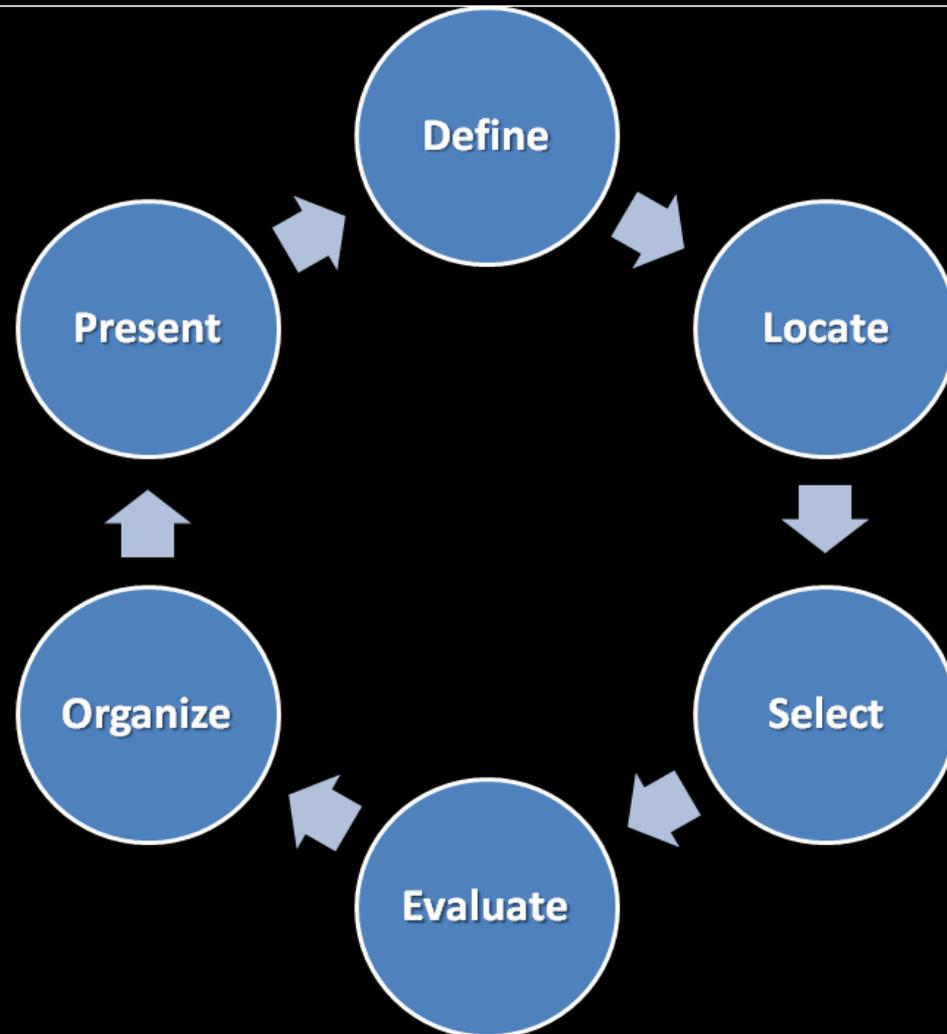
# The 5 Step EBP Process:

1. **ASK:** Formulate the research question
2. **ACCESS:** Develop your strategy and track down the best evidence
3. **APPRAISE:** Appraise the evidence for its validity and usefulness
4. **APPLY:** Integrate the results into your project/proposal
1. **ASSESS:** Evaluate the effectiveness of the process



# Another way of looking at it....

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Source: Nursing and Midwifery Subject Guide. University of South Australia.  
<<http://guides.library.unisa.edu.au/NursingAndMidwifery>> Accessed: April 18, 2017.