

# A Roadmap for Developing a Public Health Research Portfolio Evaluation Program: Panel Overview

Presented at the 2007 American Evaluation Association  
Conference  
November 10, 2007

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Centers for Disease Control and Prevention  
Atlanta, GA



# Panel Presentations

- *Methodology Used to Develop a Research Evaluation Program*, Wagner et al.
- *MEDLINE Search Strategies vs. Relevant Retrieval: How Closely Do They Match for a Research Evaluation Topic?*, Pepper et al.
- *Evaluating Public Health Research: Information from the Literature*, Wang et al.
- *Payback: Achieving Health Impact from Investments in Public Health Research*, Woollery et al.



# Methodology Used to Develop a Research Evaluation Program

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# Overview

- Context
  - CDC vision and mission
  - External forces on public health and CDC response
    - CDC strategic plan, CDC Health Protection Goals
- Agency-wide research portfolio assessment program
  - Program office description
  - Program mission, guiding principles, and strategic priorities
  - Program highlights
  - Program new directions



# CDC Vision and Mission

- Vision: Healthy People in a Healthy World — Through Prevention
- Mission: To promote health and quality of life by preventing and controlling disease, injury, and disability



# Why Change? Many External Forces on Public Health ...

Human Genome

Emerging Public Health  
Threats

**Globalization**

**Health Disparities**

Changing Demographics

**Rising Health  
Care Costs**

**Information Technology**

**Aging Workforce**

**Public Health Infrastructure**



# CDC Actions

- New strategic plan
- New strategic imperatives
- New CDC Health Protection Goals
- New organizational excellence performance measures
- New organizational structure



# CDC Overarching Health Protection Goals

**Healthy  
People  
in Every  
Stage of Life**



**Healthy  
People  
in Healthy  
Places**



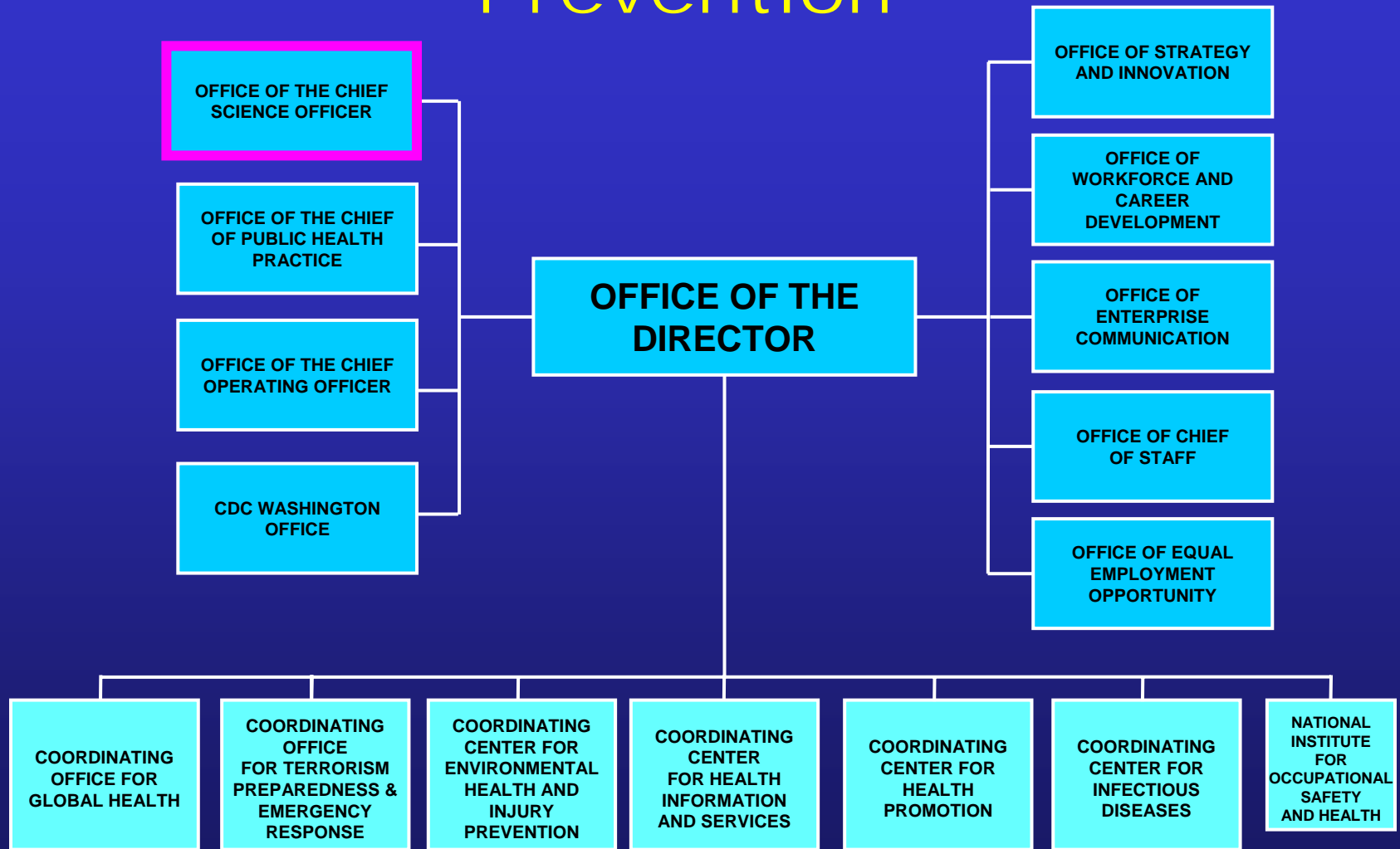
**People  
Prepared  
for Emerging  
Health  
Threats**

**Healthy  
People  
in a Healthy  
World**

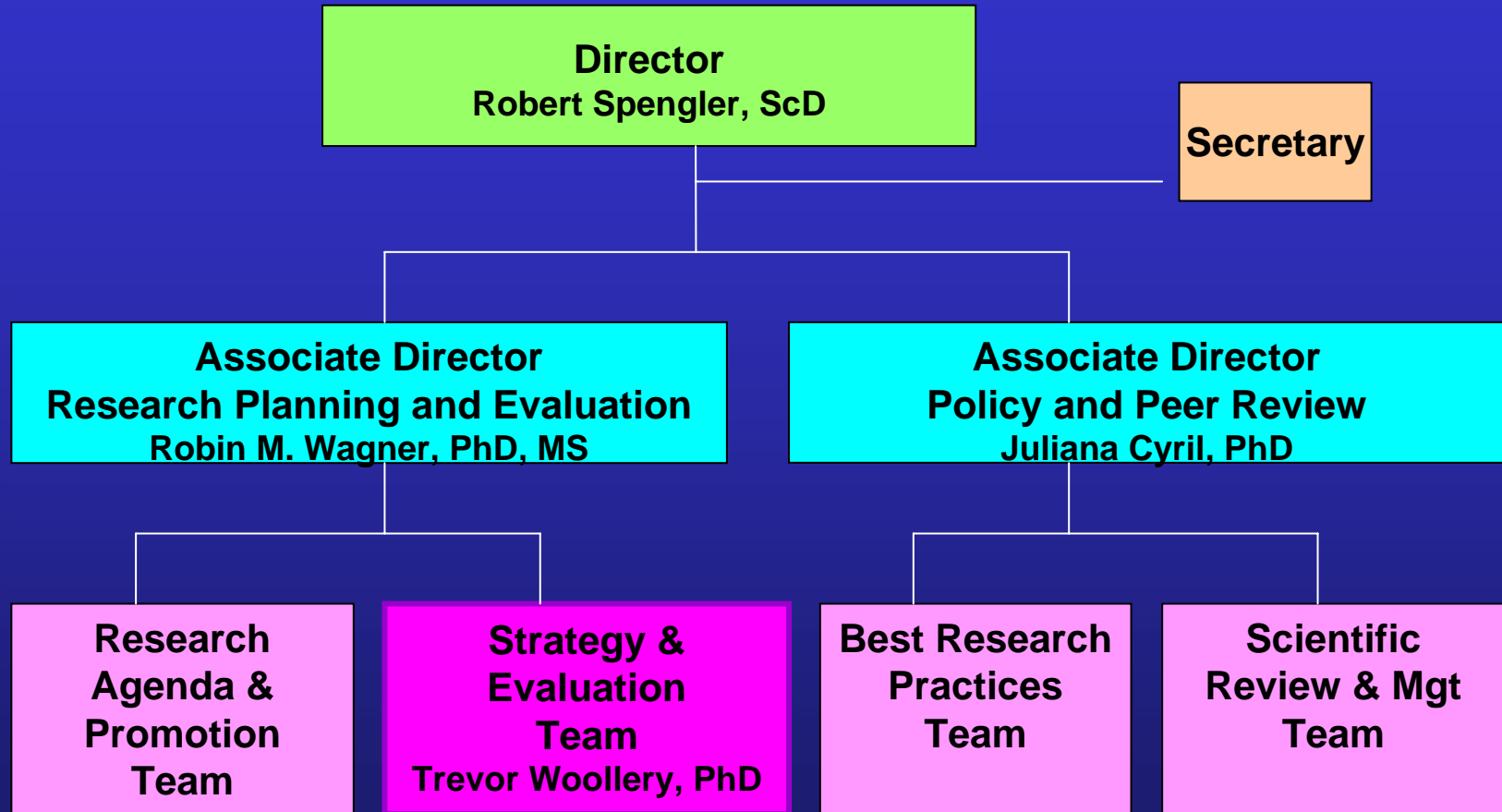




# Centers for Disease Control and Prevention



# Office of Public Health Research (OPHR)



# Mission of OPHR Strategy and Evaluation Team (SET)

To evaluate and monitor CDC's *overall research portfolio progress* towards meeting CDC's Health Protection Goals and the CDC-wide goals-driven research agenda *in order for CDC to*

- Maximize and report on health impact
- Achieve organizational excellence
- Showcase CDC science and research
- Provide high quality, credible data and results
- Be accountable for resources and results

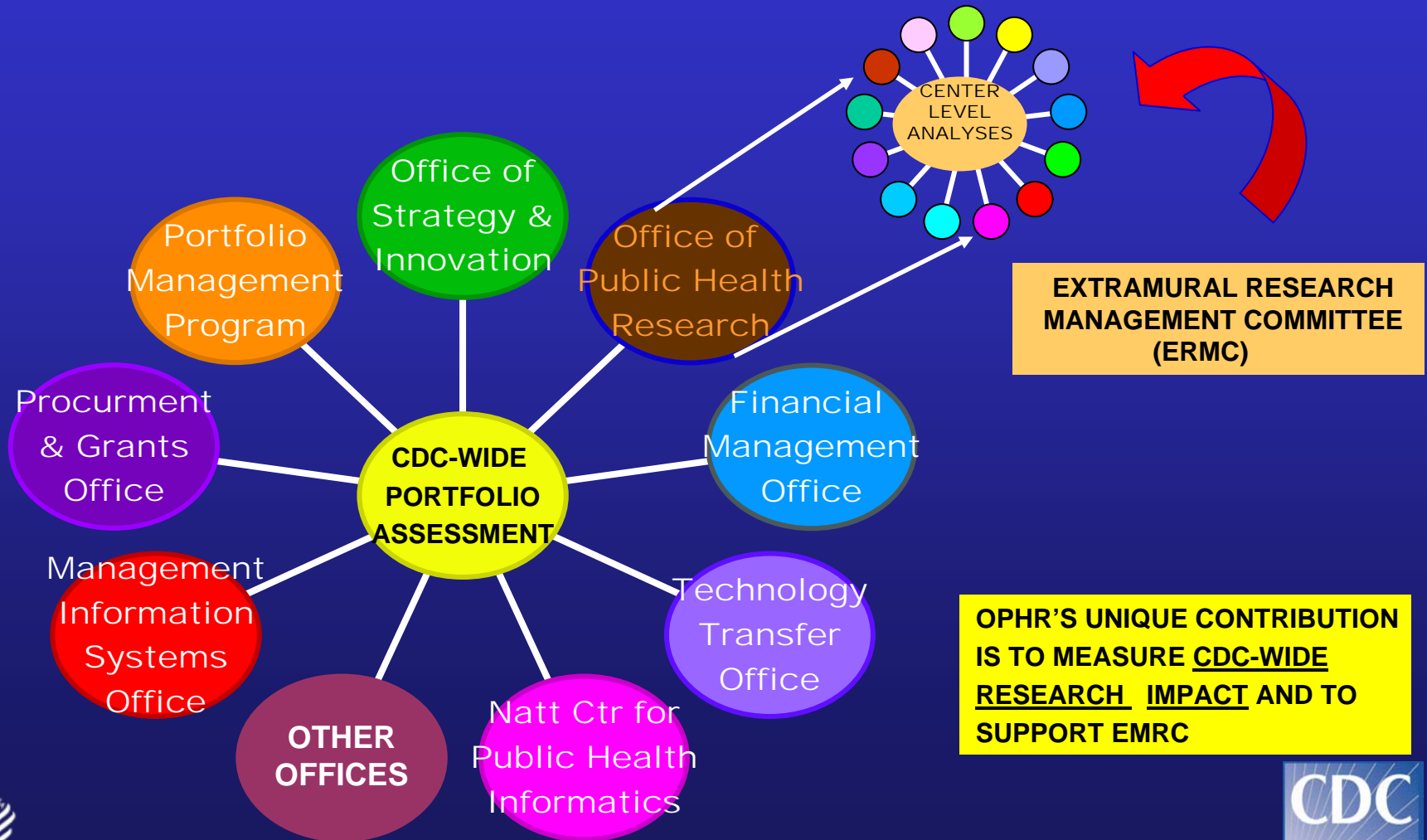


# OPHR's Research Portfolio Approach: 3 Guiding Principles

1. Supports CDC's needs, Health Protection Goals, and organizational excellence measures
2. Employs best available practices gleaned from the research evaluation scientific literature
3. Applies tested and evolving strategies and models used successfully by research portfolio practitioners from other federal agencies and governments



# OPHR Collaborates with Other CDC Offices Engaged in Portfolio Assessment



# Lessons Gleaned from Literature

- Conclusions
  - Minimal scholarship exists on evaluation of health research investments and even less on public health research investments
  - Bibliometric analyses are a commonly used method but they can't show how research knowledge is ultimately translated into impact
  - Newer approaches show multiple downstream benefits of research investments (e.g., Payback model)
- There is a need for advances in theory and practice to assess impacts of public health research investments



# Lessons Gleaned from Practitioners

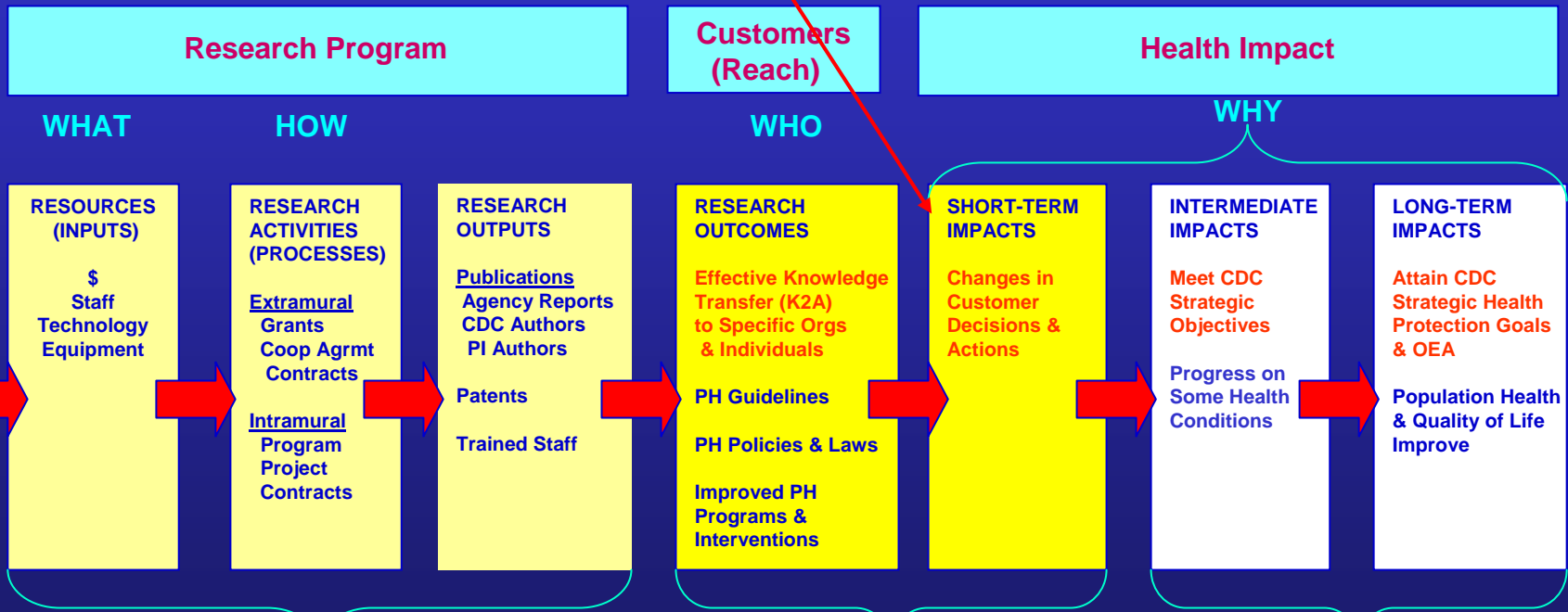
- Research portfolio assessment practitioners from other federal agencies and governments are an invaluable resource
  - American Evaluation Association Topical Interest Group on Research Technology and Development Evaluation
  - Washington Research Evaluation Network
- Most other federal agencies involved in research portfolio assessment use a common evaluation logic model or variant



# Logic Model for Communicating About CDC Research Progress and Impacts

CDC Programs Can Be Accountable for **Research** Contributions that Strengthen Health Decisions & Enable Customers to Achieve Short-Term Outcomes

CDC GOALS & OEA PRIORITIES/ SOCIAL FORCES



*Program Managers Have Direct Control*

*Program Managers Have Direct Influence*

*Agencies Have Indirect Impact*



**EXTERNAL INFLUENCES**





# Four Related Strategic Priorities

*To assess our research portfolio investments\* we must*

1. Strengthen data systems used to analyze research investments
2. Develop and apply knowledge management strategies to better characterize our research investments and impacts

*To demonstrate our research portfolio's value and attainment of Goals we must*

3. Develop or adopt methods to show how CDC research leads to improved health impact
4. Promote CDC research activities and impacts through publications, presentations and service to other offices and partners

\*\$, staff, technology, equipment → public health interventions



# Program Activity Highlights

Strategic Priority 1. Strengthen data systems used to analyze research investments

- Provide guidance and technical assistance to CDC Health Impact Planning Initiative and its new agency-wide portfolio database, HealthImpact.Net
- Work with other CDC offices to improve quality and utility of data in centralized systems used by staff across the agency



# Program Activity Highlights

Strategic Priority 2. Develop and apply knowledge management strategies to better characterize our research investments and impacts

- Improve search strategies to retrieve relevant knowledge (Pepper et al.)
- Increase access to public health indexing vocabulary
- Explore knowledge management tools to better classify portfolio



# Program Activity Highlights (cont'd)

Strategic Priority 3. Develop or adopt methods to show how CDC research leads to improved health impact

- Conduct literature review on health research evaluation methods (Wang et al.)
- Improve an established economic model (Payback) for measuring net research benefits (Woollery et al.)
- Do trend analysis of # of research papers using data from CDC surveillance system (BRFSS)
- Analyze contributions of CDC research to development of a public health recommendations (Araujo et al.)



# Program Activity Highlights (cont'd)

Strategic Priority 4. Promote CDC research activities and impacts through publications, presentations

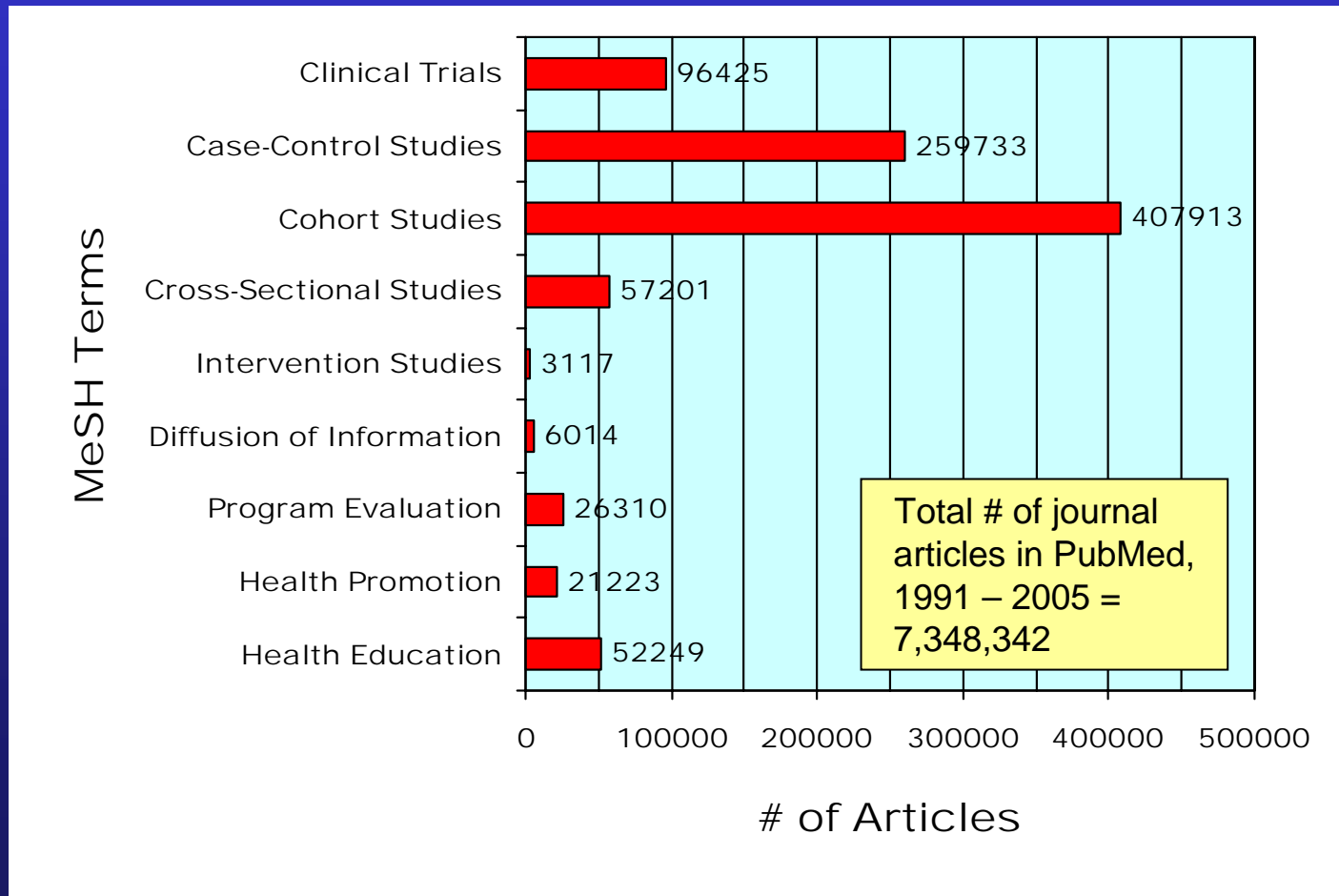
- CDC Research Profile, Fiscal Year 2005
- Numerous presentations and posters at scientific meetings on research evaluation and health impact
- Planned journal articles from completed work



# Bibliography

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# Scope of Public Health Articles For Literature Review



# Program Activity Highlights (cont'd)

Strategic Priority 4. Promote CDC research activities and impacts through service to other offices and partners

- Majority of service to date provided to other CDC offices
- Service to external partners will be a focus of future efforts





# New Program Directions

- Program strategic directions and activities were reviewed by CDC panel held June 20, 2007
- Increase emphasis on public health impact of research
- Modify annual “Research Profile”
  - Highlight recent CDC research and science accomplishments and impact, with less emphasis on portfolio statistics
  - Include profiles of prominent CDC researchers
  - Useful for promoting CDC research
  - Complement formal research evaluation activities
  - Diverse target audience: Public, policy makers, media, external partners and CDC staff



# New Directions (cont'd)

- Increase program visibility within and outside of CDC
- Increase technical assistance to CDC National Centers, Institute and Offices in evaluation of their own research portfolios
- Provide technical assistance to external partners as resources permit
- Continue agency-wide research evaluation with greater consultation of internal and external stakeholders
- Leverage resources more effectively, e.g., consult on data quality issues to other parts of CDC who have primary responsibility for these data systems



# Conclusion



- Research portfolio assessment is essential to achieving organizational excellence, measuring health impact, and attaining CDC's Health Protection Goals
- Being integrated with internal and external stakeholders key to success

*Thank you!*



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