Research Utilization

M6728
Class4

Thanks to Dr. Elaine Larson for many of these slides

Idea to Implementation

- Before 1920: 30 years
- Until 1965: 9 years
- 1980s: 2-5 years
- Now: Depends

Research Utilization

Why does it take so long?
Antisepsis as a Case Study

- Holmes, U.S.
  - 1840-82
  - Direct transmission of infection
  - Ridiculed by peers
- Semmelweis, Austria
  - 1845-61
  - Hands as transmitter of infections
  - Lost his job

Antisepsis

- Nightingale, England
  - 1854-90
  - Importance of sanitation and clean environment
  - Despite resistance, had success
- Lister, Scotland
  - 1856-85
  - Antiseptic surgery
  - Acceptable within a few years

Stages of Innovation

- Awareness (knowledge)
- Persuasion (belief)
- Occasional Use
- Regular Use
  (Brett, 1987)
Why Don’t Nurses Use Research?

Don’t know about the findings: 11% nurses read a journal weekly, 41% monthly (Retsas, 2000)

Why Don’t Nurses Use Research?

Don’t understand or cannot assess the findings
Varying Perspectives

Researcher
• Comfort with probability and tentative answers
• Wants to discover common patterns and similarities
• Goal to extend general knowledge

Clinician
• Seeks/needs clear prescriptions
• Views each patient as unique
• Wants to apply knowledge

Why Don’t Nurses Use Research?

They don’t believe the findings

What Does It Take to Change Practice?

• Dissatisfaction with present situation
• Perception that there are or could be acceptable alternatives
• Confidence in ability to change
Why Don’t Nurses Use Research?

They don’t know how to apply the findings

Differing Skills

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Nurse Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generates questions</td>
<td>Generates questions</td>
</tr>
<tr>
<td>Develops designs and methods</td>
<td>Uses knowledge for patient care</td>
</tr>
<tr>
<td>Collects and analyzes data</td>
<td>Evaluates relevance and utility of studies</td>
</tr>
<tr>
<td>Interprets data</td>
<td>Transfers information to practice</td>
</tr>
<tr>
<td>Communicates findings</td>
<td>Evaluates effects</td>
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</tbody>
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Why Don’t Nurses Use Research?

There aren’t any findings
Survey of 400 Nurses

- What would help nurses use research?
- Most prevalent response: RESEARCH THAT IS RELEVANT AND APPLICABLE (Retus, 2000)

Why Don’t Nurses Use Research?

They are not allowed to use the findings

It’s changing* ....

- Survey of 204 critical care nurses, 1999
- 11/12 practice innovations being used

*Thompson, NINR State-of-Science Congress, 9/99
Correlates of research use*….

• Positive: individual innovativeness, using communication channels
• Negative: years of nursing experience

*Thompson, State-of-Science Congress

Barriers to Implementation

• Failure of researchers to communicate
• Divisions between education, research, practice
• Studies lack relevance to practice
• Confusion about conduct and use
• Disparity in education of nurses
• Institutional barriers

Assessing Relevance to Practice

• Evaluate quality of scientific base
• Assess relevance to the practice setting
• Determine potential for evaluation
Possible Outcomes

- May meet its goal, solve a problem
- May result in no noticeable change
- May be harmful and need to be stopped
- Results may be totally unexpected

WICHE

- First major utilization project, mid-1970s
- Funded by Division of Nursing
- Five phases: recruitment, workshop, change agent, second workshop after 5 months, followup
- Difficulty finding clinical studies
- Three published reports

CURN

- 1975-80, Mich State Nurses’ Assoc
- 34 hospitals participated
- Structured, formal organizational process
- Required organizational commitment, resources, research expertise
Assumptions of CURN Model

• Organization must be committed
• Visible, potent, enduring mechanisms vital
• Substantial resources necessary
• Planned change is essential
• Two or more studies are required to support change

Steps in CURN Model

• Systematic problem identification
• Assessment of research
• Adaptation/design of practice innovation
• Conduct of clinical trial and evaluation
• Decision: adoption, modification, rejection
• Plan for diffusion of innovation
• Mechanisms for maintenance

Ten CURN Clinical Protocols

• Preop teaching, decubitus prevention
• Reducing diarrhea in tube-fed patients
• Clean intermittent urinary cath
• Mutual goal setting, reducing pain
• Stress reduction, IV cannula change
• Preop sensory preparation
• Lactose free diet
Criteria for Using Research: CURN

• Evaluating and integrating studies for the research base
  – Replication (at least two studies)
  – Scientific merit
  – Risk

Criteria for Using Research: CURN

• Relevance
  – Clinical merit
  – Clinical control
  – Feasibility
  – Cost benefits

Criteria for Using Research: CURN

• Potential for Clinical Evaluation
Stetler/Marram Model

- 1976
- For use by individual practitioners as well as organizations
- Pragmatic, most widely used

Assumptions of Stetler/Marram

- Formal organizations may or may not be involved
- Research provides probabilistic information, not absolutes
- Includes experience and theory
- Lack of knowledge of utilization can inhibit effective use

Six Phases: Stetler/Marram

- Preparation
- Validation
- Comparative Evaluation
  - Fit of setting, Feasibility
  - Substantiating evidence, Current practice
- Decision making
- Translation/Application
- Evaluation
Research Utilization versus Evidence Based Practice

• Are these the same or different?

Forms of Research Utilization

• INSTRUMENTAL: concrete application to practice
• CONCEPTUAL: enlightenment, changes understanding
• SYMBOLIC: legitimates current practice or position

What Do You Decide?

• Use
• Consider use
• Delay use
• Forget it
AHRQ and Clinical Practice Guidelines

- AHCPR established 1989 to enhance quality, appropriateness and effectiveness of health care services
- Guidelines developed between 1990-96
- Each guideline has
  - full guideline and quick reference for practitioner
  - consumer guide

Guideline Development Process

- Extensive interdisciplinary clinical review of needs, practices, emerging technology
- Comprehensive literature review
- Ranking of evidence quality
- Peer review of guideline drafts
- Pilot review with intended users

AHRQ Guideline Topics

- Acute pain management
- Alzheimer’s disease
- Benign prostate hyperplasia
- Cancer pain
- Cardiac rehabilitation
- Cataract
- Depression
Guidelines, cont.

- Heart failure
- Low back problems
- Mammography
- Otitis media
- Post-stroke rehabilitation
- Pressure ulcers
- Sickle cell disease

Guidelines, cont.

- Smoking cessation
- Unstable angina
- Urinary incontinence

Oh, oh: Political Problems

No more specific guidelines
Practice Guidelines as Evidence-based Information

- Systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances (IOM, 1990)
- Science based
- Explicit, yet flexible
- Developed by practitioners
- Subject to revision

Evidence-based Practice Centers (EPCs)

- 12 EPCs established in 1997
- Promote evidence-based practice in everyday care
- Develop evidence reports and technology assessments
- AHRQ serves as “science partner” to improve quality, effectiveness, and appropriateness of clinical care

Next Iteration

- Evidence-based Practice Centers: Examples
  - Evaluation of cervical cytology
  - Treatment of attention deficit disorder
  - Treatment of acute sinusitis
  - Pharmacotherapy for alcohol dependence
  - Testosterone suppression treatment for prostatic cancer
  - Swallowing problems in elderly
  - Assessing cost-effectiveness of interventions
  - Assessing translation of evidence into practice
National Guideline Clearinghouse

Agency for Healthcare Research and Quality (AHRQ)

Other Research-Based Guidelines

• CDC
  – http://www.cdc.gov/ncidod/publicat.htm
  – Isolation precautions, prevention of IV-related infections, prevention of nosocomial pneumonia, prevention of spread of VRE, prevention of surgical site infections, personnel health

• Professional Organizations

The National Guideline Clearinghouse™

• Partnership with AAHP and AMA
• Web-based repository for clinical practice guidelines
• Objective is to provide “one stop shopping” for consumers and providers seeking to access and keep abreast of the many guidelines in use
• Allows comparisons of guidelines with different content and recommendations
For Utilization Project


Other Published Reviews and Recommendations

- Qualitative, non-systematic, narrative
  - Process is not clear-cut in how literature was selected
- Systematic
- Meta-analysis