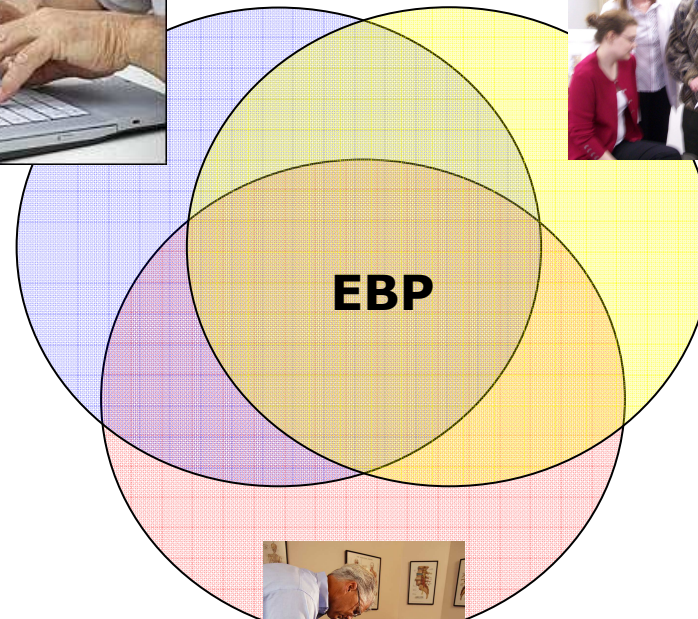


ASKING



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EBP@NUHS Essential Evidence Based Practice Study Guide EBP in Action – Asking © Barbara M. Sullivan, Ph.D. Dept. of Research NUHS 2008

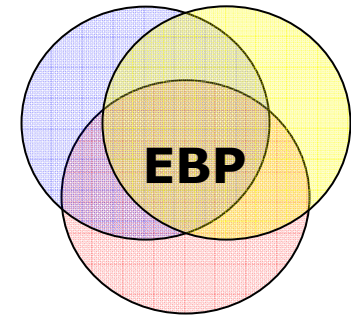
ASKING

Where does the patient focused clinical question fit in Evidence Based Practice?

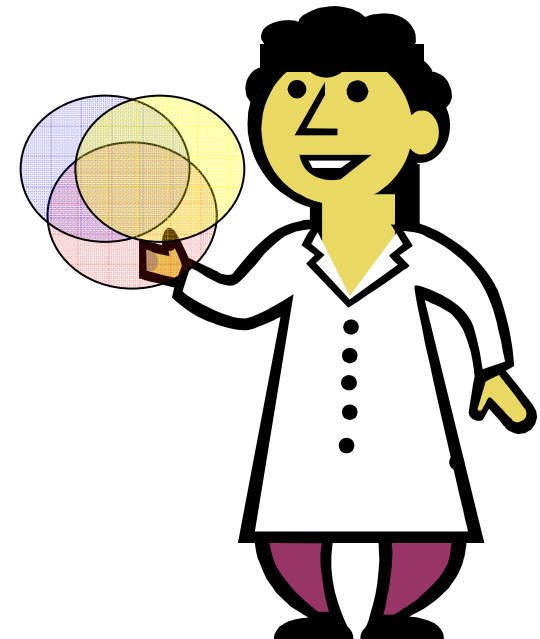
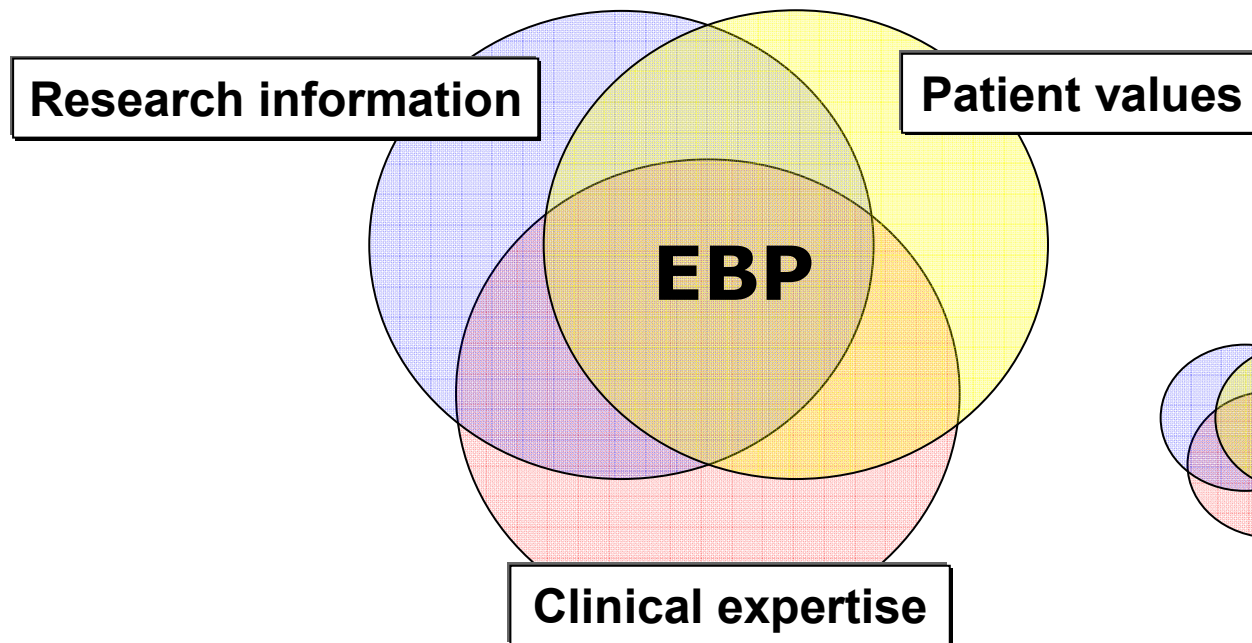
Why ask a structured clinical question?

How do you ask a structured clinical question?

Where can I start to find reliable, current evidence to answer my questions?



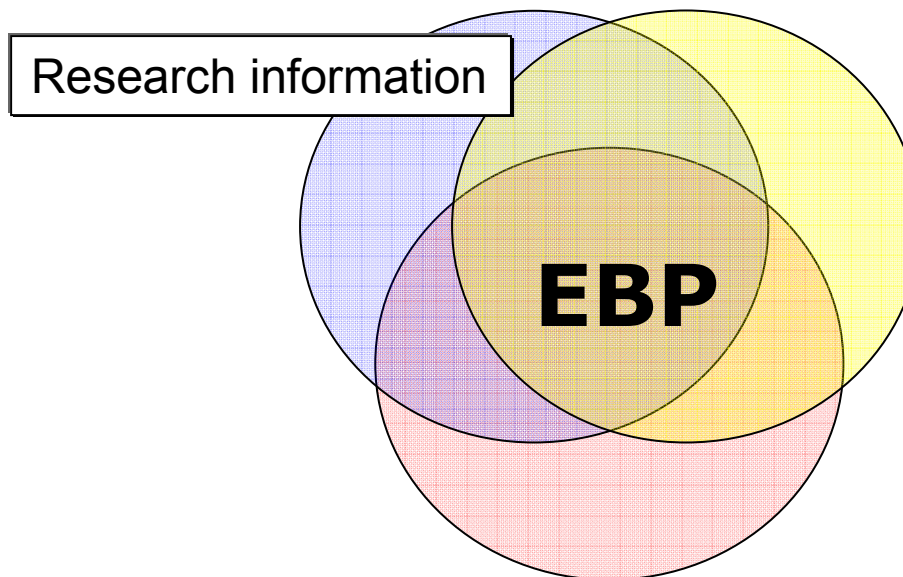
Essential Evidence Based Practice



Evidence Based Practice is

“... the conscientious, explicit, and judicious
use of the best evidence
in making **decisions** about
the care of **individual** patients.”

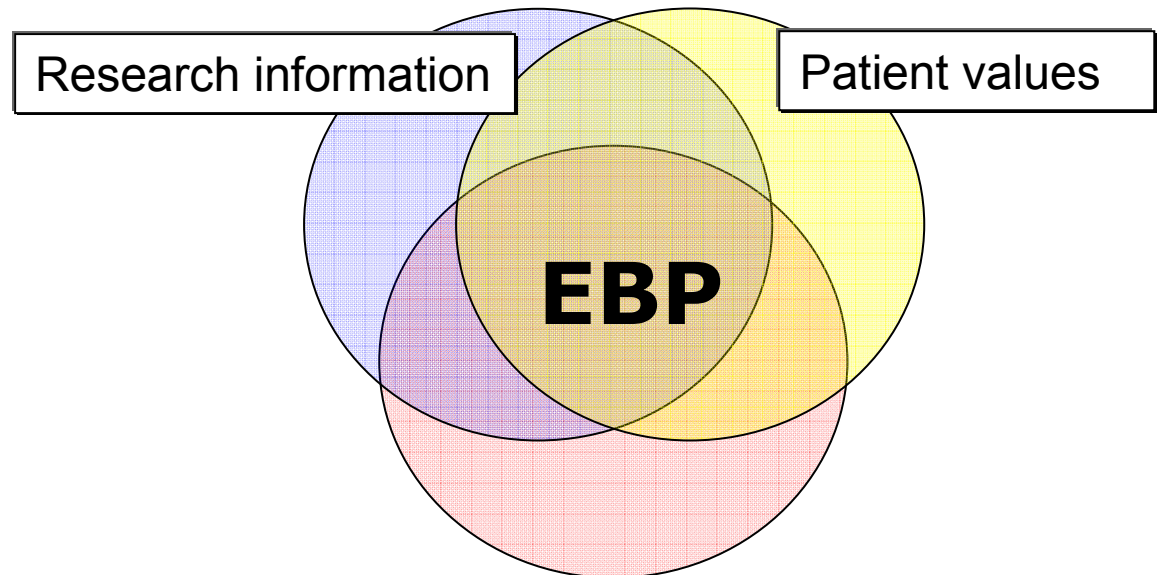
Sackett, DL, Rosenberg WM, Gray JAM, R.B. Haynes JB, Richardson WS. Evidence Based Medicine: What it is and What it isn't. BMJ 1996; 312:71-72.



Evidence Based Practice includes

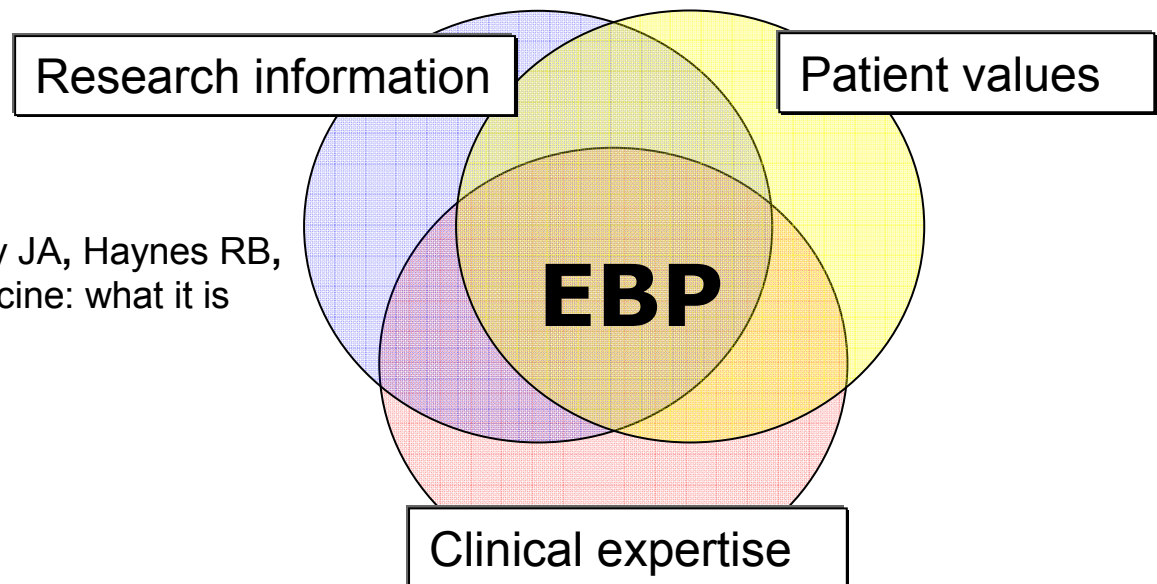
“... “thoughtful identification and
compassionate use of
individual **patients' predicaments,
rights, and preferences.**”

Sackett, DL, Rosenberg WM, Gray JAM, R.B. Haynes JB, Richardson WS. Evidence Based Medicine: What it is and What it isn't. BMJ 1996; 312:71-72.



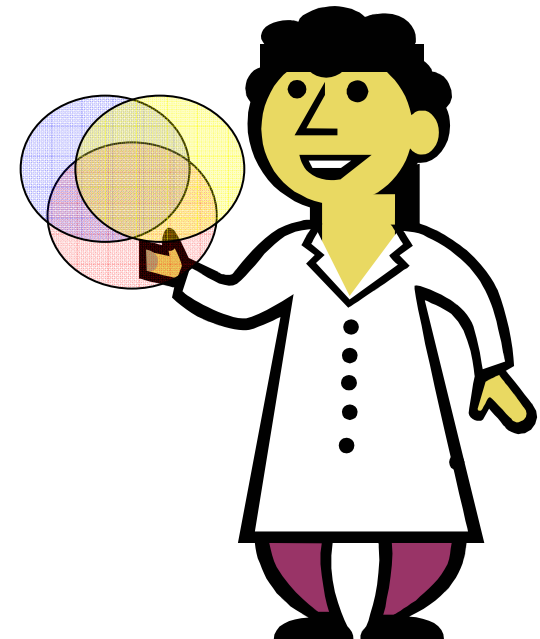
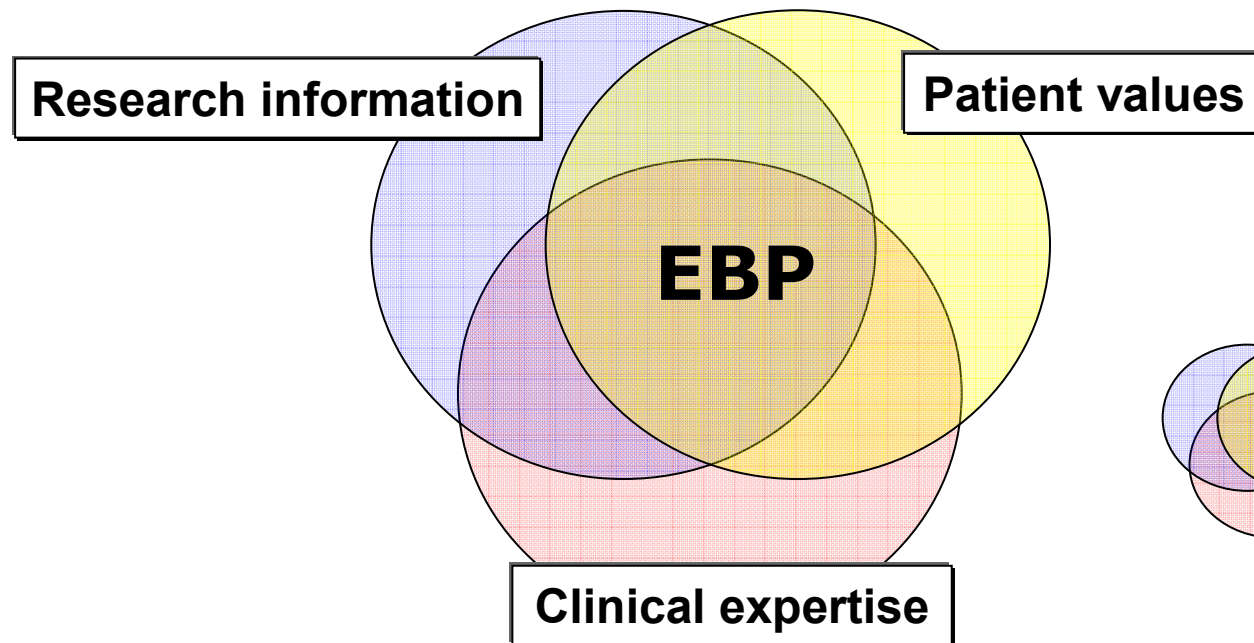
EBP emphasizes professional experience and clinical expertise.

"...Without **clinical expertise**, practice risks becoming tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient."



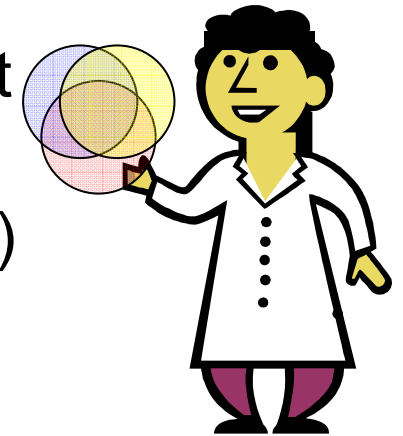
Sackett D, Rosenberg WMC, Muir Gray JA, Haynes RB, Richardson WS. Evidence Based Medicine: what it is and what it isn't. *BMJ* 1996;312:71-2.

Evidence Based Practice starts and ends with a Patient



5 *As* of Essential Evidence Based Practice

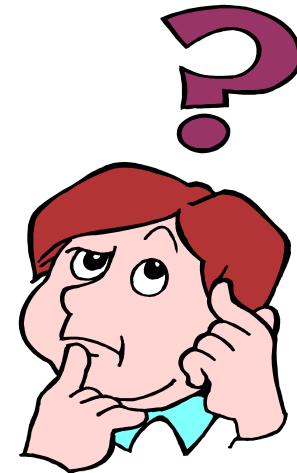
- **Asking** a focused, “searchable,” clinical question
- **Accessing** the medical literature through a **structured search** and understanding available resources
- **Appraising** -- critically evaluating the evidence to determine if it is robust, reliable and valid.
- **Applying** the evidence to the particular patient situation
- **Assessing** the outcome of using (or not using) particular information its impact on clinical practice



- Mayer D. Essential Evidence Based Medicine. New York: Cambridge University Press 2004; 10.

Asking a focused, “searchable,” clinical question

- Captures what you need to know
- Based on **actual** patient scenarios
- Form the right question using a **format that facilitates finding.**



PICO Format Facilitates Finding Answers

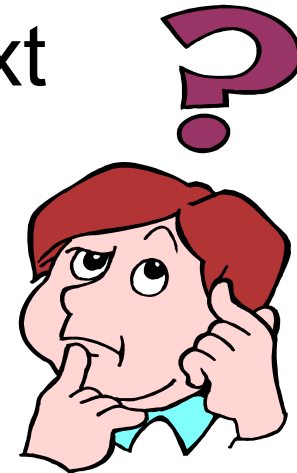
Include four essential components:

P: Patient, population

I: Intervention or therapy

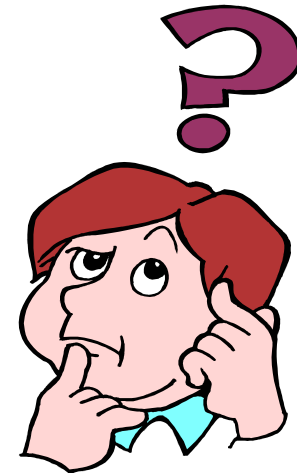
C: Comparison, control, context

O: Outcome



PICO Why use a specific format?

- Focus what you need to know
- Format facilitates finding
- **PICO** components are:
 - ✦ Key words for text searches
 - ✦ “Data fields” for literature database searches



PICO: Focused Clinical Question

Center for Evidence Based Practice http://www.cebm.net/focus_quest.asp

	Patient, population, problem	Intervention	Comparison	Outcome
Consider	Describe relevant patient characteristics or problem similar to your patient's. Be brief, clear, precise, narrow. Define alternatives.	Determine possible prognostic factors, causes. Broad (“what is most effective?”) or narrow (specific therapy).	Alternative therapy. Consider a limiting factor Compared to a “gold standard”.	Clinical outcome or goal: what do you want to accomplish? What effect do you hope to have? cure, diagnosis, cost, quality of life Be specific.
PICO				



National

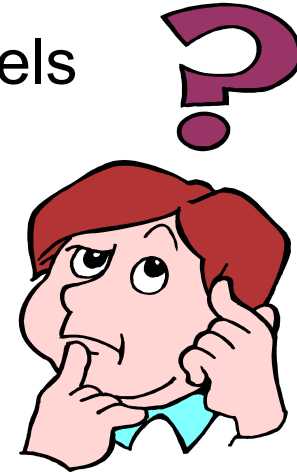
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Start with a good question to focus your efforts.

Background questions – general information

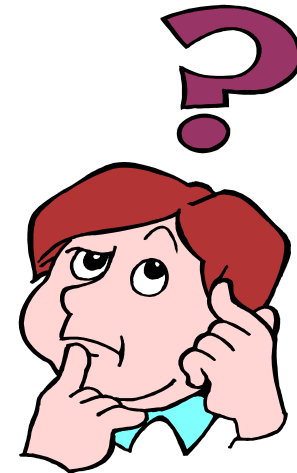
- Question root (who, what, when, why, how...)
- Specific concept: intervention, comparison alternative disorder or disease, or aspect of the disorder
- Fewer PICO components
- Broader = greater # results from search
- More “information” at various scientific levels
 - Patient information, overviews, reviews, etc.



Start with a good question to focus your efforts.

Foreground questions – specific evidence

- Patient or population focused
- Specific intervention with specific comparison
- Clinically relevant outcome
- More PICO components = fewer, more relevant results



Evidence Based Practice begins with a patient and a patient oriented, clinical question

Patient scenario

James, 32 year old male, technical sales manager who drives long distances (or at least for long periods of time) and is a frequent flier for his job, has been visiting you for neck and back issues for over two years on a fairly regular basis. In addition to working from the car and plane, he has a home office and uses a laptop. You and he have discussed work place ergonomics as well as exercise and stretching to alleviate chronic neck and back pain.



Evidence Based Practice begins with a patient and a patient oriented, clinical question

On a recent visit, he tells you he heard on the TV news that chronic back and neck pain causes depression -- or was it vice versa? -- and that chiropractic and alternative care that relieves the pain can relieve depression. He asks, "Do you think that this neck thing could be causing me to feel blue lately? Or do you think mid-winter blues are causing this pain in my lower back and neck? My colleague just had lumbar disk surgery and feels great. I'm not so excited about surgery. Should we be doing something different?"

He says after hearing that news report, he's been looking on the internet to see what might help with the chronic pain and lift his mood.



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PICO: Focused Clinical Question

Center for Evidence Based Practice http://www.cebm.net/focus_quest.asp

	Patient, population, problem	Intervention	Comparison	Outcome
Question components	<ul style="list-style-type: none"> • Adult (male) • Chronic back, neck pain • Headache • Insomnia • Mood, emotion 	<ul style="list-style-type: none"> • Alternative therapies • Conservative care • Botanicals • Massage • Chiropractic • Acupuncture 	<ul style="list-style-type: none"> • “Gold standard” or common therapy? • Surgery • Prescribed drug therapy? 	<ul style="list-style-type: none"> • Reduce / relieve pain • Alleviate symptoms of mild to moderate depression • Improve mood • Reduce inflammation
PICO				



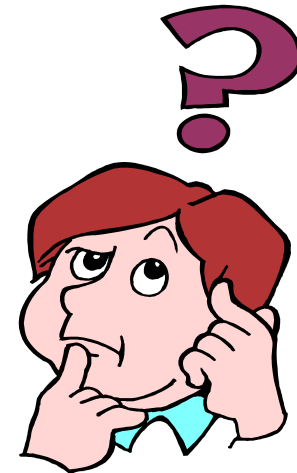
PICO: Focused Clinical Question

Background questions – general information

- What are [**O** = physical symptoms] associated with [**P** = chronic stress OR chronic low back pain OR chronic neck pain]?
- Does [**O** = stress] cause [**P** = chronic (low back or neck) pain]?
- What are [**I** = alternative therapy / therapies] for [**P** = chronic (low back OR chronic neck) pain] other than [**C** = surgery OR exercise]?

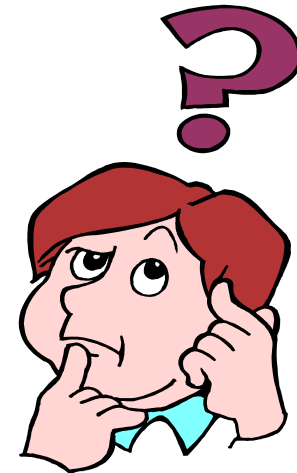
Foreground questions – specific evidence

- For [**P** = adults with chronic back OR neck pain] does [**I** = CAM provide effective therapy] to [**O** = alleviate pain] compared to [**C** = surgery]?
- [**I** = specific therapy: chiropractic, exercise, etc.]



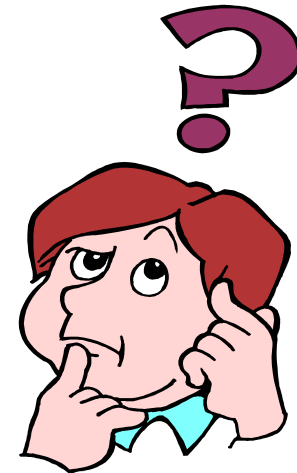
PICO: Focused Clinical Question

- Focus on what you need to know
- Substitute PICO components
(think of synonyms or alternatives)
to provide alternative search “paths”



Focus Background Questions to Searchable, Foreground Format

- Use great informational and “compiled evidence” websites and databases through the NUHS LRC web page
- Focus background questions to searchable foreground questions



Focus Background Questions to Searchable, Foreground Format

NUHS LRC web pages: NUHS home >> Student Services >>
Learning Resource Center: (click on databases)

<http://www.nuhs.edu/show.asp?durki=216>



Databases

Student Services > Learning Resource Center > Databases

Student Services

- Financial Aid
- Housing
- Learning Resource Center
 - Services and Features
 - Students
 - Visitors and Alumni
 - Online Catalog
 - Databases
 - Useful Sites
 - LRC Tips
- CygNET
- Bookstore
- Student Organizations
- Registrar
- Log in to Student Portal
- Log in to Student Webmail
- Student Weblog
- Other Student Services
- Room Reservations

Electronic Databases Available in the LRC as of October 12, 2006

[NUHS LRC web page >> databases](#)

<http://www.nuhs.edu/show.asp?durki=216>

In addition to the databases below, the LRC at NUHS also provides access to several electronic journal subscriptions. For a complete list of titles, prices, and access information, or for other questions related to database use, contact the Reference Department by phone at (630) 422-2200.

<u>Database</u>	<u>Brief Description</u>	<u>How to Access</u>
Database availability may vary without prior notice. Ask a librarian if you need assistance.	In most cases, a fuller description is available online.	When access is available through the LRC's home page. Some databases are also available from computers on campus.
A-to-Z	Provides users with a single, comprehensive online list of almost 10,000 electronic journals we have access to. Users can search for journals by keyword or browse an alphabetical list by title or subject.	http://atoz.ebsco.com/home.asp
ABI INFORM	Index of business and management topics	Via FirstSearch login
Academic Search Premier	Features full text articles from 1,850 scholarly journals, including 1,200 peer-reviewed titles	Via EbscoHost login
AIDSinfo	Dictionary of substances being tested in AIDS-related clinical trials	http://aidsinfo.nih.gov
AltHealthWatch	Covers complementary, alternative, and integrated approaches to health care and wellness. Full text of both professional and general periodicals	Via EbscoHost login

Compiled Evidence Websites & Databases



NUHS LRC database web page
<http://www.naturalstandard.com/>



NUHS LRC database web page
[http://www.naturalmedicines.com/member_home.asp /](http://www.naturalmedicines.com/member_home.asp/)



Agency for Healthcare Research
and Quality <http://www.ahrq.gov/>



US Nat'l Library of Medicine /
National Institutes of Health
<http://www.nlm.nih.gov/medlineplus>



Natural Standard

The Authority on Integrative Medicine

SEARCH FOR

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- Products
- News & Events
- Blog
- Audio
- Dictionary
- Education
- Practitioners
- Demo
- Subscribe
- Login
- Logout

Natural Standard was founded by clinicians and researchers to provide high quality, evidence-based information about complementary and alternative therapies. This international multidisciplinary collaboration now includes contributors from more than 100 eminent academic institutions.

DATABASES



[Herbs & Supplements](#)



[Health & Wellness](#)



[Allergy & Immunology](#)



[Condition Center](#)



[Brand Names](#)



[Interactions](#)

For each therapy covered by **Natural Standard**, a research team systematically gathers scientific data and expert opinions. Validated rating scales are used to evaluate the quality of available evidence. Information is incorporated into comprehensive monographs which are designed to facilitate clinical decision making. All monographs undergo blinded editorial and peer review prior to inclusion in **Natural Standard** databases.



Natural Standard is impartial and not supported by any interest group, professional organization, or product manufacturer. Institutional subscriptions, custom content and licensing are available.

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- NUHS LRC >> databases >> Natural Standard
- <http://www.naturalstandard.com/> from on campus only



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Search:

Go

Advanced Search

NATURAL MEDICINES
COMPREHENSIVE DATABASE



NUHS LRC databases >> Natural Medicines

www.naturalmedicines.com/member_home.asp

Welcome!



- Home
- Search
- Continuing Education
- Clinical Mgmt. Series
- Colleagues Interact
- Advanced Database
- Evidence-Based
- Read Reviews
- PDA Version
- Email Us
- Positions Open **New!**
- Our Team
- Newsroom

Search

- **Search** - enter any natural product name, disease or condition, or drug name...gives you objective product information, Effectiveness Ratings, or potential interactions with drugs, etc.
- **Natural Product Effectiveness Checker** - tells you the level of effectiveness for natural products used for various medical conditions.
- **Natural Product / Drug Interaction Checker** - tells you potential interactions between any natural product and any drug. Automatically checks for interactions with EACH INGREDIENT of each product.
- **Disease / Medical Conditions Search** - shows you medical conditions, and allows you to see which natural products might be effective.
- **Search Colleagues Interact** - shows you questions, answers, and comments posted by other health professionals.
- **Advanced Search** - helps you find specific information or keywords anywhere in the Database.

Clinical Management Series

- New Featured: Aging Skin**
- ADHD
 - Allergic Rhinitis
 - BPH
 - Colds and Flu
 - Depression
 - Menopause
 - Obesity
 - Osteoporosis
 - **SEE ALL 29 Courses**
- Available as CE/CME for Subscribers

Special Reports

CE

- Currently Accredited CE or CME for physicians, pharmacists, NPs, PAs, RDs.
- FREE** Online CE for you as subscriber
- **Select a Course/Take a Quiz**
 - **View your history & credits**
 - **Print Statements**

Colleagues Interact

- See what your colleagues are saying
- Post a message if you want

Manage My Account

- eUPDATE

CE Login

Get Your CE Credit Now

CE ID#: (CE info)

Go

I forgot my CE ID #

You Can Purchase Access To:

PHARMACIST'S LETTER

PRESCRIBER'S LETTER

IDENT-A-DRUG REFERENCE

How to find USP Verified Products

USP Verified

Natural Medicines Comprehensive Database
now collaborates with
U.S. Pharmacopeia (USP)
to tell you which natural products are



US federal Agency for Healthcare Research and Quality (AHRQ) www.ahrq.gov >> Clinical Information>> EBP

The screenshot shows the AHRQ website homepage. At the top, it features the U.S. Department of Health & Human Services logo and the AHRQ logo with the tagline "Advancing Excellence in Health Care". A search bar is located in the top right corner. The main navigation area is divided into several columns:

- A-Z Quick Menu:** A dropdown menu for "Select Topic" with a list of categories including Clinical Information, Consumer Health, Funding Opportunities, Data & Surveys, Research Findings, Specific Populations, Quality & Patient Safety, Health IT, Public Health Preparedness, About AHRQ, and Special Interest.
- Clinical Information:** A list of topics including Evidence-based Practice, Outcomes & Effectiveness, Effective Health Care, Technology Assessment, Preventive Services, Clinical Practice Guidelines, and National Guideline Clearinghouse™.
- Funding Opportunities:** A list of topics including AHRQ Research Agenda, Funding Announcements, Electronic Grant Applications, Research Policies, Grants Process, Grant Application Basics, Grants On-Line Database, Training and Education, and Contracts.
- Research Findings:** A list of topics including Research Activities (Online Newsletter), Research Topics (Fact Sheets/Syntheses), Primary Care, Managed Care, Markets, Public Health Preparedness, Mental Health, Long-term Care, and Methods.
- Specific Populations:** A list of topics including Women, Children, Minorities, Elderly, Rural Health, Disabilities, Low Income, Inner City, Chronic Care, and End of Life.
- Consumers & Patients:** A list of topics including Be an Active Health Care Consumer, Health Conditions/Diseases, Health Plans, Prescriptions, Prevention & Wellness, Quality of Care, Questions Are the Answer, Quit Smoking, and Surgery.
- Data & Surveys:** A list of topics including MEPS (Medical Expenditure Panel Survey), HCUP (Healthcare Cost & Utilization Project), HCUPnet (Interactive Tool for Hospital Statistics), and HIV & AIDS Cost & Use.
- Quality & Patient Safety:** A list of topics including Health Information Technology, National Quality Measures Clearinghouse™, CAHPS® (Consumer Assessment of Healthcare Providers and Patients), Health Care Innovations Exchange, Measuring Healthcare Quality (Quality and Disparities Reports), Medical Errors & Patient Safety, Patient Safety Network, WebM&M (Morbidity & Mortality Rounds), Quality Indicators, Quality Information & Improvement, Quality Tools, and TalkingQuality (Communicating with Consumers).
- Questions Are the Answer:** A section featuring a "Spotlight" on a podcast about MRSA Infections and Atypical Antipsychotics, and a "News & Information" section with links to the Newsroom, Media Resources, Healthcare 411 Podcasts, Publications & Products, Information Quality Guidelines, Freedom of Information, Electronic Policies, Copyright, Linking, and Other HHS Agencies.

Red arrows are overlaid on the image, pointing to the "Clinical Information" section, the "Consumers & Patients" section, the "Data & Surveys" section, the "Research Findings" section, the "Specific Populations" section, and the "Spotlight" section.

The US National Library of Medicine's MedlinePlus (www.nlm.nih.gov/medlineplus/)

The screenshot shows the MedlinePlus website homepage. At the top, there is a purple header with the MedlinePlus logo and the tagline "Trusted Health Information for You". To the right, it says "A service of the U.S. NATIONAL LIBRARY OF MEDICINE and the NATIONAL INSTITUTES OF HEALTH". Below the header is a search bar with the text "Search MedlinePlus" and a dropdown menu showing "MedlinePlus Trusted Health Information for You". To the right of the search bar are links for "About MedlinePlus", "Site Map", "FAQs", and "Contact Us", along with a "español" button.

On the left side, there is a vertical list of navigation options, each with a red arrow pointing to it:

- Health Topics**: Start here with 740 topics on conditions, diseases and wellness
- Drugs & Supplements**: About your prescription and over-the-counter medicines, herbs and supplements
- Medical Encyclopedia**: Includes pictures and diagrams
- Dictionary**: Spellings and definitions of medical words
- News**: Current health news and press announcements
- Directories**: Find doctors, dentists and hospitals
- Go Local**: A service for finding local resources for health-related issues
- Other Resources**: Local health services, libraries, organizations, international sites and more

In the center, there are two main sections:

- Current Health News**: A list of news items with red arrows pointing to them:
 - U.S. Life Expectancy Hits New High
 - Family Dinners Shape Healthier Eating Habits
 - Manic Phase of Bipolar Disorder Benefits from Breast Cancer Medication
 - More news
- Featured Site**: A section with a "New!" starburst icon and a red arrow pointing to it. It says "Visit the [What's New on MedlinePlus](#) page for highlights, features and announcements".

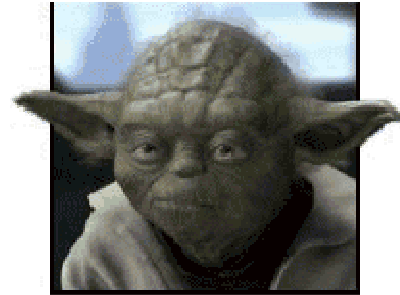
On the right side, there is a vertical list of featured content, each with a red arrow pointing to it:

- Interactive Tutorials**: Over 165 slideshows with sound and pictures
- ClinicalTrials.gov**: Studies for new drugs and treatments
- NIH SeniorHealth**: Health information for older adults
- Surgery Videos**: Videos of surgical procedures
- NEW What's New**: A yellow "NEW" button next to the link.
- Director's Comments**: A yellow icon of a person next to the link.
- NIH MedlinePlus Magazine**: A yellow icon of a document next to the link.
- E-mail Updates and RSS**: A yellow icon of an envelope next to the link.

Hierarchy of Evidence for Clinical Decision Making



Try this activity



- Follow guide & directions in Chapter 2 of the EBP@NUHS Study Guide
- Use patient scenario or a hot topic of interest, form background and foreground PICO format clinical questions
- Explore all the compiled evidence database websites for background information and foreground specifics
 - Links can be found on the NUHS LRC Database web pages or in the CygNET based EBP@NUHS
 - Natural Standard & DCConsult may have campus access only through IP address recognition – check the LRC passwords list if links do not open
- Determine if there are other PICO component words can be used as search terms for other databases based on what's available in the compiled evidence database websites

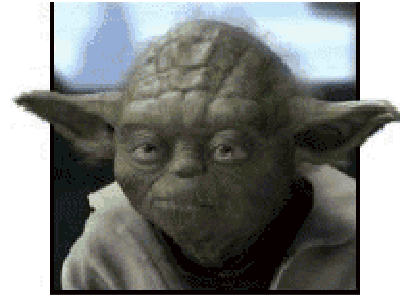
Access forms, files, links & resources for *Asking*



CygNET registration:

- e-LRC electronic LRC resources & EBP tools
- www.NUHS.edu >> [Current Students](#) >> Log into CygNET Learning Management System (<http://cygnet.nuhs.edu>)
- Sign in with NUHS ID and password
- No enrollment key

Try this activity – some practical outcomes & uses



- Turn in PICO form with clinical question and PICO Search Strategy & Results
- Use the evidence to update course material and resources – stay current efficiently
- Start or contribute to an EBP@NUHS or CygNET forum:
 - post PICO questions – what do you need to know?
 - review compiled evidence website resources that
 - provide evidence to answer the question or
 - add additional, evidence based resources for study and additional, current course content

Some notes and tips

- Forms, files and resource links are all on CygNET EBP@NUHS in the Asking topic
- Open a file, save to your hard drive with a new file name
 - Working without saving to a local drive uses the CygNET server
 - **SLOW...** can lose your work
- “Personalize” forms by adding PICO components, dates or initials to the original file name & keep for reference



Some notes and tips

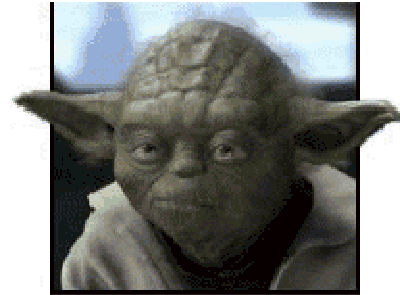
- Use Internet Explorer



- Some browsers do not support features or have security features which block links and addresses (Mozilla Firefox)
- Open links in “New Windows” if Tabs block URL addresses



ASKING



Have fun Asking
clinical questions



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