# Interpreting Scientific Research and Moving it to Practice:

# Can We Do Better?

## The State of the Art

- Better health often results from programs and policies
- Harnessing the best available science to improve health is a centuries-old public health tradition
- Widespread support for the idea that research evidence should inform practice and policy

## But We're Not Doing As Well As We Might

The US probably spends billions of tax dollars on research and more than a trillion dollars on service delivery

Kerner et al.
*Health Psychology*
September 2005

It takes 17 years to turn 14% of original research to the benefit of patient care.

Andrew Balas

## Key Questions for Policy Makers

- How important is the problem?
- What are my options?
- How well do they work?
- Will my constituents accept them?
- Can we afford it?

## All Information Isn't Necessarily Equal

## Reliable Information Helps

- Who participated in gathering/interpreting information?
  - Understandable Process?
  - Well qualified?
  - Freedom from conflict of interest?

Adapted from Fielding and Briss, Health Affairs, July 2006

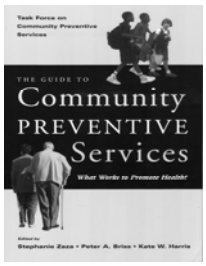
## Reliable Information Helps

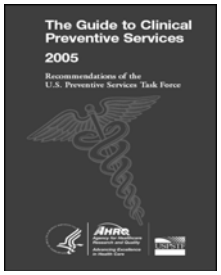
- What evidence was considered?
  - Studies vs. opinion/anecdote?
  - Good quality studies?
  - Multiple studies?
  - "The whole truth vs. only part of the truth?"
- How were results summarized and translated into conclusions?

Adapted from Fielding and Briss, Health Affairs, July 2006

## All Information Isn't Necessarily Equal (reprise)

## Rigorously Produced Resources are Increasingly Available



## Thoughts About Interpreting/Using Evidence-based Information In context

## You're Still Going To Have To Make The Tradeoffs And Judgment Calls

- Importance of problem?
- What are my options?
- Do they work?
- Are they acceptable?
- Can we afford it?

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## Better Scientific Information Sometimes Leads to Increased Use of Effective Programs and Policies

- Tobacco Control
- Injury Prevention
- Etc.

## Better Scientific Information Has Not Always Led To Substitution Of More Effective For Less Effective Choices.

- Most common school health program (DARE-Drug Abuse Resistance Education) pretty clearly doesn't change drug use behaviors.

## What to do with Evidence Gaps?

- Lack of evidence means we can't assess whether interventions do or don't work
- Interventions for which evidence is insufficient should be more thoroughly researched

"It is what we know already that often prevents us from learning"
Claude Bernard

## Things To Consider When The Evidence Is Spotty

- Insufficient evidence gives you lots of flexibility
  - Is action needed now (or should resources be directed to areas where answers are available)?
  - Are there better documented alternatives for reaching similar goals?
  - If not, what are potential benefits, harms and costs?
  - When action is taken, assure that goals are achieved (or make adjustments as you go).

## Still Much Room for Improvement In Translation

- What information is useful for and used in decision making and how best to provide it?
- What is the relative importance of scientific evidence in shaping decisions among policymakers?
  - How can the role of evidence be moved higher on the list?
- How to speed up dissemination and adoption
- How to tailor dissemination strategies

Briss et al, Annual Reviews of Public Health, 2004

- In an ideal society, all public health policies would be based on a plethora of sound scientific evidence and would achieve maximum health impact, impose no risk on individuals, and be cost saving. In the real world, these conditions never exist. Nevertheless, translating good science into policy can be one of the most rewarding aspects of working in the field of public health. And it has happened often enough to allow us to make great strides in improving public health over the last century.

Dixie Snider, CDC