Taking a Critical Look at the Evidence Base for Community Health Improvement: The US Preventive Services Task Force and the Task Force on Community Preventive Services

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Structure for My Presentation

- Overview of the US Preventive Services Task Force and the Task Force on Community Preventive Services
- Challenges in Evaluating the Evidence Base for Community Health Improvement
- Addressing the Challenges
Community Health Improvement Planning Steps

Planning & Assessment
What’s the problem?

Setting Objectives
What do we want to achieve?

Selecting Interventions
What works?

Implementing
How do we do it?

Evaluating
Did it work? How well?
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<th>CPSTF Public Health Perspective</th>
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U.S. Preventive Services Task Force (USPSTF)

Aims:

- To evaluate the benefits of individually-based clinical preventive services
  - Based on age, gender, and risk factors for disease
- To make recommendations about which clinical preventive services should be incorporated routinely into primary medical care and for which populations
- To identify a research agenda for clinical preventive care

Recommendations, findings are compiled in the Guide to Clinical Preventive Services (Clinical Guide)
Clinical Preventive Services

Evaluating the effectiveness of interventions that are typically delivered:

- At the level of the individual patient
- By a doctor, nurse, or other health care clinician
- Usually in a clinical setting

- Intervention types:
  - Screening tests
  - Preventive medications
  - Behavior change counseling
Clinical Preventive Services: Examples

What is the effectiveness of…

- Colorectal cancer screening for reducing colon cancer morbidity and mortality?

- Screening adult patients for obesity and offering counseling and behavioral interventions to promote sustained weight loss?

- Screening adults for depression?

» All from the Clinical Guide
Task Force on Community Preventive Services (CPSTF)

Aims:

- To evaluate the effectiveness and economic efficiency of community-based preventive services
- To make recommendations for use of these interventions in policy and practice
- To identify research gaps

Recommendations, findings are found in the Guide to Community Preventive Services (Community Guide)
Community Preventive Services

Evaluating the effectiveness of interventions that are typically delivered:

- At the group level
- Community or population-based
  - Demographic
    - State/province, city, neighborhood
    - Age, gender, race/ethnicity, economic status
  - Organization
    - Health care system
    - Schools
    - Worksites
- By a wide range of “providers”
Community Preventive Services: Examples

What is the effectiveness of interventions…

- To increase colon cancer screening:
  - Client incentives?
  - Small media (e.g., pamphlets)?
  - Provider assessment and feedback?

- To prevent, control obesity:
  - Worksite programs?
  - Behavioral interventions to reduce screen-time (TV, computer, video games, etc.)?

- To prevent/control depression:
  - Collaborative care interventions?
  - Community-based exercise interventions?

  » All from the Community Guide
Community Preventive Services can be

- Informational
  - Education programs when used alone for increasing use of child safety seats
  - Mass media campaigns for reducing alcohol impaired driving

- Behavioral, Social
  - Behavioral interventions to reduce risky sexual behavior and HIV, other sexually transmitted infections, and pregnancy among youth
  - Cognitive behavior therapy in reducing psychological harm among children and adolescents following traumatic events
Community Preventive Services can be

- **Environmental, Policy**
  - Street scale urban design (lighting, improved safety, ease of walking) in increasing physical activity
  - Smoking bans and restrictions in reducing exposure to environmental tobacco smoke

- **Health System**
  - Disease management programs for diabetes control
  - Client reminder and recall systems in increasing vaccination coverage
Why were the Task Forces created?

To obtain and distill the best available evidence to support decision making through a process that is:

- Independent
- Transparent
- Systematic
- Credible
- Well-vetted
- Useful
Brief History

- 1984:
  - First release of Clinical Guide

- Late 1980s – Mid 1990s:
  - Could there be a comparable guide for population-based public health?

- 1996:
  - U.S. Department of Health and Human Services established the Community Guide
    - As a resource for all of public health
    - Staff support (scientists, infrastructure) provided by CDC
    - Established the Task Force to direct its work
Both Task Forces use a rigorous, transparent process:

- Use state-of-the-art systematic reviews
  - To evaluate the best available scientific evidence about the effectiveness of interventions and policies
- Make evidence-based recommendations:
  - For practice (programs and services)
  - For policy
- Highlight research gaps
  - Areas needing further study
Both Task Forces have similar structures

- Independent, non-federal, rotating panels of experts that:
  - Oversee priority setting and selection of topics and interventions for review
  - Oversee conduct of individual systematic reviews
  - Make evidence-based recommendations for a wide range of US decision makers
  - Serve without payment

- Federal Agencies provide administrative, research, and technical support to the Task Forces:
  - USPSTF: Agency for Healthcare Research and Quality (AHRQ)
  - CPSTF: CDC
Groupings of Systematic Reviews

1. Systematic reviews whose intent is to be used to inform policy and practice decisions
   - Cochrane Collaboration
   - Campbell Collaboration

2. Systematic reviews conducted with the express goal of making formal recommendations for action for one or more specific user groups
   - Guide to Clinical Preventive Services
   - Guide to Community Preventive Services
   - NICE, UK
   - GRADE, International
CPSTF Members

- Internationally renowned experts in public health research, practice, policy

- Chair – Director of Public Health, Health Officer, County of Los Angeles

- Vice Chair – Dean, School of Public Health, UNC, Chapel Hill

- Current members include:
  - State Medical Officer
  - Deans, Schools of Public Health, Medicine
  - Associate, full professors
  - Health policy experts
  - Worksite health experts
  - Health maintenance organization scientists
  - Foundation scientists
# Over 220 Task Force Recommendations

## The Environment

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<th>Health Equity</th>
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## Settings

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## Risk Behaviors

- Tobacco Use
- Alcohol Abuse/Misuse
- Other Substance Abuse
- Poor Nutrition
- Inadequate Physical Activity
- Unhealthy Sexual Behaviors

## Specific Conditions

- Vaccine-Preventable Disease
- Pregnancy Outcomes
- Violence
- Motor Vehicle Injuries
- Depression/Mental Health
- Cancer
- Diabetes
- Oral Health
- Obesity
- Asthma
- Cardiovascular disease
- Current reviews
Community Guide: How is it Used?

- To inform decision making around:
  - Practice (initiatives, programs)
  - Policy
  - Research
  - Funding for research and programs
Challenge #1: A Typical Approach to Developing and Disseminating Evidence Based Recommendations: A Push Model

Systematic Review of the Scientific Evidence By researchers

Dissemination

Practice, Policy
Addressing Challenge #1

- By actively engaging in conducting and disseminating the systematic review those who are expected to be the users and beneficiaries of the research, it is more likely the findings and recommendations will be relevant to their needs.
Community Guide Places Equal Weight on

- The quality of the systematic review methods and analysis
- The group processes
  - Participation and collaboration
Intended Users Participation: Are we…

- Prioritizing the right topics and interventions for review?
- Asking the right questions?
- Staying true to the important questions over the course of the review?
- Appropriately considering context, other issues of applicability to different settings, populations?
- Thinking proactively about interpretability, relevance, usefulness, use?
- Planning for and undertaking dissemination and translation into action from the outset?
So Whose Participation Do We Seek in our Systematic Reviews?

- Who is to be affected by the recommendations and findings? Who are the intended users?
  - Practitioners
  - Policy makers
  - Health departments
  - Professional and Non-Governmental Organizations
  - Community-based organizations
  - Employers, employees
  - Minority or special populations
  - Researchers
  - Research funders
  - Educators
User Involvement in the Community Guide

- **Official Liaisons**
  - 30 federal agency and organizational
    - NIH, AHRQ, VA, all US Armed Forces, etc.
    - ASTHO, NACCHO, NALBOH, PHF, DHPE
    - Public health, physician, nurse, other organizations
      - APHA, AMA, Quad Council, ASPH
  - **Roles**
    - Provide input into prioritization of topics, reviews, Task Force findings and recommendations
    - Serve on, recommend participants for review teams
    - Participate in dissemination and translation of Task Force findings, especially to their constituents
Participants in Individual Reviews

- **Coordination Team (n=~10-15)**
  - Coordinating scientist (typically Community Guide)
  - Fellows, abstractors (Community Guide)
  - Subject matter experts
    - From CDC, other federal agencies, academia, practice, policy settings
  - Task Force member(s)
  - Liaison(s) to Task Force

- **Consultants, Consultation Team (n=~20-60)**
  - Subject matter experts
Challenge #2: Will the intervention work for me?

- Always need to assess whether the intervention works under the conditions set forth in the study
  - Internal validity
  - When internal threats to validity are controlled, is the intervention effective?

- But most decision makers considering community preventive services want to know:
  - Are the findings generalizable across all the settings, situations and populations for which I am responsible?
  - Are the findings applicable to my specific setting, situation, or population?
Community Guide Places Equal Weight on

- The quality of the systematic review methods and analysis

- The group processes
  - Participation and collaboration
Key Criteria Used in Prioritization of Review Topics

- Overall attributable burden
- Magnitude of preventable burden
  - Potential population reach, health benefit
  - Extent, feasibility, cost effectiveness of disease burden prevented
- Potential to reduce health disparities
- Degree and immediacy of interest expressed by major partners and stakeholders
- Alignment with strategic community prevention initiatives:
  - HP2020; National Prevention, Health Promotion Strategy
  - Communities Putting Prevention to Work; County Health Rankings
- Synergies with USPSTF, Advisory Committee on Immunization Practices
- Balance across topics, risk factors, settings, populations
The CG Seeks to Answer Key Questions about Interventions

- Do they work?
- How well?
- For whom?
- Under what circumstance are they appropriate (applicability)?
- What do they cost?
- Do they provide value?
- Are there barriers to their use?
- Are there any harms?
- Are there any unanticipated outcomes?
In General, a Conclusion About Effectiveness Requires….

A Body of Evidence + A Demonstration of Effectiveness

- Number of studies
- Quality of studies
- Study limitations
- Suitability of study design

NB. Studies can be research-tested or practice-based

Consistency of Effect + Sufficient Magnitude of Effect

“Most” studies demonstrated an effect in the direction of the intervention

The effect demonstrated across the body of evidence is “meaningful”
Formal Review of Applicability

- Information is explicitly provided to Task Force on applicability
  - Considered when they make recommendations

- Information is provided to users in a refined *Rationale Statement* accompanying the Task Force Recommendation Statement

- Remaining challenge: information is often limited
  - Critical role for program evaluation of real world programs, services, and policies!!!
  - Information can be incorporated into updates of CPSTF recommendations!
Task Force Recommendation Options

- **Recommend**
  - Strong Evidence
  - Sufficient Evidence

- **Recommend against**
  - Strong Evidence
  - Sufficient Evidence

- **Insufficient evidence** to recommend for or against
What Does Insufficient Evidence Mean?

- This does NOT mean that the intervention does not work.

- Insufficient evidence means that additional research is needed to determine whether or not the intervention is effective:
  - In some cases there are not enough studies to draw firm conclusions.
  - In other cases, the available studies have inconsistent findings.
If “Insufficient Evidence,” then what?

- If the intervention is currently being used
  - May want to continue using it if there are no associated harms
  - May choose to stop due to issues such as cost

- If the intervention is not being used
  - May not want to begin using it
  - May choose to cite the IE finding in your funding proposal

- Consider:
  - Are there better documented alternatives for reaching the same goals?
  - If you undertake a practice-based innovation: Collect sufficient data so your experience can contribute to the evidence base!
What to Do with a Recommendation

“Even if it is evidence-based, it is not certainty.”

McGinnis and Foege

- Not a cookbook or a one-size-fits-all solution
- Users must combine scientific information (e.g., effectiveness, cost) with other information (e.g., needs, values, capacities, resources)
- Community Guide aims to provide menus of options for decision makers
How Can Public Health Agencies and their Partners Use the Community Guide in Support of Performance Improvement?

- In support of agency programmatic initiatives:
  - Plan and evaluate programs
  - Strengthen applications for programmatic funding
  - Justify program support/funding
  - Plan/modify systems
  - Learn what magnitude of effect might be possible from implementation of specific programs
  - Inform interface with the health care system to support delivery of effective clinical services
How Can Public Health Agencies and their Partners Use the Community Guide in Support of Performance Improvement? (cont’d)

- In support of policy:
  - Identify policies, laws for which there is evidence of their effectiveness in achieving important public health outcomes
  - Learn what magnitude of effect might be possible from implementation of specific policies
  - Inform interface with governmental agencies, organizations, and other stakeholders in support of:
    - Health policies
    - Policies in other sectors with health implications
Thank You!

For more information on the Clinical Guide:
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The findings and conclusions in this presentation are those of the presenter and do not necessarily represent the views of CDC.