Evidence-based Health Care

Defining Effective Care

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Objectives

1. The road to EBHC.....the rationale
2. What is evidence and how is it used in patient care
   – At individual patient level
   – At population level
3. How does EBHC inform quality improvement (QI)
Evidence Based Health Care (EBHC)  
Fundamental Principle

• ...What happens to patients should be based upon “evidence” (Eddy, 2005)

• A simple notion... slow to become self evident.
The Problem: Wide Variation in Care

Observed

• **Overuse** (of procedures that do not help)
• **Underuse** (of procedures that can help)
• **Misuse** (errors of execution)

Reason

• Treatment based on personal “opinion”
• Belief Clinical Judgment sufficient to guide wise decision making
• Lack of access to high quality evidence
• Changing behavior difficult

Rationale for EBHC (Berwick, 2008)
Institute of Medicine (2001)

• Americans should receive care based on scientific knowledge
  – This is not the case.
• Health care harms patients and fails to deliver its potential benefits.
• Serious and widespread quality problems exist –
• Between what is and what should be...a chasm.
IOM Core Metrics

Health Care
- Safe
- Effective
- Patient centered
- Efficient
- Timely
- Equitable

Population Health
- Length of life
- Quality of life
- Health behavior and risk
- Utilization of preventive services
- Community health
- Social and economic factors

Rationale for EBHC
Dentistry Too

- Widespread, unexplained variation in clinical decision
- Large disparities in oral health status
- Finance methods: 3X to 4X costs differences
- Affordability concerns
General Principle of EBHC

When different physicians (or dentists) are recommending different things for essentially the same patients, it is impossible to claim that they are all doing the right thing. (Eddy 2005)

It suggests a lack of criteria based diagnostic training and treatment unsupported by and evidence-based rationale.

There is only one “best” treatment for a given patient.
Something “Old”… Something “New”

- Old - Objective evidence as basis for care
- New – systematic, formalized, widespread use of evidence in guiding care.

- Challenge: Finding high quality evidence and facilitate its use in patient care.
- Approach at two levels:
  - Individual Patient Decision Making
  - Guidelines
Two Paths to EBHC Developed

1980  1990  2000  PRESENT

Wide variations in practice

Underuse

Overuse

Path 1: EB Individual Decision Making

Path 2: EB Guidelines

The Art of Medicine
EBHC: @Individual Patient Care Level

"Do Right Things"
EBHC: Individual Patient Model

**DEFINITION:**

- The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients (Sackett)

Later additions:

- Patient Needs
- Clinical Expertise (judgment)
EBD (ADA): Individual Patient Model

ADA: Evidence-based dentistry is the integration of:
1. Clinically relevant **scientific evidence**,
2. **Dentists** clinical expertise and
3. **Patients** needs and preferences
EBHC Provider Skills: Individual Patient-Level

- Provider with ability to:
  1. Ask questions
  2. Find evidence
  3. Assess quality
  4. Assess relevance (to individual patient)
  - Clinical Skill
  5. Implement EB decision
    - Attitudinal (change with the evidence)
EBD Model

1. Knowledge Question
   - Clinical Skill required to frame the question

2. Search
   - EBD Skill required to find best evidence

3. Assess
   - EBD Skill required to assess validity and quality
   - Clinical Skill required to determine relevance and appropriateness for this patient

4. Decide

5. Best Evidence
   - Do Right Things
EBHC: @population health level
EB Guideline Development

1. Evidence-based
2. Criteria-based
3. Aimed at generic patient
4. Effects are indirect
5. Aimed at system level change

- Cost implications
- Population-based health change
EB Guideline Development

• Identify Target Condition
  – High Risk
  – High Volume
  – Complicated Care

• Conduct Systematic Review
  – Expert Panel

• Aim: fix KNOW – DO gap
EB Guideline Development

• Transmit information effectively
• Incorporate into practice.
EB Guideline Development

• Sustain system change.
  – Create population quality indicators
  – Measure organizational performance
  – Support with infrastructure
  – Make part of organizational “culture”
EB Individual Care vs. EB Guidelines
Guidelines in Dentistry – slow to adopt

• Why
  – Lack of evidence.
  – Decentralized system.
  – Dentist resistant notion of a “system”.
  – Culture – individual preferences are acceptable.
  – No one dies.
  – Comoditization of care
    • less emphasis on cost containment (cost-effectiveness).
Different Focus

**EBHC**

- **Do Right Things**
- Actions informed by best available evidence from clinical knowledge base.

**QI**

- **Do Things Right**
- Focus on recurrent problems —
  - High risk
  - High volume
  - Problem prone
- Intended actions done thoroughly, efficiently, and reliably.

*Do Right Things Right*
Where is oral health delivery system?

- “Quality assessment in dental care is in a relatively primitive state....measures used are little changed in the past three decades.”
- We need to move focus up the pyramid to achieve population health outcomes.

QI Approach

- **AIM**: Is there really a problem?
  - High Risk
  - High Volume
  - Problem Prone

- **MEASURE**: Is there a solution?
  - Evidence Review
  - EB Guidelines

- **CHANGE MANAGEMENT**: Can it be implemented locally?
  - System Level Infrastructure

- **Will it make a difference?**
What and EBHC System Looks Like

System Level
- Focus on recurring Problems
  - “doing things right”
- EB guidelines are in place
  - Understood by clinical staff
  - Supported by financing model
  - System goals set
  - Tracking of compliance and outcomes ongoing
  - Provider performance monitored.
  - Learning system

Individual Patient Care Level
- Focus on Personalized Medicine
  - “doing the right thing”
- Individual patient exceptions to guidelines anticipated
  - Tracking accounts for opt out
  - IT support available
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References  
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