


Preventive Services ToolKit
Module 3 – Epidemiology as a Policy Tool




11/4/17 Module 3
Epi as a Policy Tool

AAPHP PSTK Advocacy Strategy Seminar

Slide 1

Module 3 – Content

- Translating science to policy
- Epi Tools
- Syndemics
- Data Models
 - Medical
 - Public Health
 - Community
- Resource Web Site




11/4/17 Module 3
Epi as a Policy Tool

AAPHP PSTK Advocacy Strategy Seminar

Slide 2

Health Policy Errors
that Should Have Been Prevented

- Public Health
 - Tobacco policy legislation (ref harm reduction)
 - Interpretation of Louisiana Infant Mortality
- Disease Management
 - Untimely Demise of DM Programs
 - Unwillingness to stratify health ed and outreach
- (administrators and financial managers pay no attention to science if not forced to do so)





11/4/17 Module 3
Epi as a Policy Tool

AAPHP PSTK Advocacy Strategy Seminar

Slide 3

Science to Policy

- Science
 - Risk and causation
 - Natural history
 - Efficacy of interventions
 - Secondary benefits and harms
- Policy
 - Planning
 - Evaluation
 - Advocacy strategy
 - Who pays, who benefits
 - Values and perceptions
 - Types of costs
 - Types of benefits
 - Secondary gains and losses


11/4/17 Module 3
Epi as a Policy Tool

AAPHP PSTK Advocacy Strategy Seminar

Slide 4

Epi Approach to Translation

- Numerators
- Denominators
- Patterns of cause and effect
- Identify interventions and outcomes
- Time dimension
 - Project levels of intervention and outcomes by quarter and year
 - Enable mid-course corrections
- Data needs for evaluation
- Eliminate perception of squishiness




11/4/17 Module 3
Epi as a Policy Tool

AAPHP PSTK Advocacy Strategy Seminar

Slide 5

Direct Benefits
(diabetes health ed. in healthcare settings)

- Morbidity, mortality
- Healthcare costs averted



11/4/17 Module 3
Epi as a Policy Tool


AAPHP PSTK Advocacy Strategy Seminar

Slide 6

Indirect Benefits

(diabetes health ed. in healthcare settings)

- Adherence to recommendations
 - Diabetes
 - Other
- Lifestyle
- Satisfaction
- Reputation and competitive advantage




11/4/17 Module 3 AAPHP PSTK Advocacy Strategy Seminar Slide 7
Epi as a Policy Tool

Adverse Consequences

(diabetes health education in healthcare settings as example)


- Costs
- Medical complications
- Adverse patient selection



11/4/17 Module 3 AAPHP PSTK Advocacy Strategy Seminar Slide 8
Epi as a Policy Tool

Small Numbers as basis for decisions

- Research and Publication
 - $p < 0.05$
 - Increase sample size as needed to secure "statistical significance"
- Legal and Admin
 - "more likely than not" 51%
 - Proposed Public Health policy compromise $p < 0.2$
- Cannot increase sample size to secure $p < 0.05$**



11/4/17 Module 3 AAPHP PSTK Advocacy Strategy Seminar Slide 9
Epi as a Policy Tool


diabetes as example of Multiple levels of intervention

Goal	Numerator	Denominator
Decrease mortality	Deaths	Severely Ill Diabetics
Prevent deterioration and complications	Severely Ill Diabetics	All Diabetics
Prevent onset of diabetes	All Diabetics	Obese Patients
Prevent obesity	Obese Patients	Overweight Pts.
Prevent overweight	Overweight Pts.	All Patients

11/4/17 Module 3 AAPHP PSTK Advocacy Strategy Seminar Slide 10
Epi as a Policy Tool

Diabetes – Lessons Learned


- Primary, Secondary, Tertiary Prevention Model oversimplified
- 5 levels demonstrated
- (more levels if dealing with microvascular and other complications)
- Must precisely define numerators, denominators, intervention(s) and outcomes**
- (best modeled with "stock and flow" software)



11/4/17 Module 3 AAPHP PSTK Advocacy Strategy Seminar Slide 11
Epi as a Policy Tool

Syndemics


- "synergistic epidemics"
 - <http://www.cdc.gov/syndemics/overview-definition.htm>
- Community view



11/4/17 Module 3 AAPHP PSTK Advocacy Strategy Seminar Slide 12
Epi as a Policy Tool

Examples of Syndemics


- Youth
 - STDs, AIDS, Substance Abuse, Unplanned or undesired pregnancy
- Elderly
 - Diabetes, metabolic syndrome, cardiovascular and cerebrovascular disease
- Urban inner city
 - Lead poisoning, asthma, interpersonal violence, depression, drug use, alcohol abuse
- Suburban sprawl
 - Obesity, poor physical fitness, auto accidents, depression, tobacco use



11/4/17 Module 3 Epi as a Policy Tool AAPHP PSTK Advocacy Strategy Seminar Slide 13

Data Models


- Medical
- Public Health
- Community, Mental Health and Behavioral



11/4/17 Module 3 Epi as a Policy Tool AAPHP PSTK Advocacy Strategy Seminar Slide 14

Medical Data Model


- Medical Diagnosis
 - Heart disease
 - Cancer
 - Stroke
 - Lung disease
 - Injuries
- Medical Procedure Codes
 - Per Mokdad et al, JAMA 2004; 291:1238-1245



11/4/17 Module 3 Epi as a Policy Tool AAPHP PSTK Advocacy Strategy Seminar Slide 15

Public Health Data Models


- Risk factors
 - Tobacco
 - Diet and exercise
 - Alcohol
 - Microbes
 - Toxins
- Skilled use of public data sets
 - Census and demographics
 - Vital records
 - National surveys
 - Per Mokdad et al, JAMA 2004; 291:1238-1245



11/4/17 Module 3 Epi as a Policy Tool AAPHP PSTK Advocacy Strategy Seminar Slide 16

Community Data Models


- 4 Domains
 - Social/Cultural/Economic
 - Physical
 - Biological
 - Political and Administrative
- -- for each domain
 - Problems
 - Resources
 - Environments
- -- these data more qualitative than quantitative (see partnering module)



11/4/17 Module 3 Epi as a Policy Tool AAPHP PSTK Advocacy Strategy Seminar Slide 17

Bottom Line re: Epi as Policy Tool

- **Do not start with a literature review!!!**
- Start with Goal, feasibility, and Strategic plan
- Consider syndemic interactions
- Move to guidelines and literature summaries
 - Best place to start is usually the AHRQ National Guideline Clearinghouse <http://www.guidelines.gov>
- Seek guidance and consultation from public health colleagues



11/4/17 Module 3 Epi as a Policy Tool AAPHP PSTK Advocacy Strategy Seminar Slide 18