

# Perspectives on Cochrane Reviews from a User in the U.S.



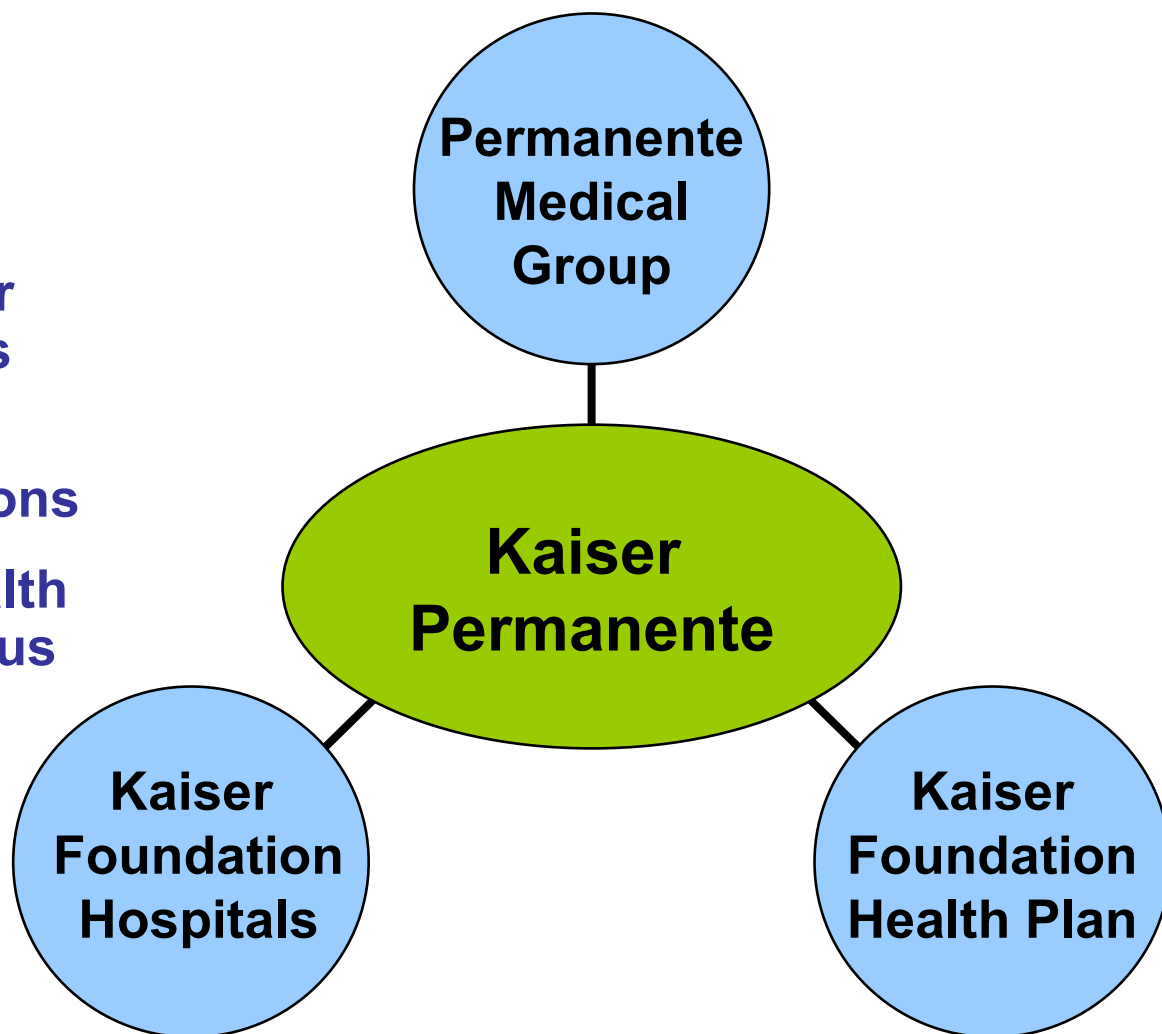
**16<sup>th</sup> Cochrane Colloquium**  
**Freiburg, Germany**  
**October 5, 2008**

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**Technology Assessment and Guidelines Unit**  
**Kaiser Permanente Southern California**

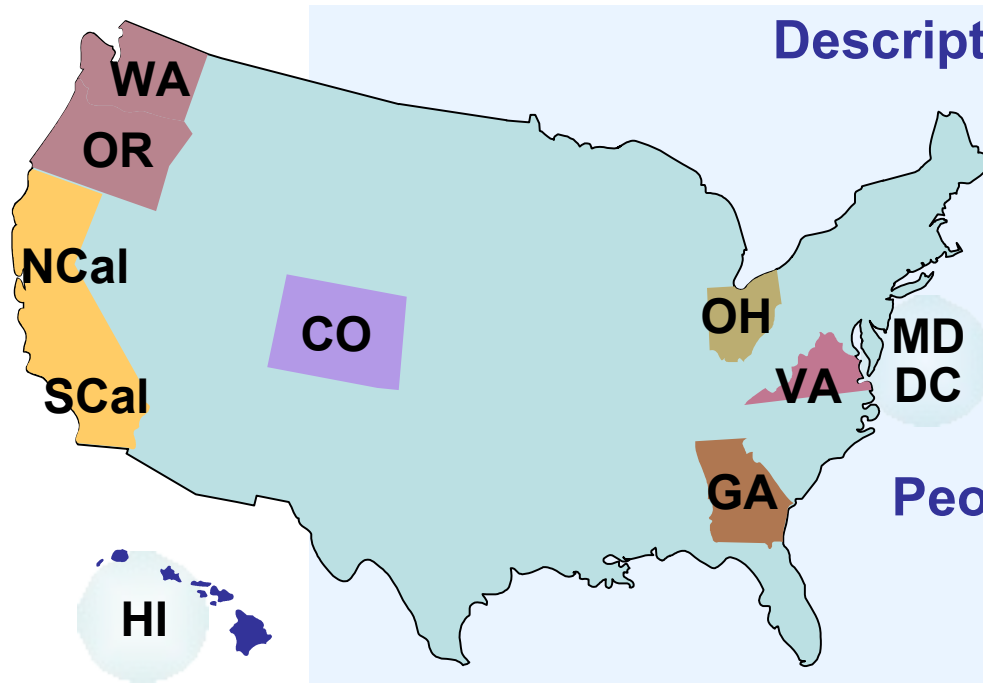
- About Kaiser Permanente (KP)
- About KP Southern California (KPSC)
- Functions of the KPSC Technology Assessment & Guidelines Unit
- How Cochrane Reviews are used in the TAG Unit
- Examples of how Cochrane reviews have influenced health care decision making
- Input from Kaiser Permanente users of Cochrane reviews
- Potential collaborative activities

## A Prepaid Integrated Health Care Delivery System

- **Social Mission**
- **Quality Driven**
- **Shared Accountability for Program Success**
- **Integration along Multiple Dimensions**
- **Prevention & Health Maintenance Focus**



# About Kaiser Permanente



**Description:** Nation's largest nonprofit health plan (founded 1945)

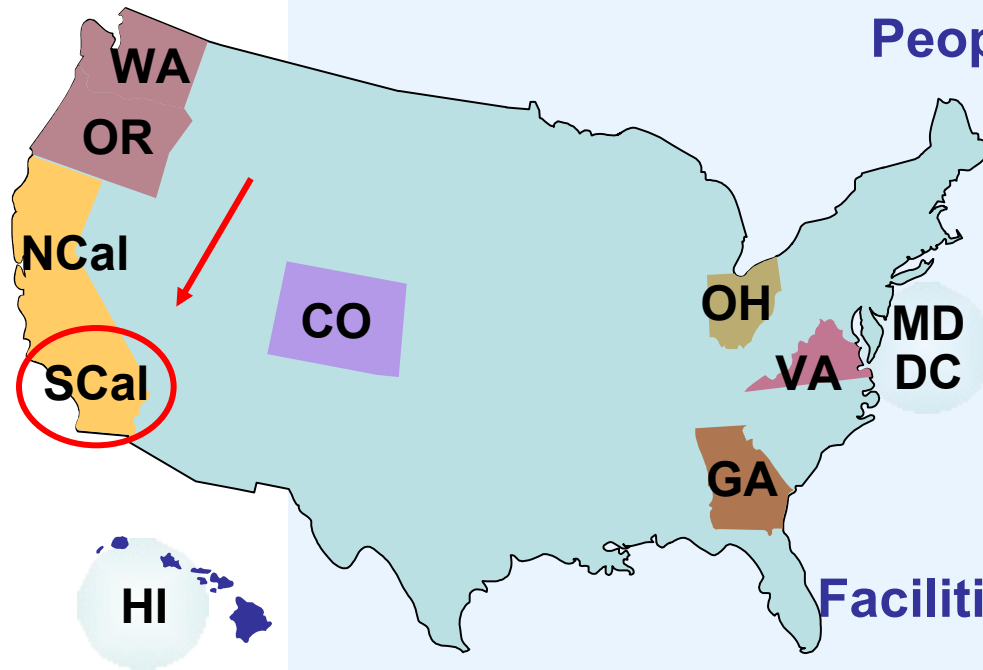
Integrated health care delivery system

**People:** 8.7 million members  
14,000+ physicians  
40,000+ nurses  
159,000+ employees

**Facilities:** 8 regions in 9 states and D.C.  
32 hospitals and med centers  
421 medical offices

**Revenue:** \$37.8 billion annually

Based on year-end 2007 statistics



**Description:** One of KP's largest regions

**People:** 3.3 million members

- from 140 countries
- 90 different languages spoken

6,000 physicians

13,000 nurses

55,000 employees

**Facilities:** 12 hospitals and med centers  
130 medical offices

**Revenue:** \$9 billion annually

**Doctor Office Visits:** 17.5 million annually

**Prescriptions Filled:** 24 million annually

## Clinical Practice Guidelines

- Develop evidence-based guidelines (n=30) to support important KPSC clinical goals
- Provide evidence support for KP National guidelines program

## Medical Technology Assessment

- Produce evidence-based technology assessments (e.g., evaluate devices, equipment, medical and surgical procedures)
- Staff a Medical Technology Inquiry Service (respond to 500-600 physician inquiries per year)
- Provide evidence support for KP National technology assessment program

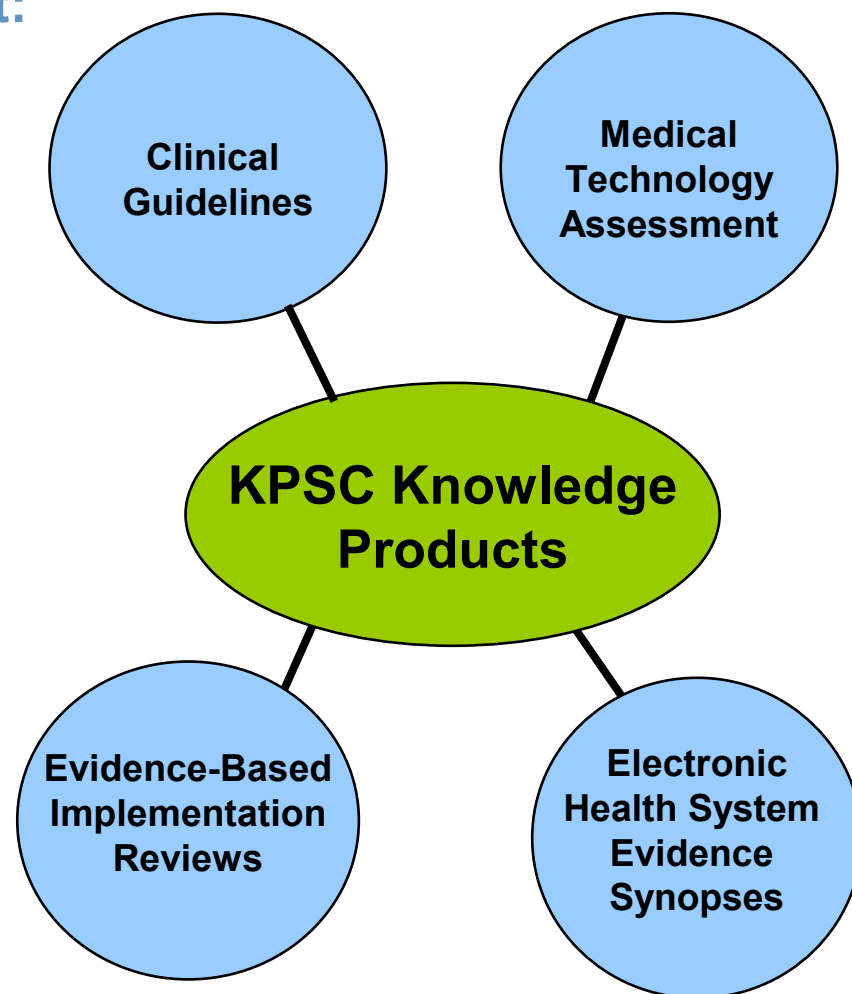
## Evidence-Based Implementation

- Produce evidence reviews on the effectiveness of implementation strategies for clinical interventions
- Produce evidence synopses to support clinical content development for electronic health system (“KP HealthConnect”)

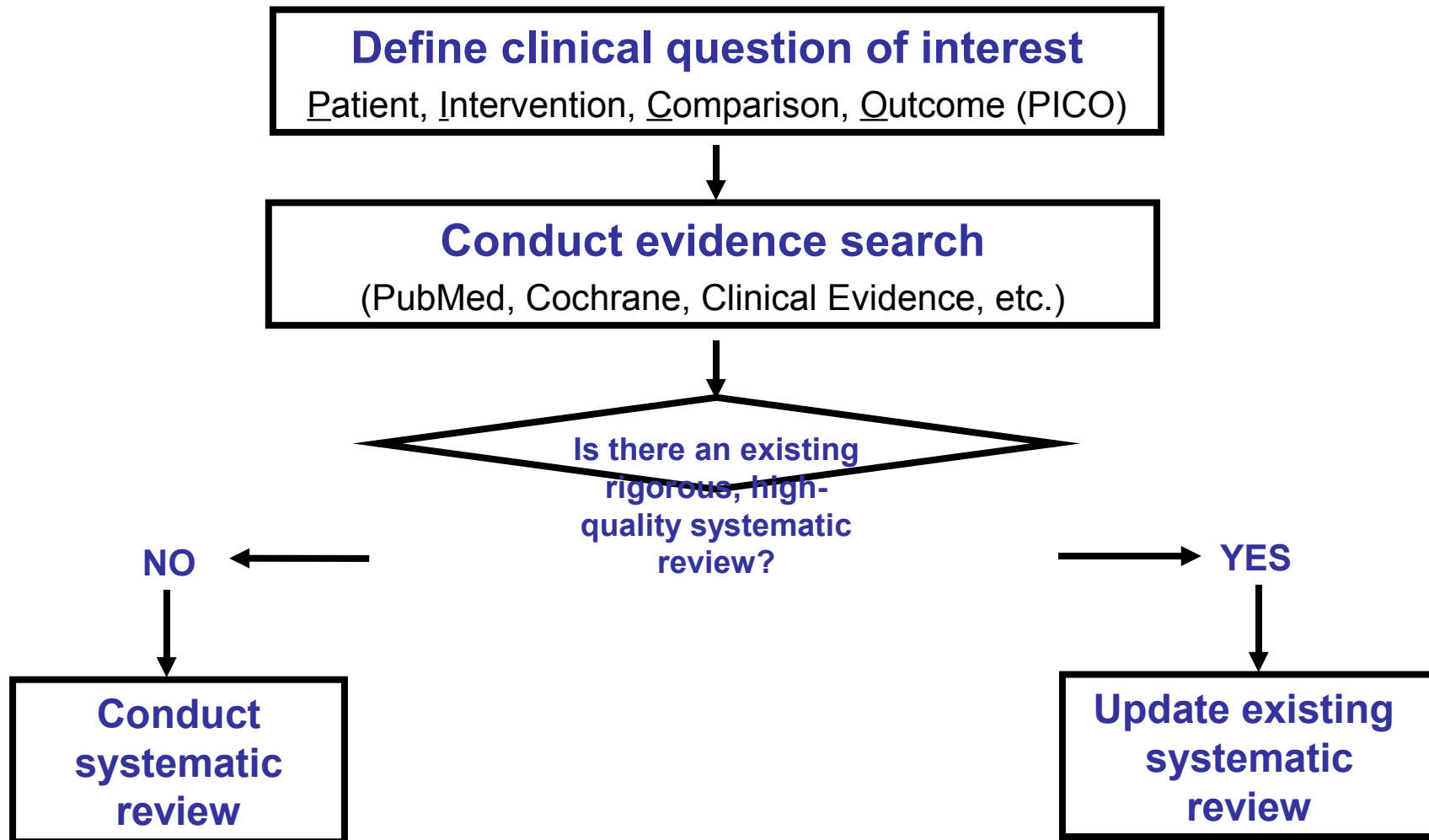
- **Functions have been performed within KPSC since the early 1990s**
- **Unit includes 10 research analysts with backgrounds in epidemiology, statistics and research methods**
- **With support from senior leadership, a strong evidence-based culture has developed among clinicians and administrators**
- **Knowledge products generally well-received due to involvement of key clinician leaders in all phases:**
  - **topic selection**
  - **evidence review/synthesis**
  - **content development for knowledge products**
  - **implementation and knowledge exchange activities**

## KPSC evidence reviews also support:

- **KP National Guideline Development Program**
- **KP Interregional New Technology Committee**
- **Clinical content development for KP's electronic health information system (EHS)**



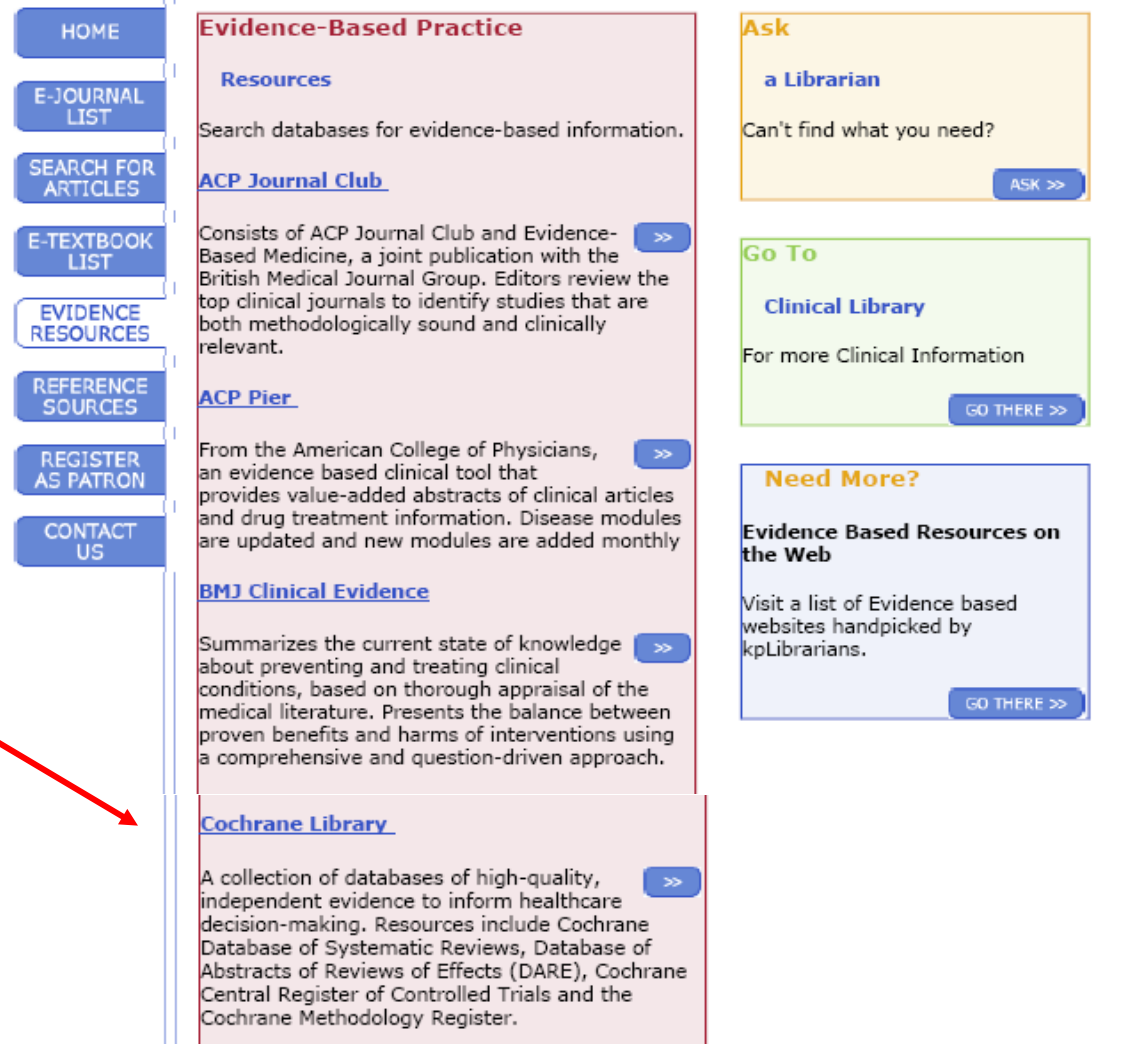
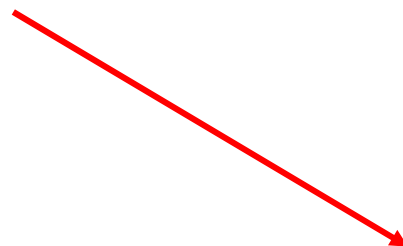
# How Do We Use Cochrane Reviews?



*Cochrane considered a primary “trusted source” of systematic reviews*

# How Do We Use Cochrane Reviews?

Cochrane reviews can be accessed by all physicians and employees through Kaiser Permanente's online Clinical Library

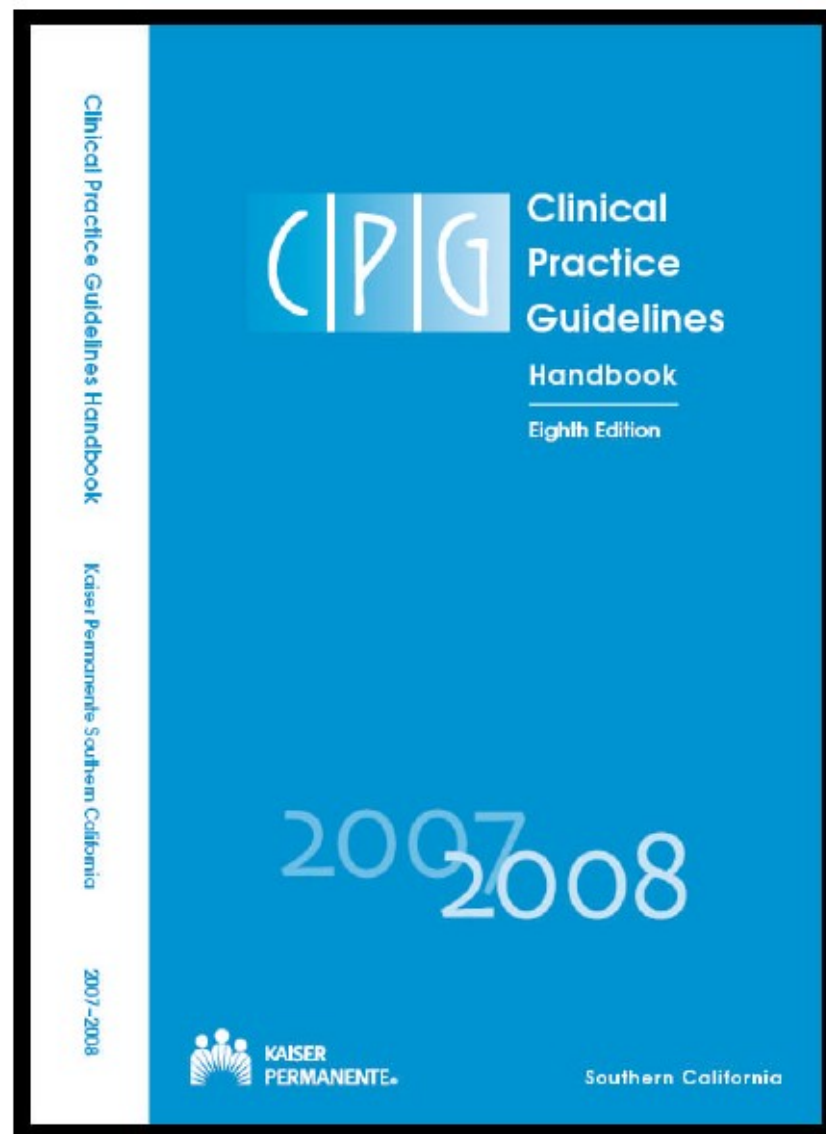


The screenshot displays the kpLibraries website interface. On the left is a vertical navigation menu with buttons for HOME, E-JOURNAL LIST, SEARCH FOR ARTICLES, E-TEXTBOOK LIST, EVIDENCE RESOURCES, REFERENCE SOURCES, REGISTER AS PATRON, and CONTACT US. The main content area is titled "Evidence-Based Practice" and lists several resources: "Resources" (Search databases for evidence-based information.), "ACP Journal Club" (Consists of ACP Journal Club and Evidence-Based Medicine, a joint publication with the British Medical Journal Group. Editors review the top clinical journals to identify studies that are both methodologically sound and clinically relevant.), "ACP Pier" (From the American College of Physicians, an evidence based clinical tool that provides value-added abstracts of clinical articles and drug treatment information. Disease modules are updated and new modules are added monthly.), "BMJ Clinical Evidence" (Summarizes the current state of knowledge about preventing and treating clinical conditions, based on thorough appraisal of the medical literature. Presents the balance between proven benefits and harms of interventions using a comprehensive and question-driven approach.), and "Cochrane Library" (A collection of databases of high-quality, independent evidence to inform healthcare decision-making. Resources include Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects (DARE), Cochrane Central Register of Controlled Trials and the Cochrane Methodology Register.). On the right side, there are three promotional boxes: "Ask a Librarian" (Can't find what you need? ASK >>), "Go To Clinical Library" (For more Clinical Information GO THERE >>), and "Need More? Evidence Based Resources on the Web" (Visit a list of Evidence based websites handpicked by kpLibrarians. GO THERE >>).

- KPSC analytical staff reviews abstract, background and objectives sections of Cochrane review for applicability to the clinical question of interest (does it meet “PICO” elements?)
- If applicable, then search dates are reviewed and a new search is conducted to update the Cochrane review
- Results of the Cochrane review are summarized in evidence documents using the following elements:
  - Search methods for identification of studies and general methods of the review
  - Description of the methodological quality of the studies
  - High-level overview of the results
  - Evidence tables are developed combining the section on “Characteristics of included studies” with quantitative data from the “Results” section and the forest plots

- **Examples of the ways in which Cochrane Collaboration systematic reviews impact care in a large health maintenance organization**

Cochrane reviews have been used to develop and/or update many of the guidelines developed by Kaiser Permanente in Southern California, as well as the entire KP program (8 regions).



## Topic: Chronic Obstructive Pulmonary Disease (COPD)

- Clinical questions formulated for the following:
  - **Smoking cessation**
  - **Influenza vaccination**
  - **Pharmacologic management of stable COPD** (beta-agonists, anticholinergics, inhaled/oral corticosteroids, theophylline, mucolytics)
  - **Nonpharmacologic management of stable COPD** (pulmonary rehabilitation, self-management education, supplemental oxygen, nutritional supplementation)
  - **Pharmacologic management of COPD exacerbations** (antibiotics, oral corticosteroids, anticholinergics)
  - **Nonpharmacologic management of COPD exacerbations** (noninvasive positive pressure ventilation)
  - **Screening for depression**

## Cochrane Reviews Used in Development of COPD Guideline (n=16):

- **Appleton S, Poole P, Smith B, Veale A, Lasserson TJ, Chan MM, Cates CJ.** Long-acting beta2-agonists for poorly reversible chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews* 2006, Issue 3.
- **Barr RG, Rowe BH, Camargo Jr CA.** Methylxanthines for exacerbations of chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2003, Issue 2.
- **Bradley JM, O'Neill B.** Short-term ambulatory oxygen for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2005, Issue 4.
- **Cranston JM, Crockett AJ, Moss JR, Alpers JH.** Domiciliary oxygen for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2005, Issue 4.
- **Effing TW, Monninkhof EM, van der Valk PDLPM, Zielhuis GA, van Herwaarden CLA, Partridge MR, Walters EH, van der Palen J.** Self-management education for patients with chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews* 2007, Issue 4.
- **Lacasse Y, Goldstein R, Lasserson TJ, Martin S.** Pulmonary rehabilitation for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2006, Issue 4.
- **McCroory DC, Brown CD.** Anticholinergic bronchodilators versus beta2-sympathomimetic agents for acute exacerbations of chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2003, Issue 1.
- **Nannini L, Cates CJ, Lasserson TJ, Poole P.** Combined corticosteroid and long-acting beta-agonist in one inhaler versus inhaled steroids for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2007, Issue 4.
- **Nannini L, Cates CJ, Lasserson TJ, Poole P.** Combined corticosteroid and long-acting beta-agonist in one inhaler versus placebo for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2007, Issue 4.
- **Nannini L, Cates CJ, Lasserson TJ, Poole P.** Combined corticosteroid and long-acting beta-agonist in one inhaler versus long-acting beta-agonists for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2007, Issue 4.
- **Poole PJ, Chacko E, Wood-Baker RWB, Cates CJ.** Influenza vaccine for patients with chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews* 2006, Issue 1.
- **Ram FSF, Picot J, Lightowler J, Wedzicha JA.** Non-invasive positive pressure ventilation for treatment of respiratory failure due to exacerbations of chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2004, Issue 3.
- **Ram FSF, Rodriguez-Roisin R, Granados-Navarrete A, et al.** Antibiotics for exacerbations of chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2006, Issue 2.
- **Walters JAE, Walters EH, Wood-Baker R.** Oral corticosteroids for stable chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews*. 2005, Issue 3.
- **Wood-Baker RR, Gibson PG, Hannay M, Walters EH, Walters JAE.** Systemic corticosteroids for acute exacerbations of chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews* 2005, Issue 1.
- **Yang IA, Fong KM, Sim EHA, Black PN, Lasserson TJ.** Inhaled corticosteroids for stable chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews* 2007, Issue 2.

## Topic: Breast Cancer Screening

- **Cochrane Reviews Used in Evidence Assessment:**
  - **Gøtzsche PC, Nielsen M.** Screening for breast cancer with mammography. *Cochrane Database of Systematic Reviews* 2006, Issue 4.
  - **Kösters JP, Gøtzsche PC.** Regular self-examination or clinical examination for early detection of breast cancer. *Cochrane Database of Systematic Reviews* 2003, Issue 2, updated October 2007.

### KPSC Leads Nation in Breast Cancer Screening

*2008 Quality Compass® report from the National Committee on Quality Assurance (NCQA)*

- of all reporting U.S. health plans, Kaiser Permanente Southern California had the highest breast cancer screening rate
- more than 87 out of 100 KP patients, ages 52 to 69, received their recommended mammograms
- U.S. national average is slightly more than 72 out of 100

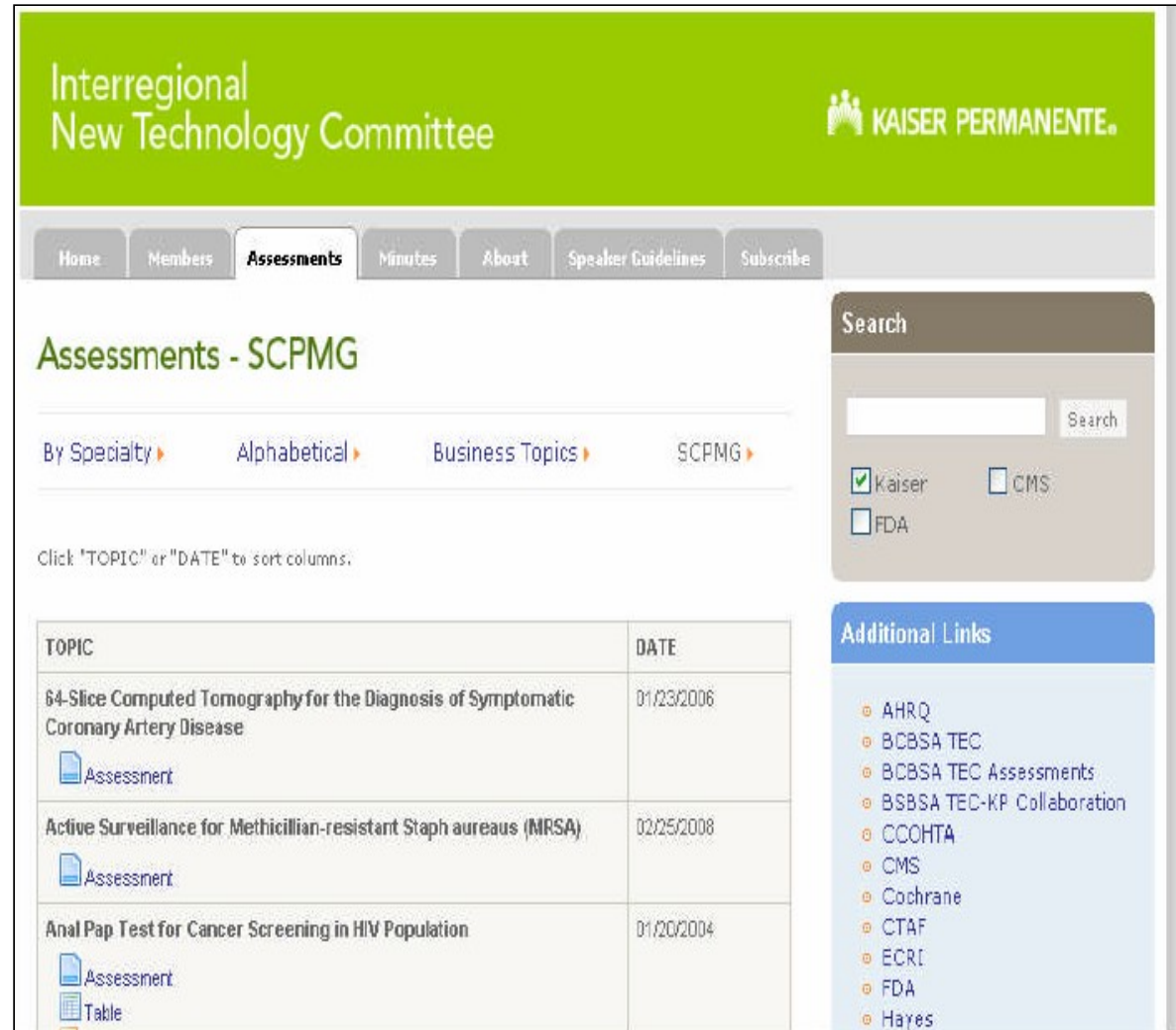


# Example: Medical Technology Assessment





Cochrane reviews are frequently used in the assessments for KP Southern California's

- Medical Technology Assessment Team
- Medical Technology Inquiry Service (500-600 inquiries per year)

Technology assessments produced by Southern California are often used to support evaluation of technologies for the KP Interregional New Technology Committee.



The screenshot shows the website for the Interregional New Technology Committee. The header is green with the committee name and the Kaiser Permanente logo. A navigation bar includes links for Home, Members, Assessments (which is highlighted), Minutes, About, Speaker Guidelines, and Subscribe. Below the navigation bar, the page title is "Assessments - SCPMG". There are sorting options: "By Specialty", "Alphabetical", "Business Topics", and "SCPMG". A search box is on the right with a "Search" button. Below the search box are checkboxes for "Kaiser" (checked), "CMS", and "FDA". An "Additional Links" section on the right lists various organizations and resources. The main content area is a table with two columns: "TOPIC" and "DATE".

TOPIC	DATE
64-Slice Computed Tomography for the Diagnosis of Symptomatic Coronary Artery Disease  Assessment	01/23/2006
Active Surveillance for Methicillin-resistant Staph aureus (MRSA)  Assessment	02/25/2008
Anal Pap Test for Cancer Screening in HIV Population  Assessment  Table	01/20/2004

## Topic: Lumbar Fusion vs. Nonsurgical Management for the Treatment of Chronic Low Back Pain

### Examples of Cochrane Reviews Used in Technology Assessment (n=6):

- **Gibson JNA, Waddell G.** Surgery for degenerative lumbar spondylosis. *Cochrane Database of Systematic Reviews* 2005, Issue 4.
- **Guzmán J, Esmail R, Karjalainen K, Malmivaara A, Irvin E, Bombardier C.** Multidisciplinary bio-psycho-social rehabilitation for chronic low-back pain. *Cochrane Database of Systematic Reviews* 2006, Issue 2.
- **Hayden JA, van Tulder MW, Malmivaara A, Koes BW.** Exercise therapy for treatment of non-specific low back pain. *Cochrane Database of Systematic Reviews* 2005, Issue 3.
- **Heymans MW, van Tulder MW, Esmail R, Bombardier C, Koes BW.** Back schools for non-specific low-back pain. *Cochrane Database of Systematic Reviews* 2004, Issue 4.
- **Ostelo RWJG, van Tulder MW, Vlaeyen JWS, Linton SJ, Morley SJ, Assendelft WJJ.** Behavioural treatment for chronic low-back pain. *Cochrane Database of Systematic Reviews* 2005, Issue 1.
- **Schonstein E, Kenny DT, Keating J, Koes BW.** Work conditioning, work hardening and functional restoration for workers with back and neck pain. *Cochrane Database of Systematic Reviews* 2003, Issue 3.

# Example: Evidence-Based Implementation

Cochrane reviews are also used in assessments of the evidence to support Kaiser Permanente Southern California's implementation efforts.

The EPOC group's methodology resources have been especially useful in the development of the evidence-based implementation function in Southern California.



## Topic: Online vs. In-Person Education for Adults With Chronic Conditions

### Examples of Cochrane Reviews Used in EBI Assessment (n=6):

- **Deakin T, McShane CE, Cade JE, Williams RDRR.** Group based training for self-management strategies in people with type 2 diabetes mellitus. *Cochrane Database of Systematic Reviews* 2005, Issue 2.
- **Fahey T, Schroeder K, Ebrahim S.** Interventions used to improve control of blood pressure in patients with hypertension. *Cochrane Database of Systematic Reviews* 2006, Issue 4.
- **Gibson PG, Powell H, Coughlan J, Wilson AJ, Hensley MJ, Abramson M, Bauman A, Walters EH.** Limited (information only) patient education programs for adults with asthma. *Cochrane Database of Systematic Reviews* 2002, Issue 1
- **Haby MM, Waters E, Robertson CF, Gibson PG, Ducharme FM.** Interventions for educating children who have attended the emergency room for asthma. *Cochrane Database of Systematic Reviews* 2001, Issue 1.
- **Rueda S, Park-Wyllie LY, Bayoumi AM, Tynan AM, Antoniou TA, Rourke SB, Glazier RH.** Patient support and education for promoting adherence to highly active antiretroviral therapy for HIV/AIDS. *Cochrane Database of Systematic Reviews* 2006, Issue 3.
- **Wolf FM, Guevara JP, Grum CM, Clark NM, Cates CJ.** Educational interventions for asthma in children. *Cochrane Database of Systematic Reviews* 2002, Issue 4.

# Example: Electronic Health Information System Support



- In the past several years, KP has implemented an extensive electronic health system – KP HealthConnect™
- Offers opportunity to integrate evidence and influence clinician decision making at the point of care
- Cochrane reviews are frequently used in evidence synopses produced to support the integration of evidence-based clinical content into the KP Southern California system

The screenshot displays the Epic Hyperspace interface for a patient's record. At the top, the 'Kaiser Permanente HealthConnect™' logo is visible. The browser window title is 'Hyperspace - INITIAL DEPARTMENT - RESC - KTAZP1577 RESCTCM'. The main content area is titled 'Test, Data' and shows patient information: MRN 000017617465, Age 56, Sex F, PCP, Allergies (No Known Allergies), Alert (HM), Spec Feat (N), and kp.org (Inactive). A 'Visit Navigator' for a 9/5/2006 visit with TAFI is active, showing a 'BestPractice' tab. A prominent yellow warning box states: 'PREVENTION REMINDER: Patient is overdue for Pap Test/HPV. ACTION: Review MA documentation, pended orders and codes. If patient reports hysterectomy, use SmartSet to code. Last PAP: Not on file (PAP SCREENING last satisfied: Not on file). Open SmartSet: PAP SCREENING CLINICIAN (PCM - SCAL)'. Below this, 'Nursing Notes' are listed as 'None', and 'Progress Notes' include a note from Catherine Downey dated Oct 3, 2006, regarding a mammogram screening due and a pending Pap test order.

## Examples of Cochrane Reviews Used in Evidence Synopses:

- **Treatment of Acute Gout**
  - **Schlesinger N, Schumacher R, Catton M, Maxwell L.** Colchicine for acute gout. *Cochrane Database of Systematic Reviews* 2006, Issue 4.
  - **Janssens HJEM, Lucassen PLBJ, Van de Laar FA, Janssen M, Van de Lisdonk EH.** Systemic corticosteroids for acute gout. *Cochrane Database of Systematic Reviews* 2008, Issue 2.
- **Epogen for Patients with Chronic Anemia**
  - **Bohlius J, Wilson J, Seidenfeld J, Piper M, Schwarzer G, Sandercock J, Trelle S, Weingart O, Bayliss S, Brunskill S, Djulbegovic B, Benett CL, Langensiepen S, Hyde C, Engert A.** Erythropoietin or Darbepoetin for patients with cancer. *Cochrane Database of Systematic Reviews* 2006, Issue 3.
- **Oral vs. Topical Treatments for Fungal Nail Infections**
  - **Crawford F, Hollis S.** Topical treatments for fungal infections of the skin and nails of the foot. *Cochrane Database of Systematic Reviews* 2007, Issue 3.
- **Negative Pressure Therapy for Chronic Wounds**
  - **Ubbink DT, Westerbos SJ, Evans D, Land L, Vermeulen H.** Topical negative pressure for treating chronic wounds. *Cochrane Database of Systematic Reviews* 2008, Issue 3.
- **Naltrexone for Opiate Withdrawal Under Heavy Sedation**
  - **Gowing L, Ali R, White JM.** Opioid antagonists under heavy sedation or anaesthesia for opioid withdrawal. *Cochrane Database of Systematic Reviews* 2006, Issue 2.
- **Pelvic Floor Exercises for Urinary Urgency/Frequency**
  - **Hay-Smith EJC, Dumoulin C.** Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. *Cochrane Database of Systematic Reviews* 2006, Issue 1.

- **Solid, rigorous methodology – impressive**
- **Explicit and transparent in reporting of studies/results**
  - Criteria for selecting studies, search methods and description, data collection and analysis, assessment of biases, consistency of authors' conclusions with evidence
- **Well-organized and comprehensive review format**
  - Background, objectives, methods, study characteristics, results, discussion, conclusions, figures/tables, excluded studies
  - Sections on characteristics of studies, methodological quality and forest plots for multiple outcomes especially useful
- **Plain language summary helpful to clinicians – allows for quick summary of evidence in patient discussions**
- **PDF format for reviews very useful**

- Provide evidence tables that incorporate study characteristics and quantitative results
  - List key study information in table format with columns across the top; difficult to compare across studies in current format
- Update reviews more frequently
- Dates are sometimes confusing (issue date vs. original online publication date vs. last update)
- Provide updates on protocols and/or remove old protocols
- Consider enhancements to current searching capabilities
  - use Google or other search engine; search by hierarchical topics (i.e., Urology -> prostate cancer); capture acronyms in searches
- Formalize evidence-grading system
  - this may already be occurring with incorporation of SoF tables and GRADE system
- Provide more information on condition, alternative treatments/standard of care used as comparators, and technology/procedure under investigation
- Provide more detail on selection of meta-analysis method (i.e., fixed- or random-effects models), why it is appropriate to combine the studies, and include heterogeneity scores

- Greater coordination in selection of review topics with groups of users in the U.S. (e.g., established interorganizational guideline and technology assessment groups)
- When KP updates a Cochrane assessment, send list of new studies to review authors
- Work toward acceptance of a uniform evidence grading system across organizations (Cochrane, organizations developing guidelines/technology assessments)
- Collaborate on methodology training activities for review authors and developers of evidence-based guidelines/tech assessments



**Special thanks to Cochrane authors, reviewers  
and review groups for a job well done!**