



Methods: Mind the Gap Webinar Series

**Approaches to Evidence Synthesis in
Systematic Reviews of Public Health
Interventions Methods and Experiences of
the Community Preventive Services Task
Force**

Presented by

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Centers for Disease Control and Prevention (CDC)





Evidence Synthesis in Systematic Reviews of Public Health Interventions:

Methods and Experiences of the Community Preventive Services Task Force (CPSTF)

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Community Guide Branch

U.S. Centers for Disease Control and Prevention

NIH Office of Disease Prevention

Medicine: Mind the Gap Webinar Series

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The Community Guide

Disclaimer

The findings and conclusions in this presentation do not necessarily represent the official position of the Centers for Disease Control and Prevention.

The Centers for Disease Control and Prevention “provides administrative, research, and technical support for the Community Preventive Services Task Force.”

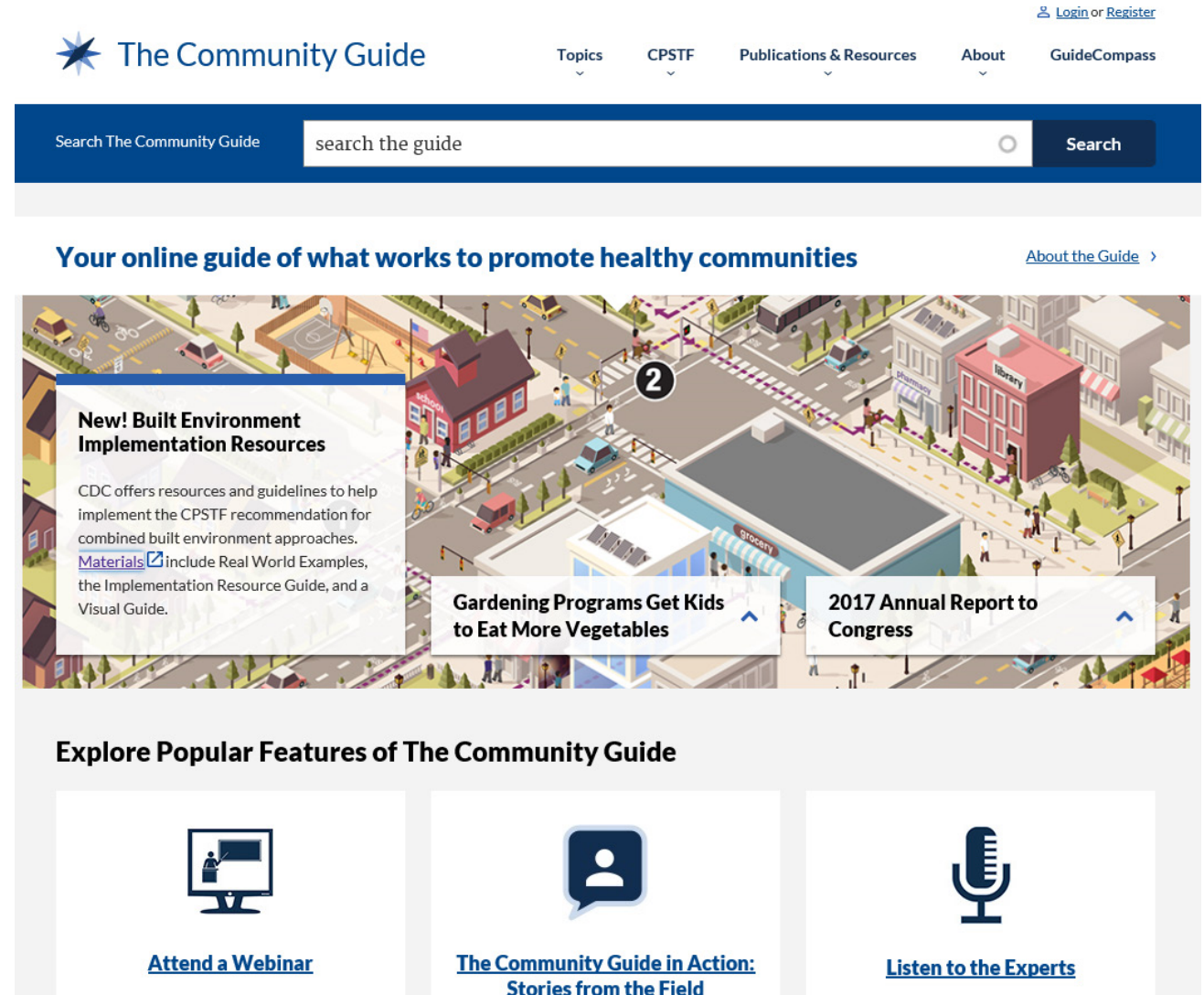
[PHS Act §399U(c)]

Webinar Agenda

- Community Guide (CG) and Community Preventive Services Task Force (CPSTF)
- Conceptual approach to an evidence-base for public health
- Methods in systematic reviews of population-based interventions
- Practice-based evidence in Community Guide reviews
- Systematic reviews on economic evidence
- Persistent challenges

The Guide to Community Preventive Services (The Community Guide)

- Systematic reviews of population-based interventions
 - Communities
 - Health care systems
- Methods for the broad consideration of evidence on effectiveness and other issues
- Reviews support the findings of the Community Preventive Services Task Force (CPSTF)



The screenshot shows the homepage of The Community Guide website. At the top, there is a navigation bar with the logo "The Community Guide" and links for "Topics", "CPSTF", "Publications & Resources", "About", and "GuideCompass". A "Login or Register" link is also present. Below the navigation bar is a search bar with the text "Search The Community Guide" and a "search the guide" input field, followed by a "Search" button. The main content area features a large banner with the text "Your online guide of what works to promote healthy communities" and a link "About the Guide". The banner includes an illustration of a city street scene with various buildings and people. Overlaid on the banner are three boxes: "New! Built Environment Implementation Resources" (with a link to CDC resources), "Gardening Programs Get Kids to Eat More Vegetables", and "2017 Annual Report to Congress". Below the banner is a section titled "Explore Popular Features of The Community Guide" with three icons: a webinar icon, a speech bubble icon, and a microphone icon. Each icon has a corresponding link: "Attend a Webinar", "The Community Guide in Action: Stories from the Field", and "Listen to the Experts".

[Login or Register](#)

The Community Guide

Topics CPSTF Publications & Resources About GuideCompass

Search The Community Guide search the guide Search

Your online guide of what works to promote healthy communities [About the Guide](#)

New! Built Environment Implementation Resources

CDC offers resources and guidelines to help implement the CPSTF recommendation for combined built environment approaches. [Materials](#) include Real World Examples, the Implementation Resource Guide, and a Visual Guide.

Gardening Programs Get Kids to Eat More Vegetables

2017 Annual Report to Congress

Explore Popular Features of The Community Guide

[Attend a Webinar](#)

[The Community Guide in Action: Stories from the Field](#)

[Listen to the Experts](#)

Community Preventive Services Task Force (CPSTF)

- Is an independent, nonfederal, unpaid panel of public health and prevention experts
- Oversees the systematic review process and development of methods
- Produces recommendations and identifies evidence gaps to help inform decision making

2018 Community Preventive Services Task Force

• Jonathan C. Fielding, MD, MPH, MBA	UCLA School of Public Health
• Robert L. Johnson, MD, FAAP	UMD-New Jersey Medical School
• Bruce N. Calonge, MD, MPH	Colorado Trust
• Douglas Campos-Outcalt, MD, MPA	Mercy Care Plan
• Marshall Chin, MD, MPH, FACP	University of Chicago
• Jamie F. Chriqui, PhD	University of Illinois
• John M. Clymer	Loma Linda University
• Ana V. Diez Roux, MD, PhD, MPH	Drexel University
• Ron Goetzel, PhD	Johns Hopkins University
• Shiriki Kumanyika, PhD, MPH	University of Pennsylvania
• Gilbert Omenn, MD, PHD	University of Michigan
• Alison Cuellar, PhD	George Mason University
• Patrick Remington, MD, MPH	University of Wisconsin
• Tista Shilpi Ghosh, MD, MPH	Colorado Dept. of Public Health
• Susan M. Swider, PhD, APHN-BC	Rush University

Topics with CPSTF Intervention Reviews and Recommendations (1996-2018)

Reviews Organized by Environment

Health equity (Determinants of Health)

Reviews by Risk Behavior

Alcohol abuse/misuse

Tobacco use

Poor nutrition

Physical inactivity

Unhealthy sexual behaviors

Cardiovascular disease prevention

Reviews Organized by Setting

Worksite health promotion

Special Projects

Health communication

Reviews by Specific Condition

Cancer

Oral Health

Mental health

Increasing Appropriate Vaccinations

Violence

Motor vehicle injuries

Diabetes

Reviews Organized by Life Stage

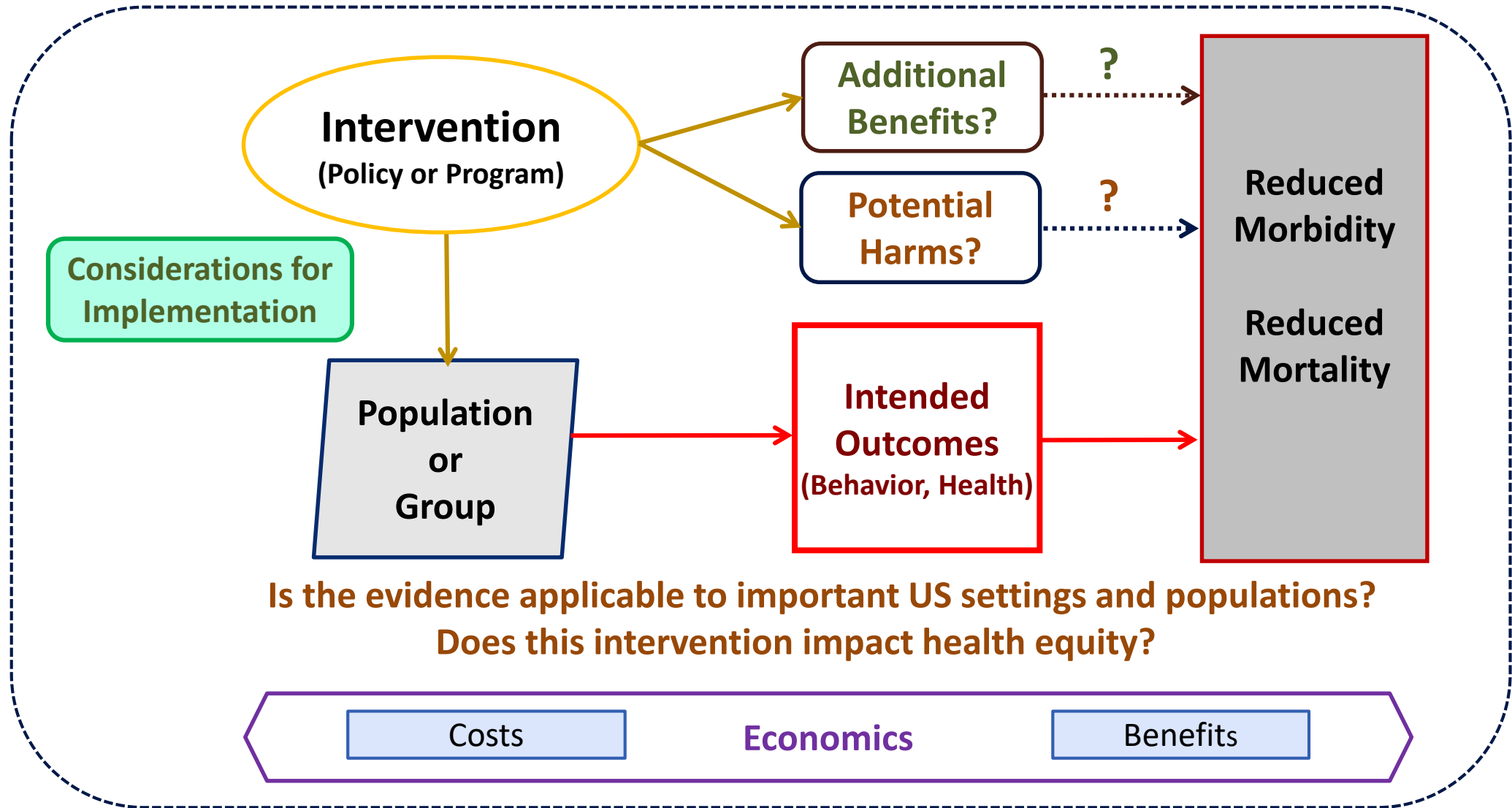
Adolescent health

Emergency preparedness

CPSTF Topic Priorities for New and Expanded Intervention Reviews (2015)

- Cardiovascular disease prevention and control
- Diabetes
- Increasing physical activity
- Obesity prevention and control
- Social determinants of health
- Violence prevention
- Mental health: Improving
- Independent living for older adults
- Injury prevention
- Environmental health (health equity)
- Sleep health
- Substance abuse

Issues Considered in Community Guide Reviews



CPSTF Goal: Providing Sets of Related Intervention Reviews and Findings

Health Equity: Education Programs and Policies	# Included Studies	CPSTF Finding
Center-based Early Childhood Education	49	Recommended-strong
Expanded In-School Learning Time	11	Insufficient Evidence
Full-Day Kindergarten Programs	55	Recommended-strong
High School Completion Programs	177	Recommended-strong (11 types)
School-Based Health Centers	46	Recommended-sufficient
Year-Round Schooling	29	Insufficient Evidence
Out-of-School-Time Academic Programs		
-Programs with minimal academic content	1	Insufficient Evidence
-General academic content	21	Recommended-sufficient
-Math-focused	5	Recommended-sufficient
-Reading-focused	23	Recommended-strong

U.S. Partners in Reviews and Recommendations

**Community Preventive
Services Task Force (CPSTF)**

Public Health Prevention Perspective

Smoke-free Policies

Mass Media Campaigns

Provider Reminder Systems

Quitlines

**U.S. Preventive Services
Task Force (USPSTF)**

Primary Care Prevention Perspective

Tobacco Smoking Cessation for Adults

“A” Recommendation

(Screening through treatment)

Complementary Preventive Services and Options

**Community Preventive
Services Task Force (CPSTF)**

**U.S. Preventive Services
Task Force (USPSTF)**

Public Health Prevention Perspective

Primary Care Prevention Perspective

Smoke-free Policies

Community-level
interventions

Mass Media Campaigns

System-level
interventions

Provider Reminder Systems

Community-level referable
preventive service

Quitlines

Screening, assessment and advice

Cessation counseling, medications

Community Guide Perspective on Public Health Interventions and Evidence on Effectiveness

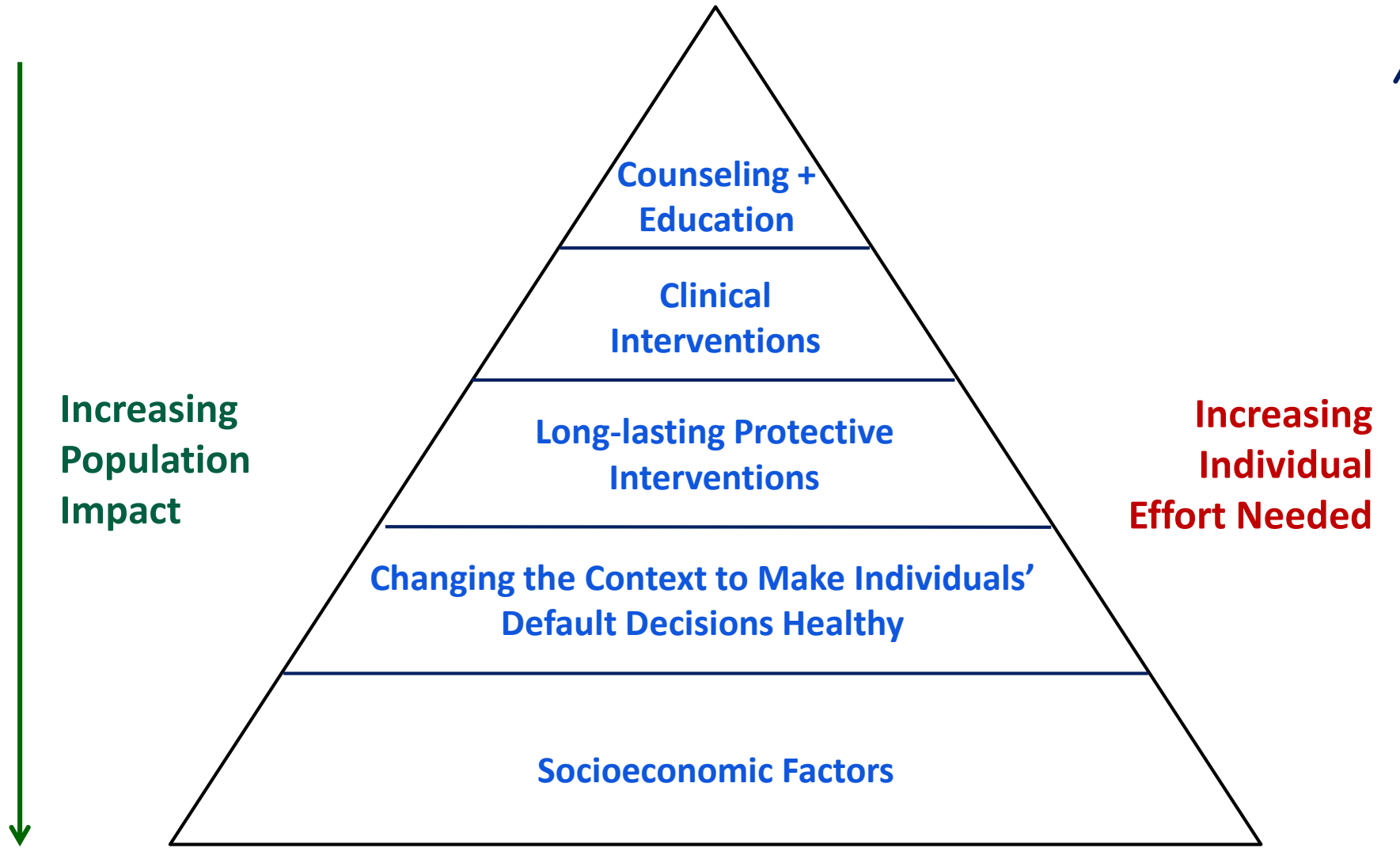
What Do Interventions to Improve Population Health Look Like?

- Programs, services, and policies
 - Implementation scale may be broad and variable
 - Often implemented opportunistically with available resources
- Interventions can be complicated
 - Multiple facets that vary across locations (components, settings, populations)
 - Often adapted to meet local needs and resources
 - Rarely implemented in isolation—several potential confounding factors to consider
 - Results may depend on context

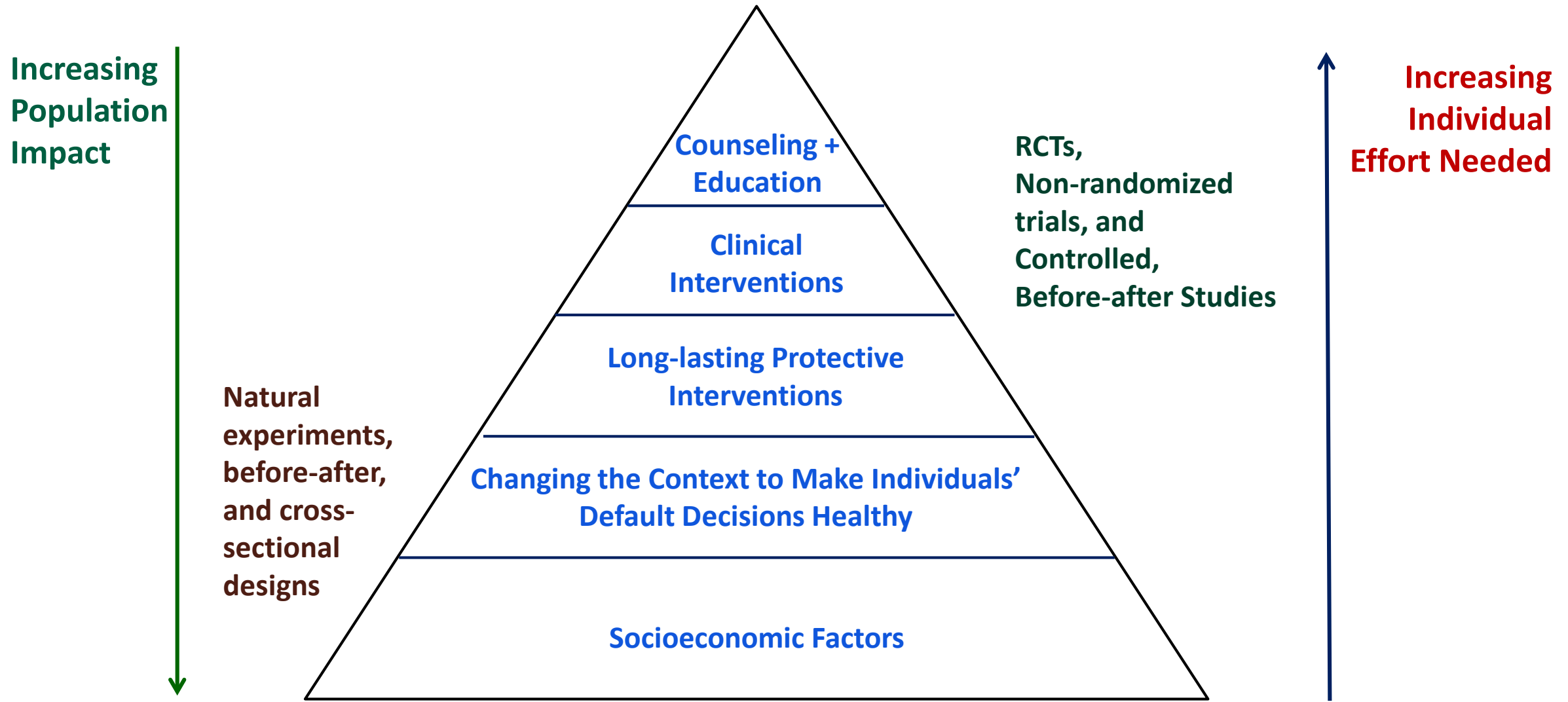
Critical Questions to Address About a Public Health Intervention

- Does it work?
- How well?
- For whom?
- Under what conditions?
- How does it influence health disparities?
- What is the cost?
- Does it provide value?
- What are important considerations for implementation?
- **Perspective:** Tentative answers to these questions are preferable to no answers.

Health Impact Pyramid: Importance of Population-based Approaches



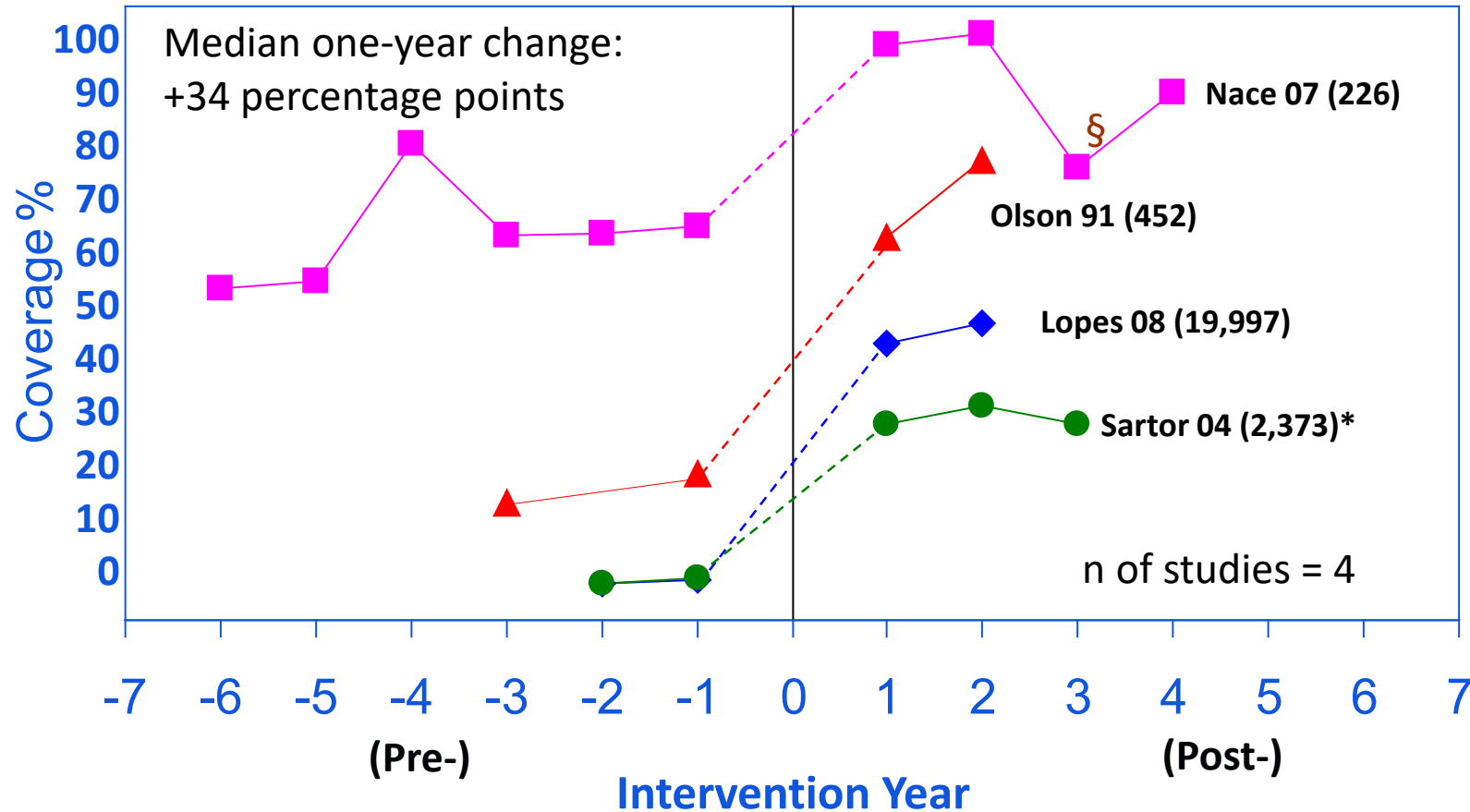
Evidence-base for Public Health Interventions



Rationale for Including a Range of Study Designs in CG Reviews

- Retains evidence potentially important for assessments of generalizability
- More information to consider for each of our research questions
 - “Lumped” effects
 - Effect modification
- Potential biases can be assessed
 - Empirically
 - By considering systematic sources of bias that may vary by study design
 - Triangulation

Observational Studies as Evidence on Effectiveness: Time-Series Studies of Worksite Influenza Vaccination Programs



*p < .05

§ Shortage year

Implications of A Broad Consideration of Evidence

- Most Community Guide (CG) reviews of population-based interventions will encounter mixed bodies of evidence requiring categorization and evaluation of subsets of studies
- Most CG reviews will not be candidates for meta-analyses
- CPSTF will be faced with challenging deliberations
 - How to weigh subsets of evidence?
 - What is a consistent (robust) demonstration of intervention effectiveness?
 - Are the magnitudes of effect meaningful?

Selected CG Methods Relevant in the Consideration of Evidence on Population-based Interventions

Steps in Systematic Intervention Reviews for the Community Guide

General Approach	Methods Steps in Community Guide Systematic Reviews
Experts help us to set up our systematic review	CPSTF works with partners to identify important topic areas for work
	Recruit Coordination team (Team) of partners and subject matter experts
	Team identifies important interventions to review within the topic
CG staff, with Team and CPSTF oversight, systematically identify and evaluate evidence on effectiveness and other important issues	Defines intervention, causal pathway, research questions, inclusion criteria, applicability
	Search literature (Included/excluded study designs based on Team/CPSTF decision)
	Assess relevance: screening
	Assess quality (both study design suitability and quality of execution)
	Analyze and summarize findings using simple summary effect measures
	Assess applicability to U.S. populations, settings, intervention characteristics
CPSTF uses the review as the basis for their guidance to the field	CPSTF translates the evidence into a conclusion and recommendation
	CG staff post, publish, and disseminate CPSTF findings and evidence gaps

CG Methods Step: Study Design Inclusion/Exclusion

- Exclusion of intervention evidence based on study design is an important, early scoping decision of the Coordination team and CPSTF
- Judgment is usually topic, intervention, or outcome-specific
 - For this topic/intervention, which study designs are stronger and weaker?
 - How well do they control for internal and external threats to validity?
 - What might be learned from comparing the findings of studies using different designs to evaluate the same community preventive service?

Common Team and CPSTF Deliberations on Inclusions by Study Design

CG Suitability of Study Design	Considered Study Design	Type of Intervention Review		
		Health System Intervention	Community Program	Policy Intervention
Greatest	RCT-individual	●	●	●
	RCT-Group	●	●	●
	Controlled Before-After	●	●	●
Moderate	Interrupted Time-Series	●	●	●
Least	Before-after	●	●	●
	Cross-sectional	●	●	●



Included



Included for some intervention reviews



Excluded

Community Guide Methods for Assessment of Study Quality

- Quality category-based assessment of threats to internal and external validity
- Assessment tool with basic judgment prompts
 - Coordination team input on review-specific modifications
 - Coordination team input on threshold decision rules
- Two evaluators with consensus resolution
- Overall quality assessment for each study
- Quality-based exclusions
- Category-specific assessments across the included studies

A Comparison of Study Quality Assessment Categories

Community Guide Study Quality Assessment Categories (category limitations: up to 9)
Description (1)
Sampling (1)
Measurement (2)
Data analysis (1)
Interpretation of Results (3)
Other (1)

Cochrane Risk of Bias Categories (Category assessment: high, low, unclear)
Random sequence generation
Allocation concealment
Blinding of participants and personnel
Incomplete outcome data
Selective reporting
Other sources of bias

Additional Differences

- Conduct-specific focus
- Sensitivity analyses/exclusions
- Outcome-specific assessments

Community Guide Systematic Review Body of Evidence Display

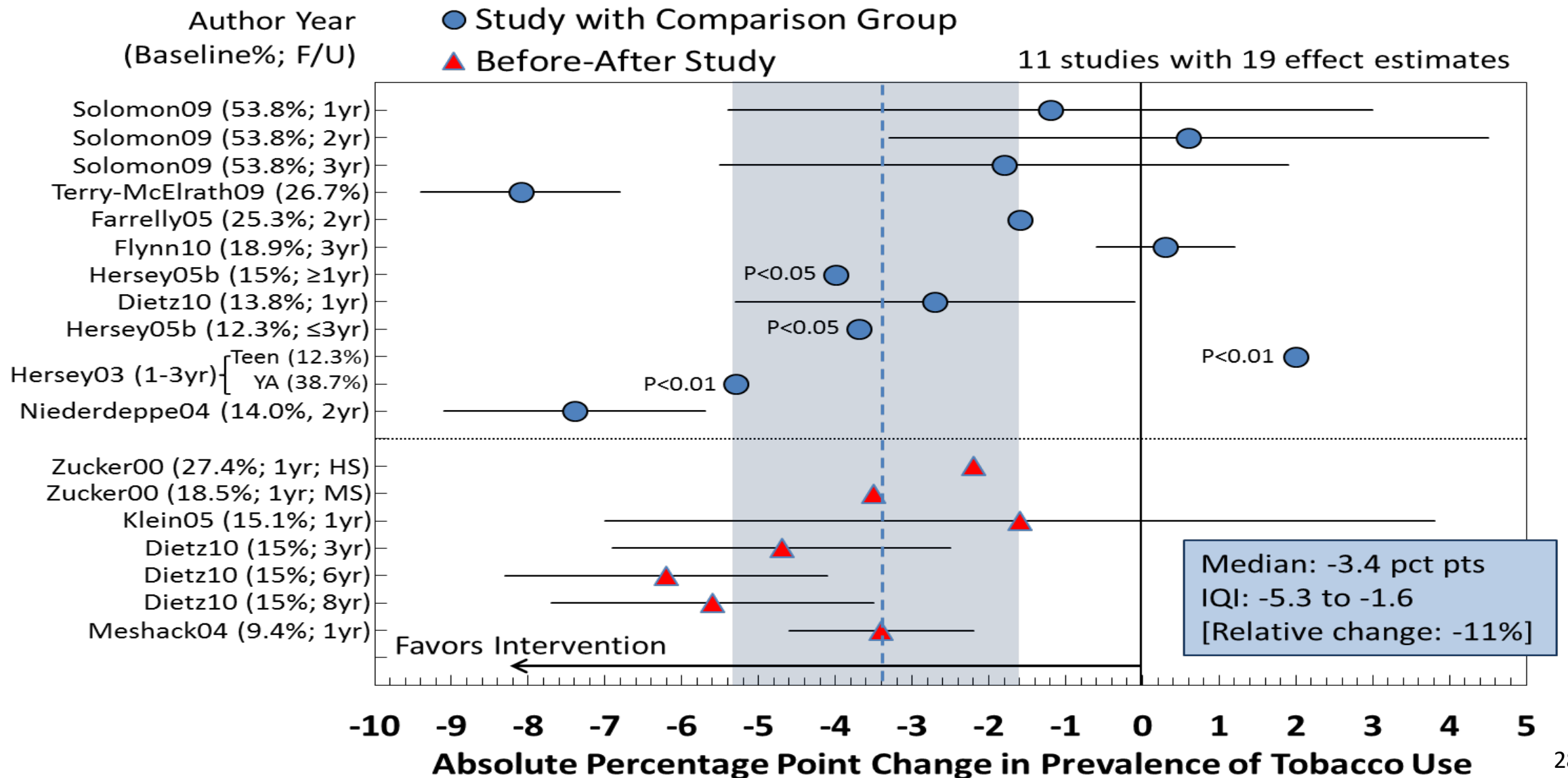
Quality of Execution	Suitability of Study Design		
	Greatest	Moderate*	Least*
Good (0-1 limitations)	2 studies	0 studies	0 studies
Fair (2-4 limitations)	3 studies	2 studies	12 studies
Limited (>4 limitations)	Excluded	Excluded	Excluded

* Study design exclusions are a review-specific Coordination team and CPSTF decision

<https://www.thecommunityguide.org/about/methods-ajpm-developing-guide.pdf>

Example of a Community Guide Review Summary Results Display:

Effectiveness of Mass-Reach Health Communication Interventions in Reducing Tobacco Use among Youth



CPSTF Strength of Evidence Assessment Table

CPSTF Rating for the Strength of Evidence on Effectiveness	Required <u>suitability</u> of study <u>design</u> within the included studies	Required <u>quality</u> of <u>execution</u> within the included studies	Required <u>number</u> of <u>studies</u> of that study design suitability and quality of execution	Overall assessment of the distribution of study results for the recommendation outcome or outcome pathway	Overall assessment of the (population) health impact based on findings from included studies for the recommendation outcome or outcome pathway
STRONG	Greatest	Good	2 or more	Consistent	Meaningful
	Moderate <u>or</u> a mix of Greatest and Moderate	Good	5 or more	Consistent	Meaningful
	Greatest	Fair <u>or</u> a mix of Fair and Good	5 or more	Consistent	Meaningful
	Included studies meet criteria for SUFFICIENT but not STRONG body of evidence, but magnitude of effect is substantial and supports UPGRADING the strength of the evidence supporting the CPSTF conclusion on effectiveness				LARGE
SUFFICIENT	Greatest	Good	1	NA	Meaningful
	Moderate <u>or</u> a mix of Greatest and Moderate	Fair <u>or</u> a mix of Fair and Good	3 or more	Consistent	Meaningful
	Least, <u>or</u> a mix of Least and higher	Fair <u>or</u> a mix of Fair and Good	5 or more	Consistent	Meaningful
	Included studies meet criteria for STRONG body of evidence, but CPSTF assessment finds one or more issues and therefore decides to DOWNGRADE the strength of the evidence to SUFFICIENT (see supplementary table)				
INSUFFICIENT (Identified evidence does not meet one or more criteria)	Identified evidence does not meet minimum requirements or combinations based on design suitability, quality of execution, or number of studies			<u>Or</u> overall assessment is that study findings are Inconsistent	<u>Or</u> overall assessment is that studies demonstrate Small or No Effects

Recommendation Outcome(s): Intervention-attributable outcomes which are 1) health or established as linked to health, and 2) identified by the CPSTF as outcomes on which the systematic review conclusion on effectiveness will be based

Community Guide Methods: Formal Consideration of Applicability

- Coordination team identifies important characteristics on applicability for inclusion in the review (abstraction, evaluation, stratified or subset analyses)
 - Settings of implementation
 - Target populations
 - Intervention components
- Coordination team makes a priori judgements on likely generalizability with respect to the factor in question

Example: Mass Media Campaigns to Reduce Tobacco Use

Category	Factor(s)	<i>a priori</i>	Considerations
Settings	- US/Non US - National/state/local	Probably applicable	Population-level responses to media messages may be similar
Population	- Age (youth/adults) - Gender - Race/ethnicity - SES	Unsure	Interventions implemented for different populations might have differential effectiveness
Intervention characteristics	-Stand-alone campaign -With other interventions -Comprehensive program	Probably applicable	Promotion content might be more important than implementer type
	- Intensity - Targeting - Content - Channel - Placement - Tagging	Unsure	These factors might influence intervention effectiveness

Potential Conclusions on Applicability

- Stratified subsets of included studies are examined for evidence of effectiveness on each characteristic and factor:
 - Are these interventions effective across all examined settings and population groups?
 - Are there gaps (settings or populations that were not examined)?
 - Should differences or gaps be identified in Task Force findings (beyond the call for additional research)?

- Available evidence is assessed for concordance with a priori expectations
 - Confidence in generalizability is a function of the priors and the empirical evidence
 - Initial judgment on importance can inform CPSTF decisions and placement of findings
 - Useful in the absence of evidence

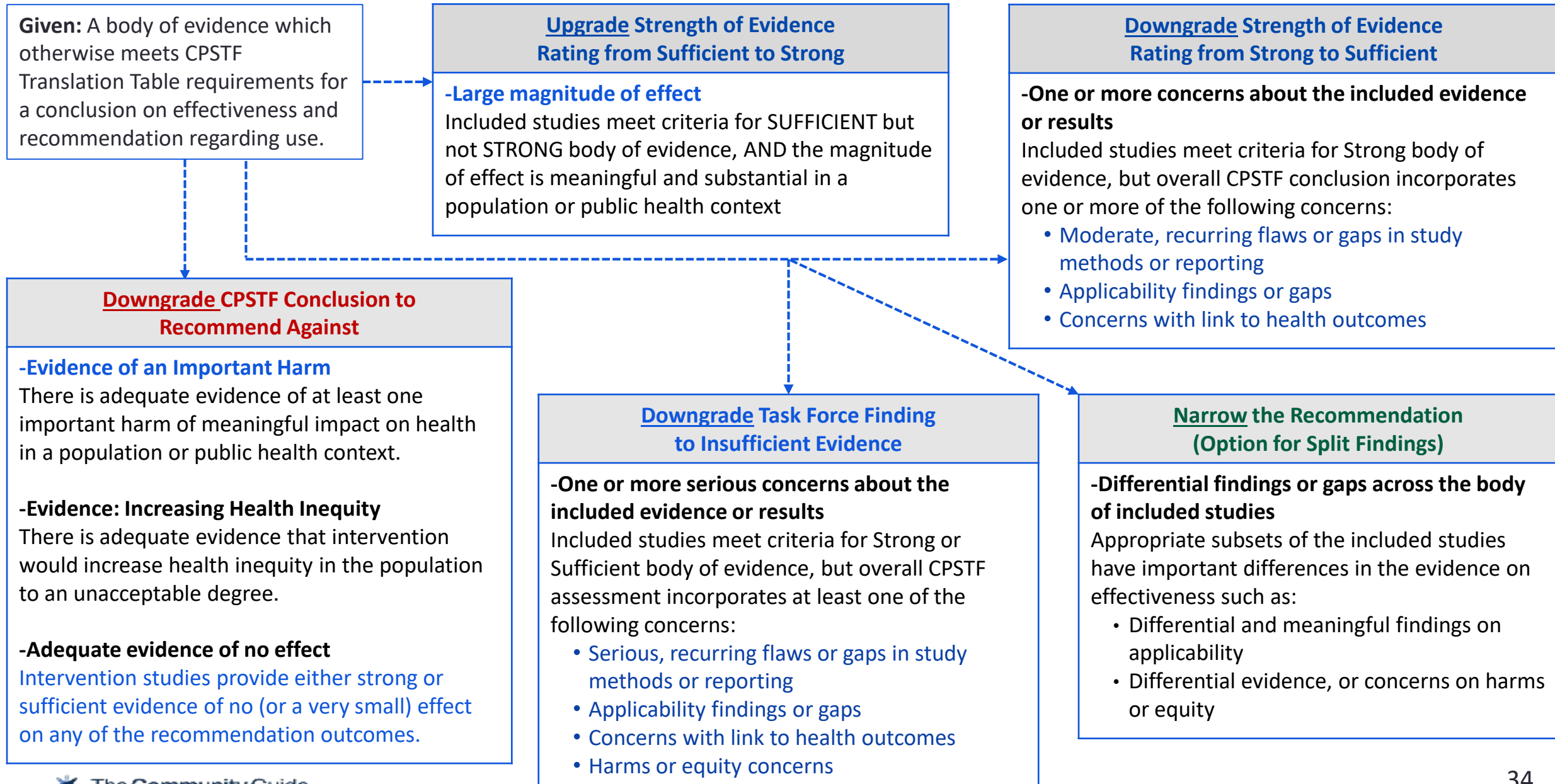
CPSTF Options Guidance Table for Findings on Applicability

A Priori Expectation for Factor (aspect within a factor)	Evidence Quality/Quantity	Similar Results Across Strata?	Potential Conclusions (Based on evidence + broader literature + Team/CPSTF deliberations)
Probably Applicable	Moderate or High	Consistent	Applicable
	Little or None	Consistent/Not applicable	Likely Applicable, with Evidence Gap, OR Evidence Gap, OR Split Finding
	Little	Inconsistent	Likely Applicable, with Evidence Gap, OR Evidence Gap, OR Split Finding
	Moderate	Inconsistent	Evidence Gap, OR Applicability Concerns, with Evidence Gap
	High	Inconsistent	Applicability Concerns, OR Split Finding
Probably Effect Modification	Moderate or High	Inconsistent	Applicability Concerns, OR Split Finding
	Little or None	Inconsistent/Not applicable	Applicability Concerns, OR Split Finding
	Little	Consistent	Applicability Concerns, with Evidence Gap, OR Evidence Gap, OR Split Finding
	Moderate	Consistent	Evidence Gap, OR Likely Applicable, with Evidence Gap
	High	Consistent	Applicable, OR Likely Applicable
Unsure	Moderate or High	Consistent	Applicable, OR Likely Applicable
	Little or None	Consistent/ Inconsistent/Not Applicable	Evidence Gap
	Moderate	Inconsistent	Applicability Concerns (effect modification)
	High	Inconsistent	Applicability Concerns, OR Split Finding

Example of Community Guide Review Findings on Applicability

Category	Factor(s)	Findings from Pertinent Studies	Assessment
Settings	<ul style="list-style-type: none"> - US/Non US - National/state/local 	<ul style="list-style-type: none"> - Majority US studies - Results comparable for national and state-based campaigns 	Applicable
Audience	<ul style="list-style-type: none"> - Age (youth/adults) - Gender - Race/ethnicity - SES 	<ul style="list-style-type: none"> - Effective for both youth and adults - Effectiveness demonstrated for many population groups 	Applicable
Intervention characteristics	<ul style="list-style-type: none"> -Stand-alone campaign -With other interventions -Comprehensive program 	Effective in all three situations	Applicable
	<ul style="list-style-type: none"> - Intensity - Targeting - Content - Channel - Placement - Tagging 	<ul style="list-style-type: none"> - Intensity directly associated with effectiveness - Channel: Most studies used TV ads - Tagging documented as effective in increasing use of cessation services 	Discuss findings in Rationale

CPSTF Options Table for Adjustments to Strength of Evidence Conclusions



CPSTF Systematic Review Findings (n=234; 2001-2017)

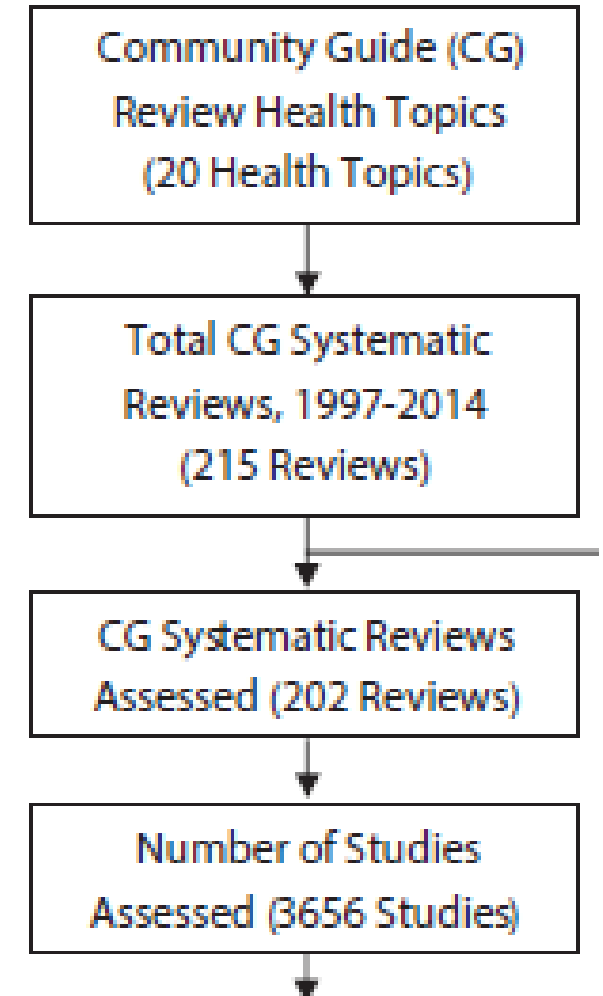
CPSTF Finding and Strength of the Supporting Evidence	Number of Findings (%)	Comments
Recommended based on <u>Strong</u> Evidence on Effectiveness	86 (37%)	Evidence of effectiveness driven by studies with comparative designs
Recommended based on <u>Sufficient</u> Evidence on Effectiveness	54 (23%)	Evidence of effectiveness driven by findings from observational studies
Insufficient Evidence	92 (39%)	#1: Not enough studies #2: Inconsistent effects
Recommended-against use	2 (1%)	Sufficient evidence of harms (1) and unfavorable direction of primary outcome (2).

Practice-based Evidence in Community Guide Systematic Reviews

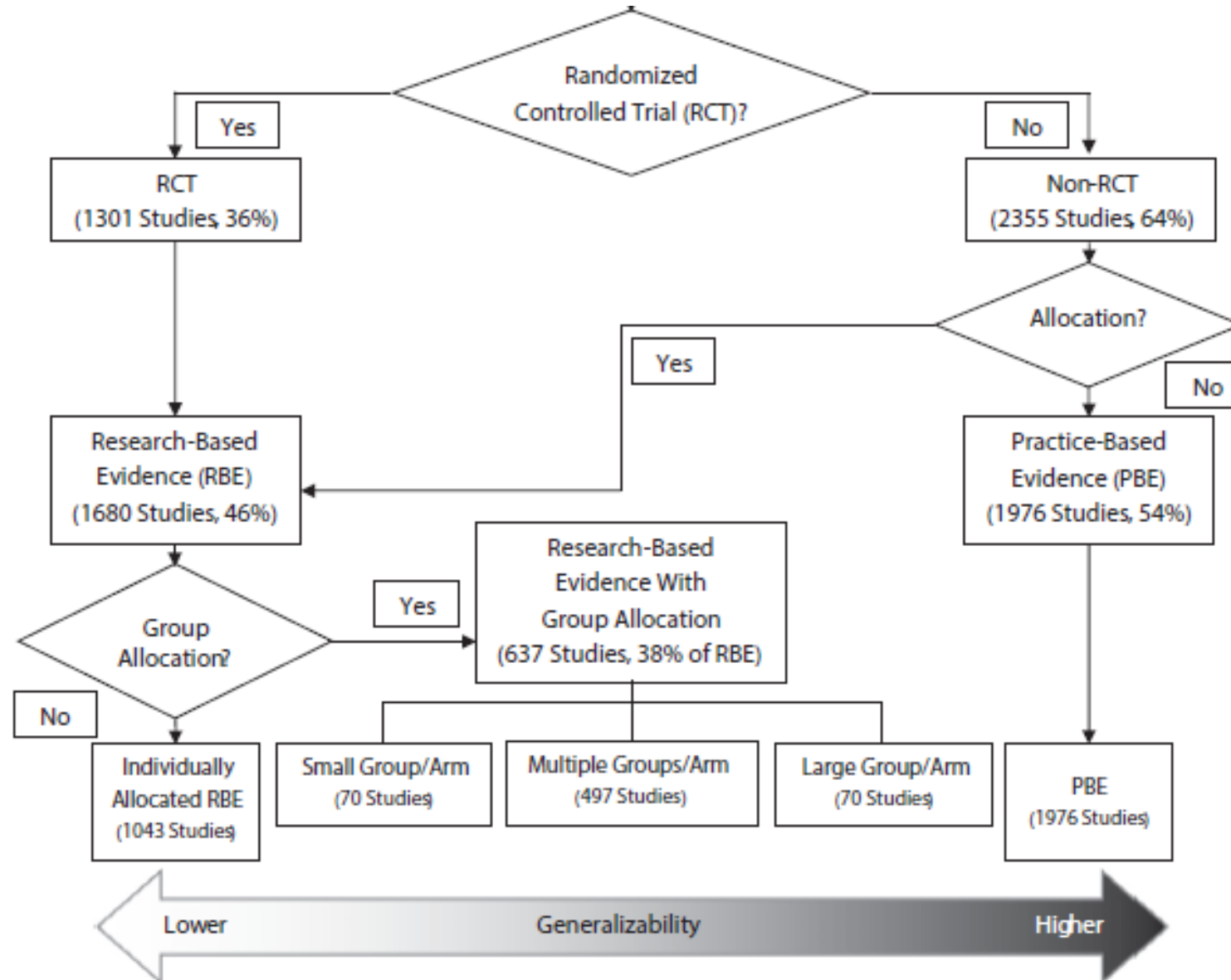
Study: Practice-based Evidence in Community Guide Reviews

■ Research Goals

- Develop operational definitions of practice-based (PBE) and research-based evidence (RBE)
- Determine the relative contributions of evidence types within and across CG topics and reviews
- Characterize differences in evidence by
 - Study design
 - Intervention type
 - Setting
 - Study location
 - Study quality of execution



Evidence Categorization Process and Results



Distribution of Evidence for Selected Community Guide Topic Areas

CG Topic	# Reviews	# Intervention Studies	% Practice-based Evidence (#)	% RBE-Group (#)	% RBE-Ind. (#)
Alcohol	10	218	79% (173)	5% (11)	16% (34)
Tobacco Use	21	550	61% (337)	12% (66)	27% (147)
Health Equity	11	185	61% (112)	5% (10)	34% (63)
Violence	23	147	52% (76)	20% (29)	29% (42)
Physical Activity	14	147	48% (71)	28% (41)	24% (35)
Mental Health	5	121	33% (40)	19% (23)	48% (58)
Obesity	12	73	23% (17)	22% (16)	55% (40)
Cancer	37	397	21% (85)	28% (111)	51% (201)
Totals (all 20 topics)	202	3656	54% (1976)	17% (637)	29% (1043)

Adapted from Table 2: Vaidya N, Thota AB, Proia KK, Jamieson S, et al. Practice-Based Evidence in Community Guide Systematic Reviews. Am J Public Health 2017; 107: 413-420.

Characteristics of Studies by Type in Community Guide Intervention Reviews

Characteristic	Research-based Evidence # Studies (%)	Practice-based Evidence # Studies (%)	Total
Intervention Type			
Program	1588 (58%)	1166 (42%)	2754
Policy	27 (4%)	692 (96%)	719
Program + Policy	65 (36%)	118 (64%)	183
Setting			
Health care	645 (64%)	365 (36%)	1010
Worksite	112 (46%)	129 (54%)	241
Community	725 (34%)	1403 (66%)	2128
Health care + community	198 (71%)	79 (29%)	277
Suitability of Study Design (CG)			
Greatest	1632 (71%)	655 (29%)	2287
Moderate	16 (4%)	424 (96%)	440 (12%)
Least	32 (3%)	897 (97%)	929 (25%)

Systematic Reviews of Economic Evidence


Process Steps in the Systematic Consideration of Economic Evidence

- **Prioritization**
 - Scope
 - Search for evidence
 - Abstraction and evaluation
 - Synthesis of findings
 - Conclusions on economics
- Economic projects prioritized by CPSTF for selected effectiveness reviews
 - CG economics team conducts review with oversight from CPSTF and effectiveness coordination team

Process Steps in the Systematic Consideration of Economic Evidence

- Prioritization
 - **Scope** 
 - Search for evidence
 - Abstraction and evaluation
 - Synthesis of findings
 - Conclusions on economics
- Adopts scope of effectiveness review
 - Evidence from World Bank designated High-income countries
 - Societal perspective

Process Steps in the Systematic Consideration of Economic Evidence

- Prioritization
 - Scope
 - **Search for evidence** 
 - Abstraction and evaluation
 - Synthesis of findings
 - Conclusions on economics
- Dedicated search for economic evidence
 - Adopts search strategy/terms from the effectiveness review. Adds economic keywords
 - Search expanded to include economic relevant databases
 - Includes evidence identified in the effectiveness review

Process Steps in the Systematic Consideration of Economic Evidence

- Prioritization
- Scope
- Search for evidence
- **Abstraction** and evaluation
- Synthesis of findings
- Conclusions on economics

Abstraction of economic evidence

- Intervention
 - Components and component costs
- System-related expenditures
 - Components and component costs
- Outcomes
 - Outcome-attributable costs
 - Outcome-attributable benefits

Process Steps in the Systematic Consideration of Economic Evidence

- Prioritization
- Scope
- Search for evidence
- Abstraction and **evaluation**
- Synthesis of findings
- Conclusions on economics

Evaluation of economic evidence

- Components driving cost, expenditures, benefits identified
 - Intervention costs
 - Expenditures
 - Outcome costs/benefits
- Quality evaluated for each estimate based on inclusion/absence of drivers
 - Completeness of capture

Process Steps in the Systematic Consideration of Economic Evidence

- Prioritization
 - Scope
 - Search for evidence
 - Abstraction and evaluation
 - **Synthesis of findings**
 - Conclusions on economics
-
- Standardized estimates after adjustment
 - Intervention duration; population size
 - Inflation (CPI)
 - US dollars
 - Evidence categorized
 - Intervention cost estimates (median; IQI)
 - System expenditures (median; IQI)
 - Cost-effectiveness estimates (median; IQI)
 - Net benefit/benefit to cost ratios

Process Steps in the Systematic Consideration of Economic Evidence

- Prioritization
- Scope
- Search for evidence
- Abstraction and evaluation
- Synthesis of findings
- **Conclusions on economics**

QALY, quality-adjusted life year;
DALY, disability-adjusted life year

- CPSTF reporting on
 - Intervention costs
 - Comparison of intervention costs to change in system expenditures (+/- productivity)
- CPSTF **findings** on cost-effectiveness
 - Two or more good quality study estimates
 - QALY saved < \$50,000
 - DALY averted < per capita income
- CPSTF **findings** on net benefit/benefit-cost ratio
 - Two or more good quality study estimates
 - Positive Net benefit
 - Benefit-cost ratio >1

Persistent Challenges

Areas for Current and Future Work

- CPSTF member turnover brings new perspectives
- Expanding literature base
 - Search and screen
- Relevant, published systematic reviews
- Minimizing overlap with USPSTF recommendations
 - Primary-care referable services

Thank You!

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Division of Public Health Information Dissemination (DPHID)
Center for Surveillance, Epidemiology, and Laboratory Services



Discussion

Additional Slides

Key References for this Presentation

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Legislative Requirements of the CPSTF

- Develop new topic areas for evidence-based recommendations
- Update existing Community Guide systematic reviews every 5 years
- Integrate federal government health objectives and targets for health improvement
- Enhance dissemination of CPSTF recommendations
- Provide technical assistance to agencies and organizations implementing recommendations
- Provide annual reports to Congress and related agencies, identify research gaps, and recommend priority areas for further examination
- Collaborate with the U.S. Preventive Services Task Force and the Advisory Committee on Immunization Practices, and examine how each task force's recommendations interact at the nexus of clinic and community

CG Methods: Study Quality of Execution Assessment Framework

Domain	Potential Reasons for Limitations	Maximum Limitations
Description	<ul style="list-style-type: none"> Was the study population well described? Was the intervention well described? What was done? When it was done? How it was done? Where it was done? How was it targeted to the study population? 	1
Sampling	<ul style="list-style-type: none"> Was the sampling frame/universe adequately described? Were the inclusion and exclusion criteria clearly specified? Was the unit of analysis the entire eligible population or a probability sample at the point of observation? 	1
Measurement	<ul style="list-style-type: none"> Were outcome measures valid and reliable? Was exposure to the intervention assessed? If yes, were these exposure measures valid and reliable? 	2

Quality of Execution Assessment Framework (continued)

Domain	Potential Reasons for Limitations	Maximum Limitations
Data Analysis	<ul style="list-style-type: none"> • Appropriate statistical testing conducted? • Reporting of analytic methods and tests? • Appropriate controlling for design/outcome/population factors? • Other issues with data analysis 	1
Interpretation of Results	<ul style="list-style-type: none"> • >80% completion rate? Data set complete? • Study groups comparable at baseline? If not, was confounding controlled before examination of intervention effectiveness? • Biases that might influence the interpretation of results including other events/interventions that might have occurred at the same time. 	3
Other	<ul style="list-style-type: none"> • Other biases or concerns not included in the previous domains (e.g., evidence of selective reporting) 	1

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