

# Introduction to Evidence-based Medicine

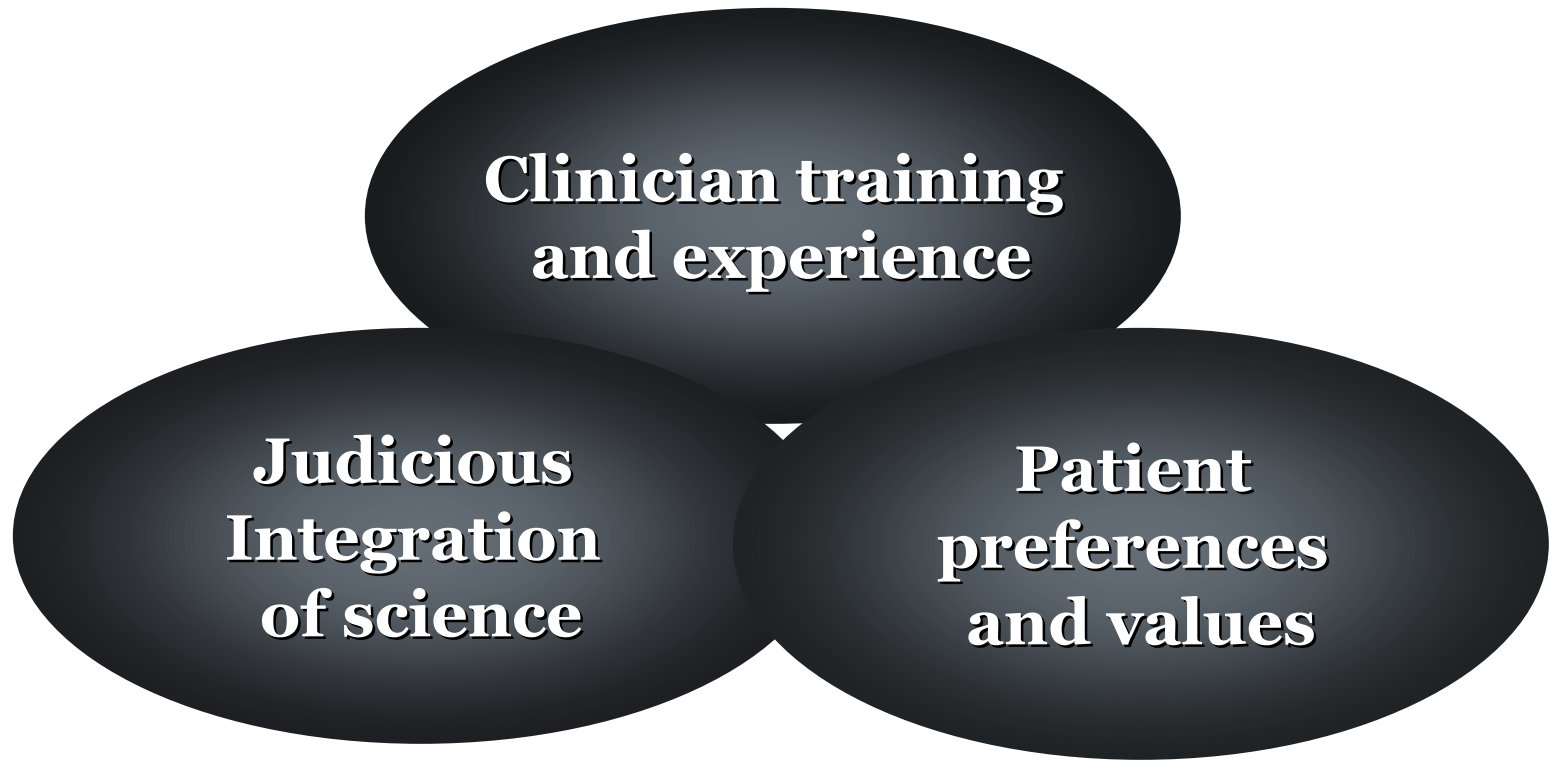
Relevance to Disease  
Management

# Definition: Evidence-Based Medicine

*“The practice of EBM includes the judicious integration of current best scientific literature, clinical experience and patient understanding and values.”*

*Adapted from Guyatt et al.  
and Sackett et al.*

# Three Dimensions of EBM



# Guidelines: The Framework for EBM

***“Systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.”***

– IOM '92

- Derived from...
- 10,000 RCTs annually
- 4,000 guidelines since 1989
- 2,500 periodicals in NLS

# Limitations of EBM

*“Evidence-based medicine in practice defines the likelihood of something happening. It is never 100%. It is not absolute truth. Evidence never tells you what to do. The same evidence applied in one case may not apply in another. The circumstances of the individual may be different, or the circumstances may be the same but patients may refuse one treatment in favor of another. What evidence-based medicine does is inform one about what their best options are—but it doesn’t make the decision.”*

*Brian Haynes MD, McMaster University at the Canadian Medical Association September 30, 2003*

# Reality: Providers Don't Practice EBM...

McGlynn et al "The Quality of Health Care Delivered to Adults in the United States" NEJM June 26, 2003

<b>Condition</b>	<b>% Recommended Care Received</b>
Senile Cataract	<b>78.7</b>
Breast cancer	<b>75.7</b>
Prenatal Care	<b>73.0</b>
Low back pain	<b>68.5</b>
Coronary artery disease	<b>68.0</b>
Hypertension	<b>64.7</b>
Congestive heart failure	<b>63.9</b>
Cerebrovascular disease	<b>59.1</b>
Chronic obstructive pulmonary disease	<b>58.0</b>
Depression	<b>57.7</b>
Orthopedic conditions	<b>57.2</b>
Osteoarthritis	<b>57.3</b>
Colorectal cancer	<b>53.9</b>

<b>Condition</b>	<b>% Recommended Care Received</b>
Asthma	<b>53.5</b>
Benign prostatic hyperplasia	<b>53.0</b>
Hyperlipidemia	<b>48.6</b>
Diabetes mellitus	<b>45.4</b>
Headache	<b>45.2</b>
Urinary tract infection	<b>40.7</b>
Community acquired pneumonia	<b>39.0</b>
Sexually transmitted diseases	<b>36.7</b>
Dyspepsia/peptic ulcer disease	<b>32.7</b>
Atrial fibrillation	<b>24.7</b>
Hip fracture	<b>22.7</b>
Alcohol dependence	<b>10.5</b>

# Results of Non-Adherence to EBM: Quality Gaps

## Preventive care deficiencies

- Child immunizations 76%
- Influenza vaccine 52%
- Pap smear 82%

## Acute care deficiencies

- Antibiotic misuse 30-70%
- Prenatal care 74%



## Surgery care deficiencies

- Inappropriate hysterectomy 16%
- Inappropriate CABG surgeries 14%

## Chronic care deficiencies

- Beta blockers 50%
- Diabetes eye exam 53%

## Hospital care deficiencies

- Proper CHF care 50%
- Preventable deaths 14%
- Preventable ADEs 1.8/100 admits
  - Life threatening 20%
  - Serious 43%

# Integrating EBM in Disease Management



# Strategic Questions

- ROI
- In-sourcing vs. outsourcing
- Clinical efficacy (evidence-based care management)

We will focus on the last one!!

# VUMC study tries new tactic to cut health-care costs

12-22-04

A Vanderbilt University Medical Center study is considering a novel way to cut health-care costs.

***If insurers paid doctors for talking patiently with patients — instead of seeing as many people as possible in a day — we all might become healthier and spend less on medical care.***

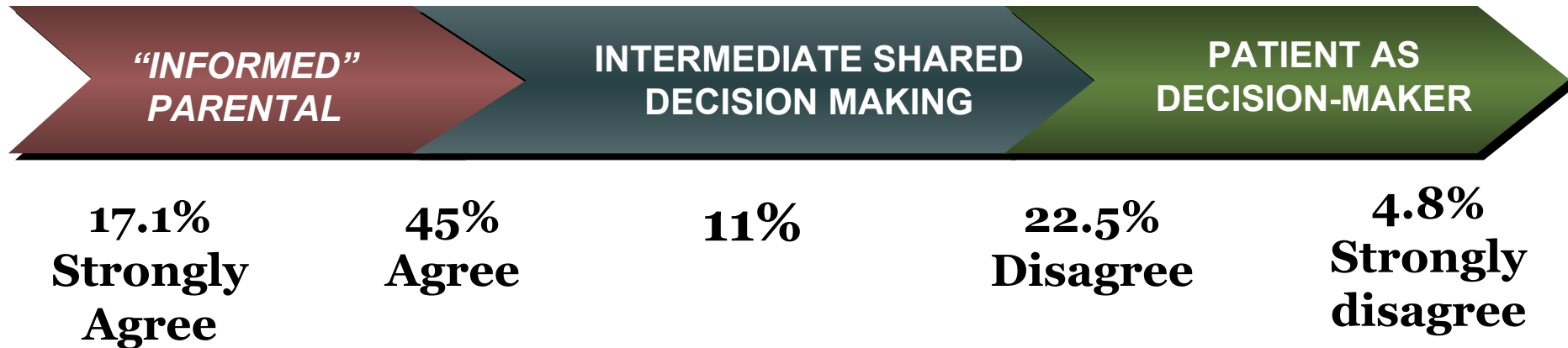
- Hypertension
- Congestive heart failure
- Type II Diabetes



"If somebody pays doctors to see patients, they are going to see patients. If someone pays doctors to care for patients, maybe they'll do what they need to do," said Dr. Steve Coulter, chief medical officer for Chattanooga-based Blue Cross Blue Shield of Tennessee, which helped organize the Vanderbilt study and is playing a key role in it.

# Challenge: Consumer Expectations

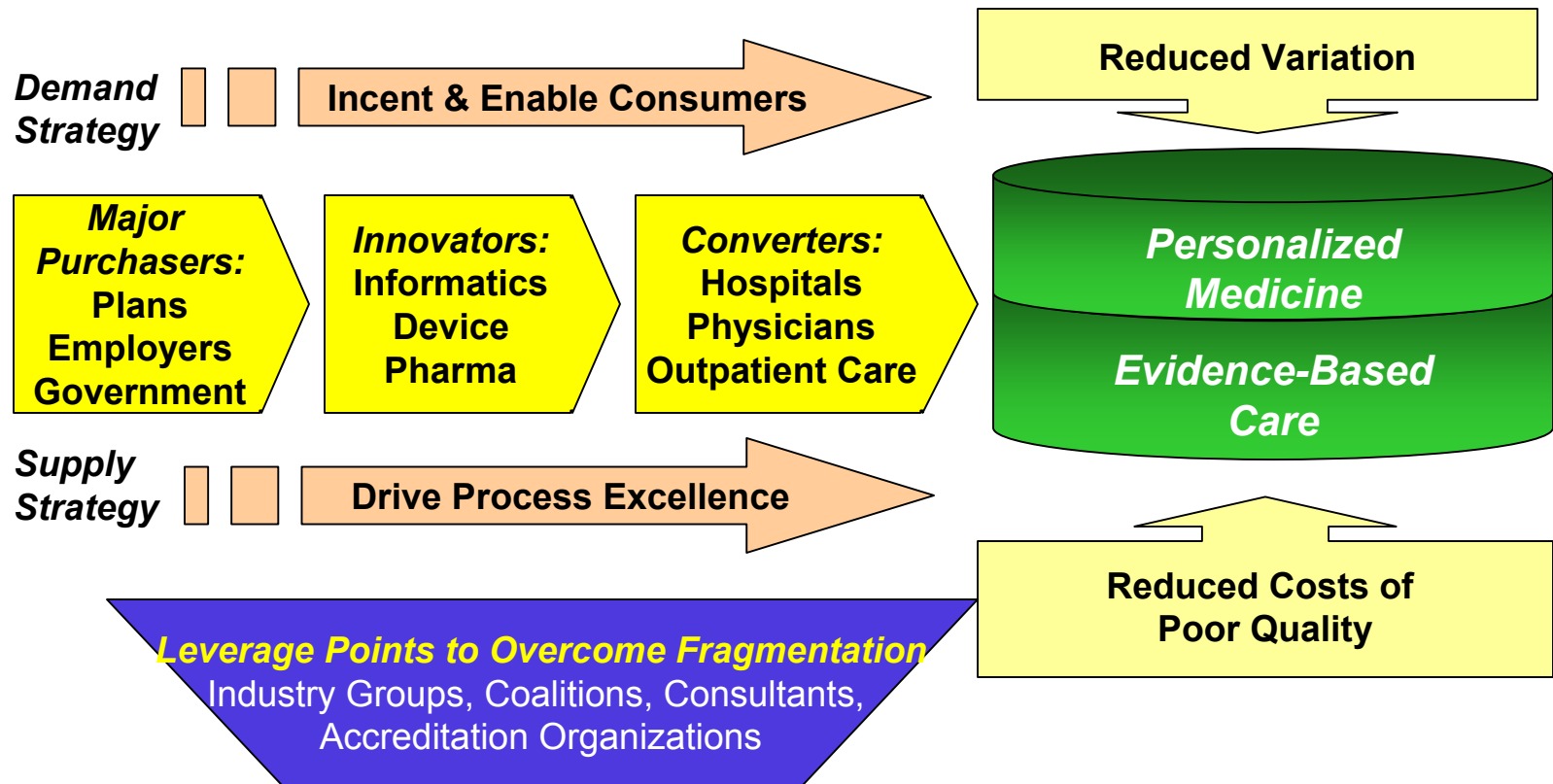
***73% of patients depend on physicians to make decisions for them!***



**\*Adapted from Guyatt et al. Incorporating Patient Values in: Guyatt et al. Users' Guide to the Medical Literature: Essentials of Evidence-based Clinical Practice. JAMA 2001**

**\*\*Arora NK and McHorney CA. Med Care. 2000; 38:335**

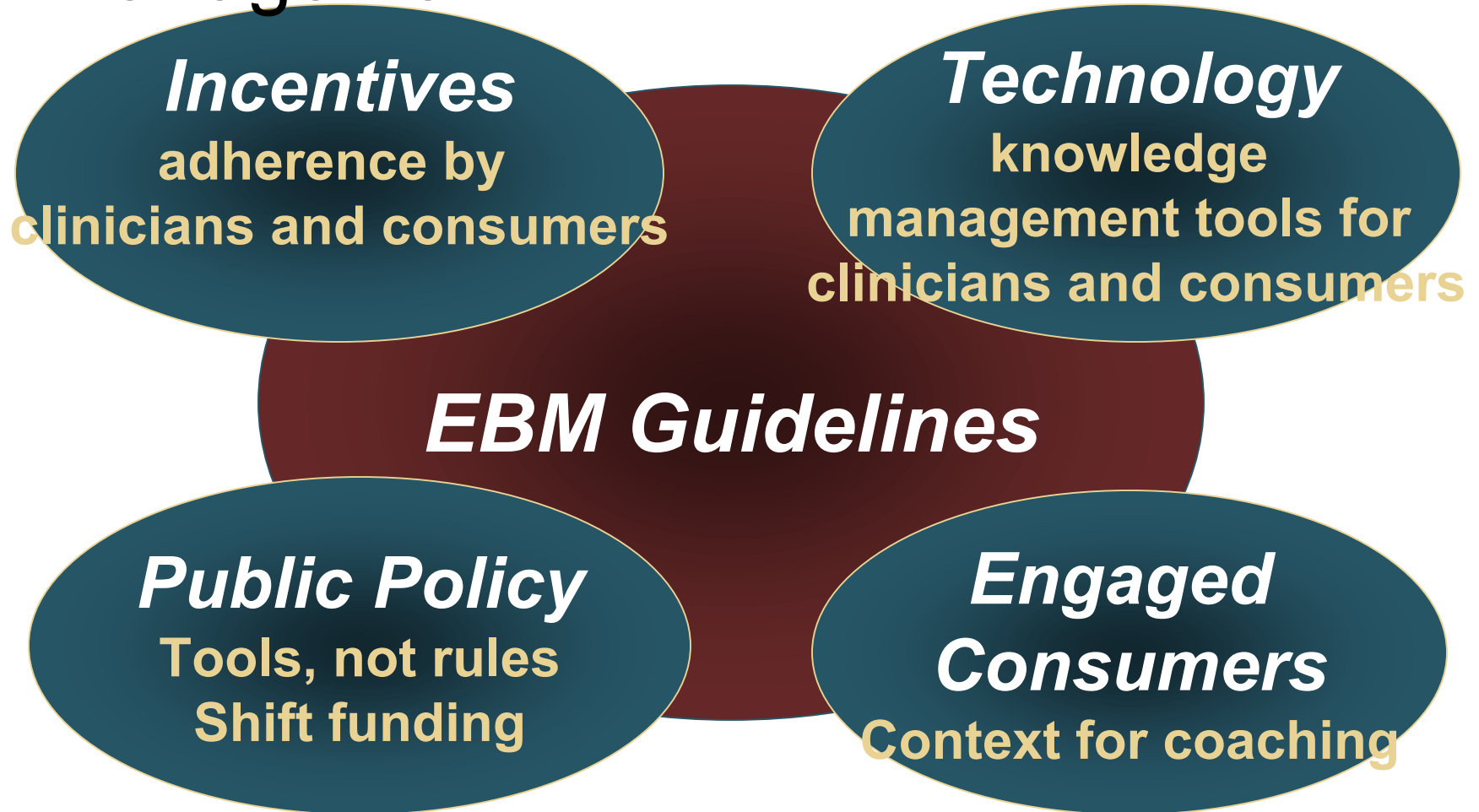
# EBM and System Transformation: Supply and Demand Focus



# Health Cost Strategies for Payers

Employer Strategy		3 yr. ROI Potential	5- yr. ROI Potential	Potential Annualized Savings*
HSA/HRA			✓	-2-3%
PBM/Aggressive Formulary		✓	✓	-3-6%
Malpractice Reform		✓		-1-2%
EBM Adherence	Overuse	✓		-5-10%
	Underuse		✓	+1-3%
	Misuse	✓		-2-3%
Chronic Care Management			✓	-3-6%

# Evidence-based Chronic Care Management



# EBM and Disease Management: The Tipping Point Questions

- Diagnostics and enrollment...
  - Are predictive models based on appropriate application of the evidence?
  - Do predictive models account for co-morbidities?
  - Are enrollee values incorporated with treatment directives?
  - How is clinician adherence evaluated?

# EBM and Disease Management: The Tipping Point Questions

- Care Management processes
  - How is co-morbidity managed?
  - How are guidelines from societies adapted/modified based on evidence?
  - How is the clinician engaged as coach?
  - Are enrollee values incorporated with treatment directives/coaching methods?



# EBM and Disease Management: The Tipping Point Questions

- Results management...
  - What measures are important for monitoring adherence? Outcomes?
  - How is appropriate variation measured/accomodated?

# Moving toward Evidence-based Care Management

- Need to invest in clinical tools, processes for integration of evidence and outcome measurement
- Need to adapt coaching models to include clinicians as well as consumers
- Need to evaluate models in context of payment systems for providers and consumers
- Need to be transparent

# Contact

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