

You Know What the Problem
Is....Now What???



How Evidence-Based Public Health Practice Can Help

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Module #5 (May)

Empowering Communities Through Access to Information & Training

Presentation Aims

- Introduce concept of Evidence Based Public Health Practice (EBPHP)
- Provide an overview of the steps of EPBPH
- Provide tools to assist in using EBPHP

Presentation Roadmap

- Definition
- Characteristics
- Importance
- Step-by-step process
- Manchester case study
- Source and resources

Definition

- Evidence-Based
 - Previous research results demonstrate effectiveness
- Public Health (PH)
 - Focuses on the health of an entire population.
- Practice
 - A policy or program to address an issue (called an “interventions” in PH lingo)

Definition

Evidence-Based Public Health Practice

The process of developing, implementing, and evaluating proven programs or policies to positively impact the health of a defined population.

Characteristics

- Relies on multiple disciplines
 - Ex. Behavior sciences, Epidemiology, Community Health
- Problem defined & described using data
- Selected solution to problem is:
 - Based on sound theory
 - Demonstrated effective
 - Implemented and evaluated

Importance

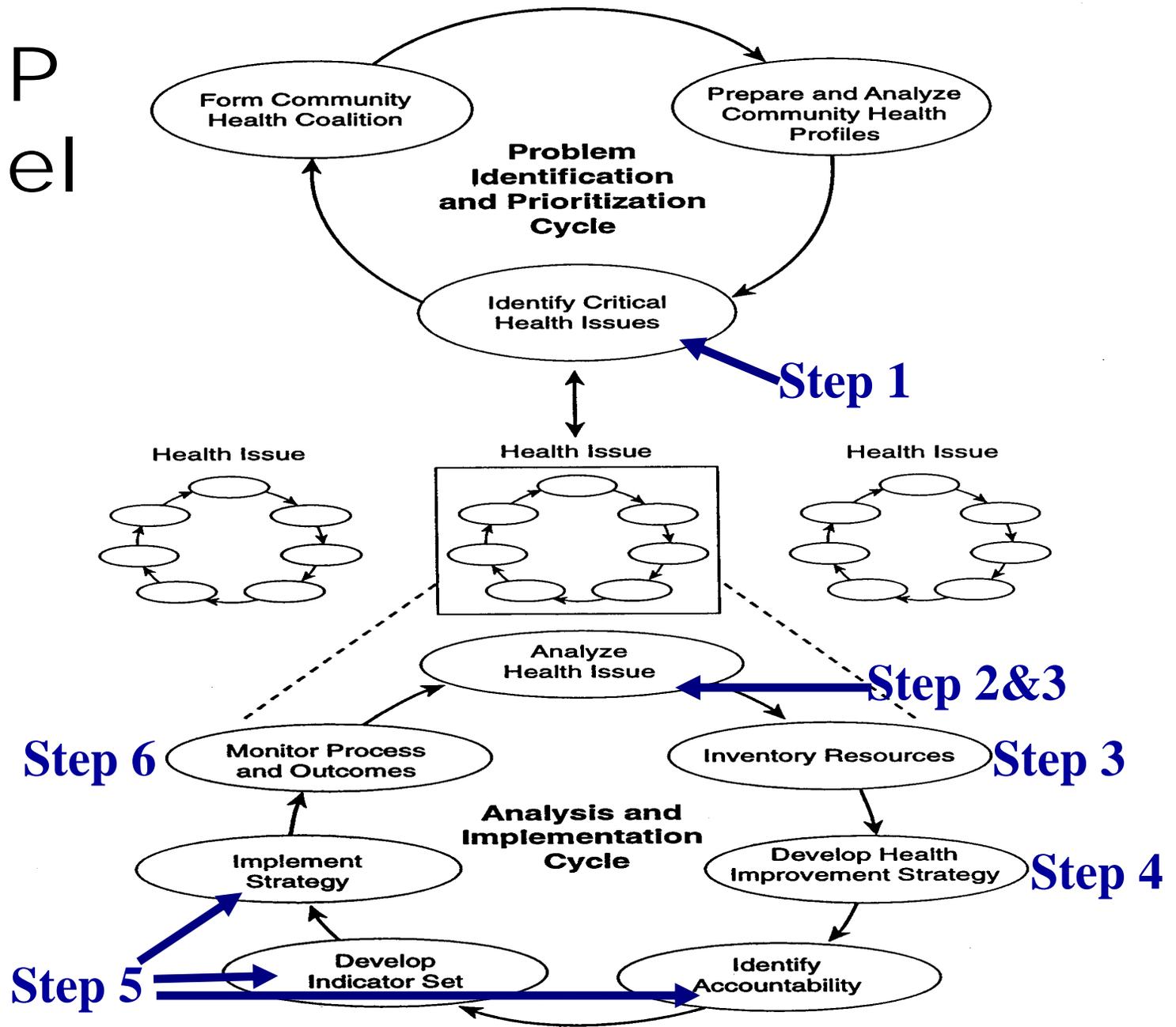
- Provides a scientific grounding
- Effective use of limited resources
- Funders look for it
- Steps align with community health improvement process and core functions of public health system (assessment, policy development, and assurance)

Step-by-Step Process*

- 1. Develop an issue statement
- 2. Determine what is known
- 3. Quantify the issue
- 4. Develop program/policy options
- 5. Implement program/policy plan
- 6. Evaluate the program/policy

* Some recommend including development of a logic model between steps 5 & 6.

CHIP Model



Step by Step Process

Step One: Develop Issue Statement

- Brief statement of the question
- Parts of an issue statement:
 - Describing the PH significance of the issue using data
 - Program/policy issue being considered
 - Potential solutions
 - Potential outcomes

Step by Step Process

Step 2: Determine what is known through the literature

- Two basic evidence “types”
 - Systematic review: comprehensive synthesis of available info on a topic
 - Economic evaluation: comparison of costs & benefits of an activity to determine the most efficient use of limited resources

Step by Step Process

- Efforts to translate existing evidence into recommendations
 - Expert Panels, Consensus Conferences, Practice Guidelines

Step by Step Process

- Locating PH practice evidence
 - Internet Websites
 - Guide to Community Preventive Services
 - Cochrane Reviews of Relevance to Health Promotion and Public Health
 - On-line databases
 - National Library of Medicine (PubMed)
 - Subject-specific: CancerLit
 - Experts
 - national, state, and local

Step by Step Process

Be Aware:

- Quality of reviews & evaluations varies greatly
- Evidence for PH practice effectiveness is scarce

Step by Step Process

- Step Three: Quantify the Issue
- Compare your community's problem with literature findings
 - Describe to decision-makers
 - At-risk populations (ID'd in literature)
 - Magnitude of problem in your community
 - Probable/possible causal pathway
 - Impact of identified policy/program options

Step by Step Process

- Step 4: Develop policy and/or program options
 - Describe and evaluate options
 - The more complex the problem, the more options should be generated
 - Science + Art = PH policy options
 - In general, PH programs are rarely overwhelmingly successful

Step by Step Process

The Intervention Decision Matrix

Intervention	Option 1	Option 2	Option 3	Option 4
Effectiveness (how strong is the evidence?)				
Feasibility (resources, time, etc)				
Affordability (high program cost=low affordability)				
Political Acceptability (ethics of equity, individual freedom)				
Social and Political Will (social/political acceptability)				
Unintended Consequences				
Final Priority (high, medium, low)				

Compare options ranking each cell as "high, medium or low priority".
Which option is strongest? Is there a "fatal cell"?

Adapted from: Fowler, CJ and Dannenberg AL, Johns Hopkins University, revised 1999

Step by Step Process

- Step 5: Develop program/policy plan
 - Create action plan to implement policy/program option
 - A good action plan is:
 - Complete (lists goal, objectives, action steps & associated evaluation measures)
 - Clear (explicitly lists who, when, how)
 - Current (resources, opport., and threats)

Step by Step Process

- Step 6: Evaluate the program and/or policy option
 - Starts with clearly defined and measurable goals & objectives
 - Should have mix of measures
 - July Training Module on Program Evaluation
 - Mike Stoto, PhD
 - July 21 12 noon-1:00PM: telepresentation
 - July 22 9-10:00AM: In-person
(Lakes Region General Hospital, Laconia)

Step by Step Process

Linkages between Program Planning and Evaluation

<i>Program Planning Activity</i>	<i>Evaluation Data/Sources</i>
Goal	- Outcome data: Access changes in morbidity, mortality, disability, quality of life --Social indicator data --Census data --National survey data
Objectives	- Impact data: Track knowledge, attitude, and behavioral/skill changes --Programmatic surveys --Qualitative data (observations, interviews, diaries, content analysis)
Action Steps	- Process data: --Records of program attendance --Survey of participant satisfaction --Observational data of environment

Source: Brownson RC, et al. *Evidence-Based Public Health*, Oxford University Press 2003, pg.196



Manchester Case Study



Step 1: Develop an Issue Statement

Data Description: In Manchester, approximately 160 babies are born to teen moms (15-19 years) each year. When compared to the state and Nashua, Manchester's teen moms are younger (< 17 years). (1988-1992 Vital Stats)

Issue under review: Do proven methods exist for reducing births to teen moms?

Potential Solutions: Comprehensive school education, home visiting, others???

Potential Outcomes: 1) % of Manchester children participating in comprehensive school health education programs 2) % of repeat pregnancies of teen moms participating in home visiting program.

Step 2: Determine What is Known through the Literature

Risk Factors for Teen Pregnancy

Adolescent

- Age at first date
- Substance abuse
- Sexually abused
- Low academic performance

Family

- Poverty
- Parent edu level
- Single parent household
- Mom/Sister a teen mom
- Lack of parent support

Community

- High unemployment
- Marginalized community
- Poverty

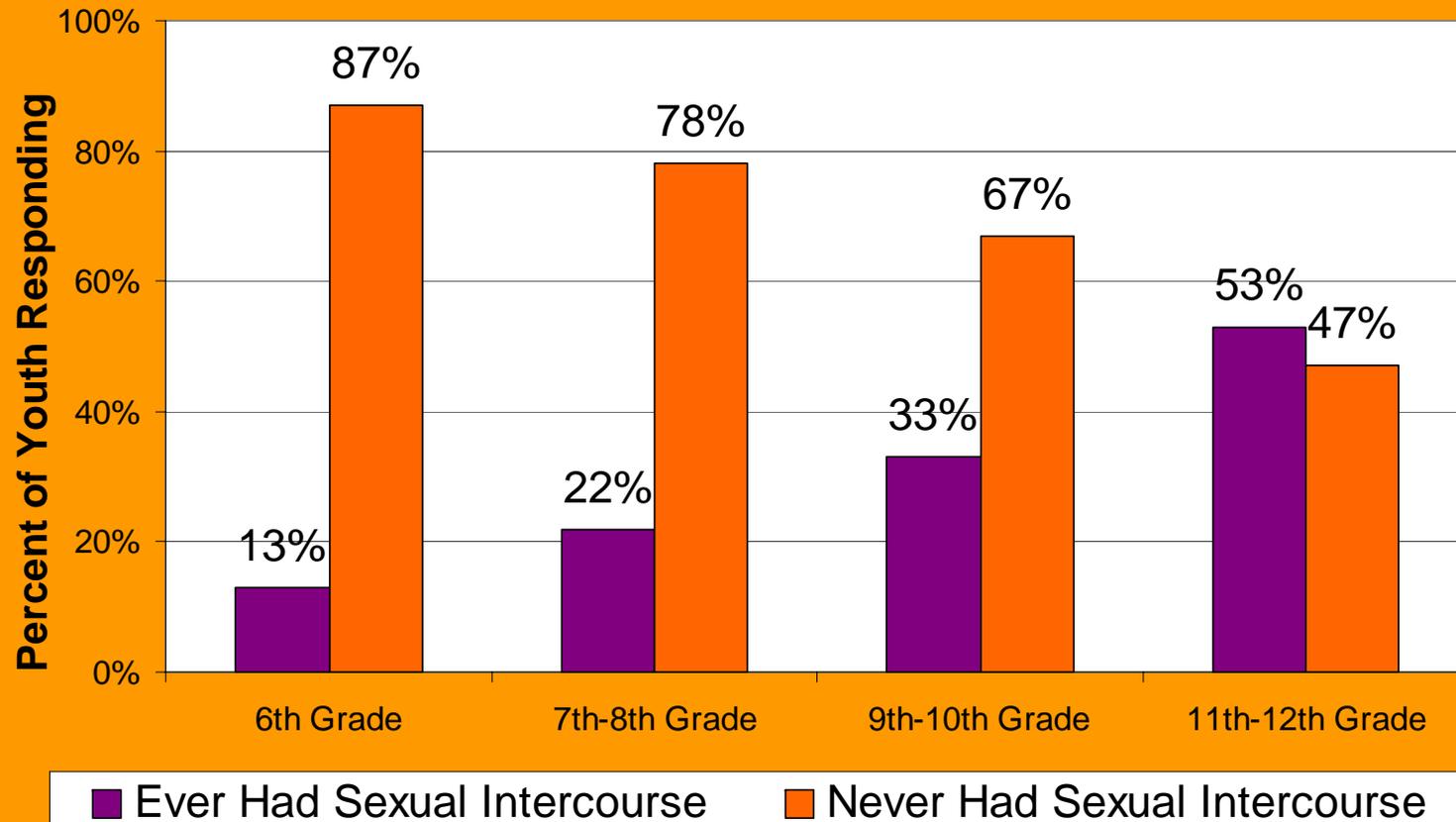
Step 2: Determine What is Known through the Literature

Programs/Policies to Reduce Teen Pregnancy

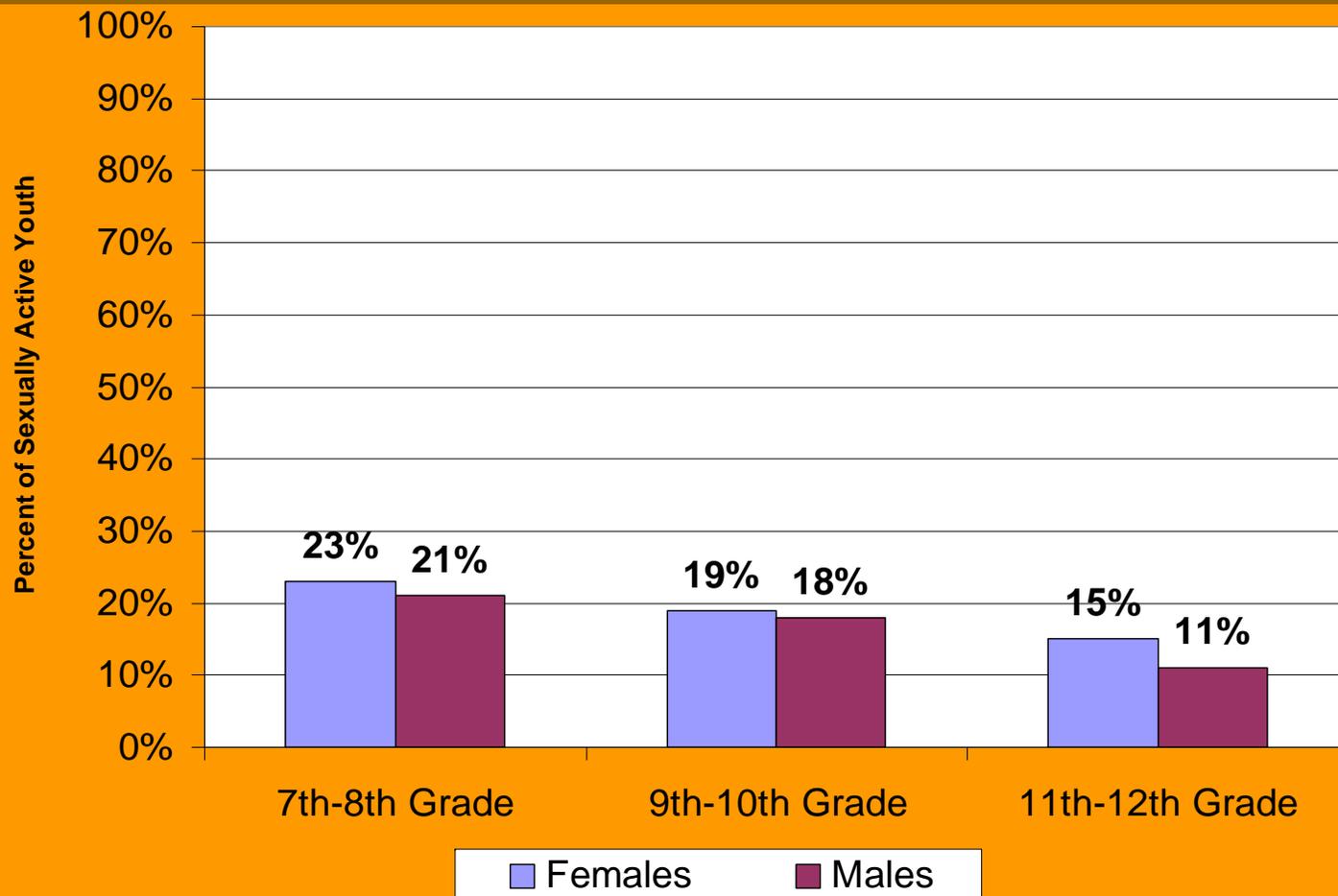
- Mentoring / Career Guidance
- Homework Assistance and Tutoring
- Comprehensive Health Education
- Sports & Fine Arts Programs
- Primary Care Provider
- Mental Health (increase resiliency)
- Building and Supporting Strong Families
- Home Visits & Adolescent Parent Support
- Case Management

Percentage of Manchester Youth Engaging in Sexual Intercourse By Grade Level

Step 3: Quantify the Issue



Percentage of Sexually Active Manchester Youth by Grade and Gender Who Reported Not Using a Pregnancy Prevention Method During Last Intercourse



Step 4: Develop policy/program options

- NH Adolescent Health Task Force Report
 - Based on US Dept. of Health and Human Services National Strategy to Prevention Teen Pregnancy
 - "Success by 19": Adolescent Teen Pregnancy Prevention Model
 - Developed by K. Dunn and J. Underhill
 - Integrated all interventions demonstrated effective in the literature

Step 5: Develop Program/Policy Action Plan

Goal: Reduce Manchester's rate of repeat teen pregnancies to 50% of the state rate.

Objective: Develop and implement a home visiting program focused specifically on teen moms younger than 17 years.

Activity	Who	By When	Resources	Measure
1. Hire nurse & social worker to staff teen home visiting program	Child & Family Services	???	Grant money	* Staff hired
2. Find space & equipment at CFS	Child & Family Services	???	Space, Computer Fax	* Space allocated * Computer, phone, and fax for
3. Identify and/or adapt materials to be used w/Teen moms	Nurse & social worker	???	pamphlets	* Pamphlets acquired
4. Educate Manchester CHC providers about home visiting program	Nurse & social worker	???	Pamphlets about program	* # of trainings given
5. Referral made to home visiting program	Manchester CHC staff	After 1st prenatal care visit	Phone	% of pregnant adolescents 17 and younger at MCHC referred to Teen visitation program
6. Teen mom visits	Nurse/Social worker	a. Every week till baby is 6 weeks b. Every other week till baby is 21 c. Monthly until 2nd birthday	Mileage reimbursement	1. ability to initiate & maintain consistent schedule of visits 2. % of teen moms who return to work or school 3. % of teen moms that have a second, unplanned pregnancy w/l two years.
7. Referrals made to appropriate agency	Nurse/social worker	As needed until child is 2 years		* Number of referrals
8. Team meetings to coordinate care	MCHC providers & nurse/social worker	Monthly		Consistency of meetings pre & post partum

Step 6: Evaluate the Program

- Planned Program Measures
 - Process
 - % of pregnant adolescents 17 and younger at MCHC referred to Teen visitation program
 - ability to initiate & maintain consistent schedule of visits
 - Impact
 - % of teen moms who return to work or school
 - Outcome
 - % of teen moms that have a second, unplanned pregnancy within two years.

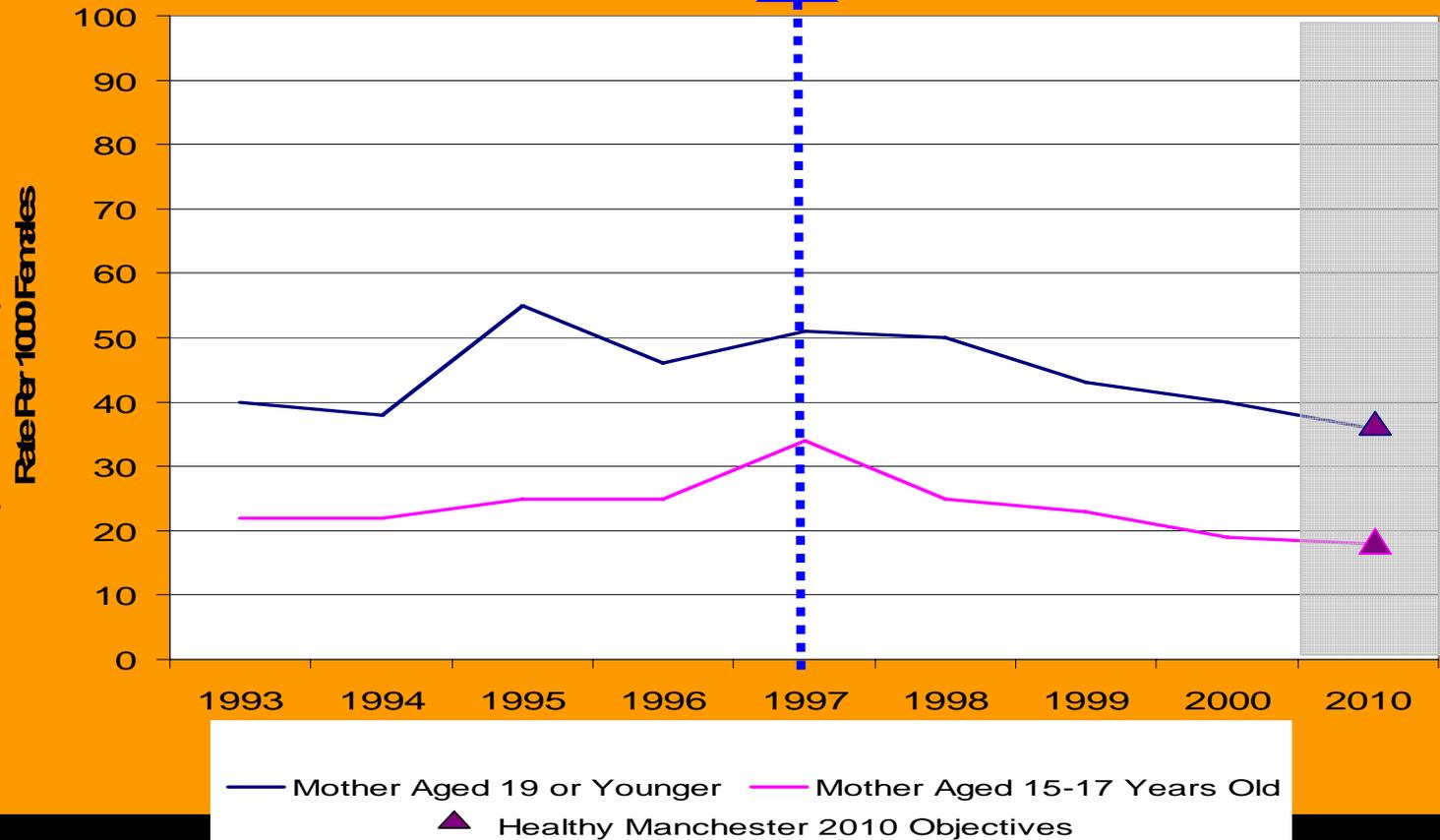
City of Manchester Teen Birth Rates, 1993-2000

Healthy Manchester Leadership Council Program Initiation

**HEALTHY
MANCHESTER 2010
OBJECTIVES
(Community
Measure):**

**Reduce births to
adolescents aged 17 or
younger by 40%.**

**Reduce births to
adolescents aged 19 or
younger by 33%.**



Sources and Resources

- Brownson, R. et al. Evidence-based Public Health Practice. Oxford University Press, 2003.
- Taking a tough look at Adolescent Pregnancy Prevention in Manchester: A Special Report from the Healthy Manchester Coordinating Council. (1998)
 - Healthy Manchester Leadership Council
Coordinator: Anna Thomas
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Sources and Resources

- Sources of PH evidence
 - On-line databases
 - National Library of Medicine (PubMed)
 - <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>
 - Subject-specific: CancerLit
 - <http://www.cancer.gov/search/pubmed/>
 - Problem-focused organizations
 - American Cancer Society
 - <http://www.cancer.org/docroot/home/index.asp>
 - Consumer Product Safety Commission
 - www.cpsc.gov

Sources and Resources

- Sources of PH evidence (Internet websites)
 - Guide to Community Preventive Svcs
 - www.thecommunityguide.org/
 - CDC Prevention Guideline System
 - www.phppo.cdc.gov/CDCRecommends/AdvSearchV.asp
 - Cochrane Reviews of Relevance to health Promotion and Public Health
 - www.vichealth.vic.gov.au/cochrane/activities/reviews.htm
 - Health Policy Coach Website
 - www.healthpolicycoach.org

Sources and Resources

Evaluating the Quality of a Systematic Review

Source: Brownson RC, et al. *Evidence-Based Public Health*, Oxford University Press 2003, pg. 46, adapted from Kelly et al, Oxman et al, Guyatt and Rennie

Are the results valid?

- Did the review explicitly address a focused and answerable question?
- Based on the search process, is it likely that important, relevant studies were missed?
- Were the primary studies of high methodologic quality?
- Were assessments of studies reproducible?

What are the results?

- Were the results similar from study to study?
- How precise were the results?
- Do the pooled results allow you to examine subgroup differences?
- Can a causal association be inferred from the available data?

How can I apply the results to patient care and/or population health?

- How can I best interpret the results to apply them to the population that I serve in my public health agency?
- Were all outcomes of the clinical and public health importance considered?
- Are the benefits worth the costs and potential risks?

Summary

- EBPHP provides a way for your community to systematically approach a solution to an identified health problem
- Review of Steps
 - Develop issue statement
 - Determine what is known about the issue
 - Quantify the issue in your community
 - Develop program/policy options
 - Implement program/policy plan
 - Evaluate the program/policy option

Acknowledgements

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 - Program Assistant, NHIHPP

Comments or Questions???

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