ANALYZING PROBLEMS AND DEVELOPING INTERVENTIONS

October 13, 2004
Foster City, CA

Family Health Outcomes Project Staff

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TODAY'S AGENDA

By the end of the workshop, participants should be able to:

- Articulate state-of-the-art knowledge about two MCAH problems and effective community-level interventions
- Identify the significant causal pathways in a problem analysis
- Use information gained from experts' "proven intervention" literature and local resources to assess potential interventions and identify the most effective strategies for their community(ies)

8:00 am **Coffee and Registration**

8:30 am **Welcome and Introductions**
Geraldine Oliva, MD, MPH

8:45 am **Session 1. Obesity Panel**
Yolanda Gutierrez, PhD, RD
Nancy Gelbard, MS, RD
Lisa Cirill

10:15 am **Break**

10:30 am **Session 2. Adolescent Health Panel**
Erica Monasterio, MSN, FNP
Janet Shalwitz, MD

12:00 pm **Lunch**

1:00 pm **Session 3. Problem Analysis 101**
Geraldine Oliva, MD, MPH
Judith Belfiori, MA, MPH
Brianna Gass, MPH
Nadia Thind, MPH

1:45 pm **Exercise: Intervention Strategy Development**

3:00 pm **Break**

3:15 pm **Exercise: Presentations**

3:45 pm **Wrap-Up and Conclusions**

Yolanda M. Gutierrez, MS, PhD, RD is the Nutrition Consultant for the Region 4 California Diabetes and Pregnancy Program (CDAPP) and the Mid-Coast Regional Perinatal Program of California (MCCPOP), at Stanford University. In addition, she is Associate Clinical Professor in the Department of Family Health Care Nursing at the University of California, San Francisco School of Nursing. She initiated her career in Nutritional Sciences at the University Javeriana in Santa Fe de Bogotá, Colombia. She completed her master's degree in Nutritional Sciences (1973) and doctorate in Interdisciplinary Applied Nutrition (1995) from the University of California, Berkeley. She is the National Past-Chair of the Women's Health & Reproductive Nutrition Dietary Practice Group (WHRN-DPG) of the American Dietetic Association. Her research interests include cultural factors that affect diet and pregnancy outcomes in Mexican-Americans, body composition, weight changes, and nutritional issues related to women's health. She is co-investigator of a 5-year, longitudinal study on women's midlife health, involving three ethnic groups of women. Her leading role has been in practice as a clinical nutrition specialist and educator. She developed the nutrition curriculum at the University of California, San Francisco School of Nursing with particular focus on the required nutrition courses for the Family Nurse Practitioner, Ambulatory Women's Health and Pediatric Nurse Practitioner Programs. The clinical component of the program includes perinatal adolescent patients and pediatric patients.

In 1978, Dr. Yolanda Gutierrez, a full time faculty at the University of California, San Francisco participated in a three-week internship program about "Nutrition Consulting in the Prevention of Low Birth Weight Babies," in Montreal, Canada, and learned first hand from Ms. Agnes Higgins. The March of Dimes sponsored this internship. As a result of this opportunity, Dr. Gutierrez developed an interdisciplinary graduate course in Maternal and Infant Nutrition which was approved by the University of California, San Francisco School of Nursing curriculum committee and became a required course for both nursing and medical students. The March of Dimes awarded and recognized Dr. Gutierrez with the Interdisciplinary Nutrition Course Modules. In 1996, Dr. Yolanda Gutierrez moved to Stanford University.

Fetal Origins of Chronic Diseases

Yolanda M. Gutierrez, PhD, RD
Stanford University

Objectives

- Identify the Fetal Origins of Chronic Disease
- Discuss the evidence based of Baker's Hypothesis
- Recognize the critical role of nutrition before, during and after pregnancy to minimized the risk of Chronic Diseases

Where Health Begins
How Are Your Odds Set in the Womb?

- Obesity
- Cancer
- Cardiovascular Diseases
- Hypertension
- Diabetes

The Baker's Hypothesis

Fetal Origins Theory

Metabolic Programming

Studies have documented the effects of the intrauterine environment on the subsequent development of many chronic diseases, even in the offspring of women without hyperglycemia during pregnancy

Evidence for the concept of Metabolic Programming

- Barker (1990)
- British National Study of Children (1997)
- The Dutch Famine Studies (1999)
- The Nurses Study I & II (1976-2002)
- High Birth Weight/Obesity (2002)

Early Predictors of Chronic Disease

- Maternal Starvation
- Fetal Starvation
- Insulin Resistance
- Intrauterine Environment

Early Predictors of Chronic Disease

Fetal Nutrition & Growth

- Fetal Starvation
- Fetal Over Nutrition
- Maternal Diet

- Post-Natal Growth
- Catch-up Growth
- Post-Natal Diet

Early Predictors of Chronic Disease

- Maternal Diet During Pregnancy
- Maternal Weight During Pregnancy
- Post-Natal Diet
- Preschool Diet
- Adolescent Diet
- Adult health habits

Determinants of High Birth Weight

- Hereditary (little)
- Maternal Obesity
- Maternal Diabetes
- Weight Gain During Pregnancy

Gestational Diabetes and the Incidence of Type 2 Diabetes

- Reviews/Commentaries/Position Statements Review Article
- 2002 <http://care.diabetesjournals.org by the American Diabetes Association

Results

- A total of 28 studies were examined.
- The cumulative incidence of diabetes ranged from 2.6% to over 70%.
- Studies examined women 6 weeks postpartum to 28 years postpartum.
- Women appeared to progress to type 2 diabetes at similar rates after a diagnosis of GDM.

Results continued...

- Cumulative incidence of type 2 diabetes increased markedly in the first 5 years after delivery and appeared to plateau after 10 years.
- An elevated fasting glucose level during pregnancy was the risk factor most commonly associated with future risk of type 2 diabetes.

CONCLUSIONS

- Conversion of GDM to type 2 diabetes varies with the length of follow-up and cohort studies retention.
- Adjustment for these differences reveals rapid increases in the cumulative incidence occurring in the first 5 years after delivery for specific racial groups.
- Targeting women with elevated fasting glucose levels during and after pregnancy are the highest risk group for the development of Type 2 diabetes.

Syndrome X

A metabolic interrelationship of risk factors characterized by:

- Insulin resistance / hyperinsulinemia
- Abnormal glucose tolerance
- Abnormal Cholesterol / lipid concentrations
- Hypertension
- Obesity

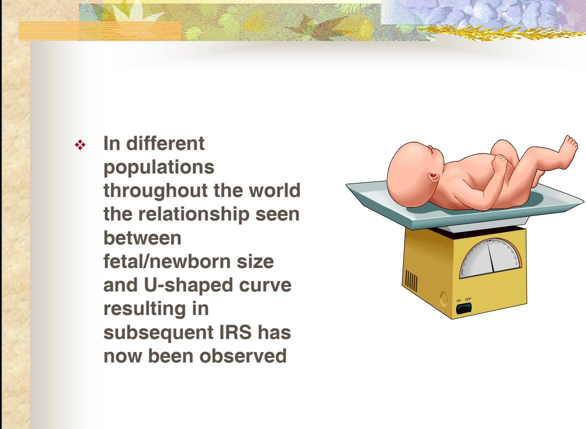
Syndrome X - Genes or Environment? (Carmelli et al, Am J Hum Gen 55:566-573, 1994)

- Study sample of 2,508 twin pairs born in 1917-1927
- Utilized national Acad. Sci-National Research Council Registry
- Investigated concordance/discordance MZ and DZ twins in rates of HTN, Obesity and Diabetes.
- Results suggest that both
  - Genetic predisposition (59%)
  - Environmental factors (41%)

  Play roles in the development of these disorders

- The development of components of the insulin resistance syndrome (IRS) or syndrome X was inversely correlated with the size of the baby at birth
- For example the smaller the baby, the more likely is that newborn to develop components of the IRS 20-40 years later)

- In different populations throughout the world the relationship seen between fetal/newborn size and U-shaped curve resulting in subsequent IRS has now been observed



Hypertension

- David Baker and his research team reported an important association between the risk of hypertension in adulthood and birth weight of < that 5 1/2 pounds.
- Physiologic change. Less number of cell for the developing kidney

Obesity

- Under nutrition during the first trimester makes obesity more likely during adulthood.
- Physiologic endocrine changes occur that reset the appetite control centers

Cholesterol

- A malnourished fetus will divert blood to the CNS, depriving other organs.
- Physiologic change:
  The growth of the organs in the stomach including the liver, can be stunted. An undersized liver is less efficient at regulating cholesterol levels in adulthood

Cancer

- Early life predictors - Nurses Mother's study I & II
- LBW <2.5 Kg- Less associated with breast cancer
- High BW high rate of prostate Cancer and Cardiovascular Disease

Cancer and Cardiovascular Disease Demonstrate Inverse Relationships

Changes in the growth and development of the fetus in utero *are secondary to nutritional disturbances and are associated with permanent metabolic alterations in the offspring that will result in chronic conditions*

Fetal Malnutrition $\neq$ Postnatal nutrition

Nutrition Treatment & Recommendations

Specific Dietary Needs of Four Difference Types of Women

- Women who are planning to get pregnant
- Women in the first trimester of pregnancy
- Women in the second or third trimester of pregnancy
- Nursing mothers

Prioritizing Nutrition Message

- Personalized meal plan
- Emphasize glycemic control, not weight loss
- Emphasize metabolic outcomes such as lipids – blood pressure
- Emphasize total amount of carbohydrate not the source, food portions, and number of servings per meal.

Prioritizing Nutrition Message

continued…

- Emphasize low intake of saturated fat <7%of energy by limiting intake of full fat dairy products, fatty meats and tropical oils (coconut and palm)
- Emphasize high intake of fiber
- Emphasize and individualized counseling regarding physical activity
- Set appropriate weight goals

A woman who has had gestational diabetes can decrease her chances of developing type 2 diabetes by doing the following:

- Screening six or more weeks after delivery
- A lipid panel is recommended five months or more after delivery
- Maintaining her ideal body weight
- Eating a diet lower in fat
- Exercising regularly
- Breastfeeding

Postnatal Nutrition

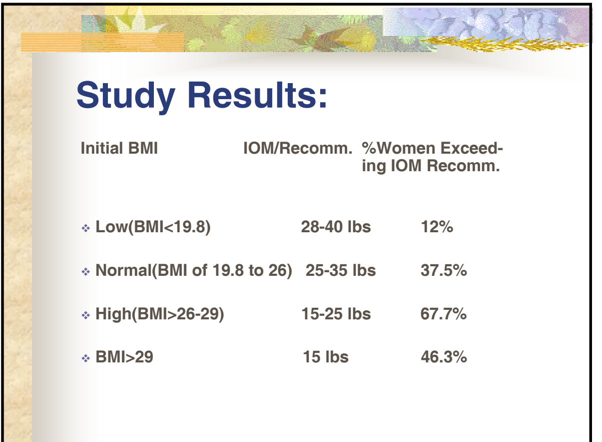
- Breastfeeding decreases the incidence of diabetes in the first 3 months after delivery.
- Also, in a study of Pima Indians, children who were breastfed had less obesity and a later onset of diabetes than those who were bottle-fed.

Lancet. 1997;350:166-168.

Weight Gain in Pregnancy: A Major Factor in the development of Obesity in Childbearing Women?

Cornell University Study by Christine M. Olson PhD., RD

- Purpose of the study: to determine whether weight gain in pregnancy that exceeded the IOM gestational weight gain guidelines was related to postpartum weight retention in a sample of 622 women
- To determine if excessive gestational weight gain is an important factor in the development of obesity in childbearing



Study Results:

Initial BMI	IOM/Recomm.	%Women Exceeding IOM Recomm.
Low(BMI<19.8)	28-40 lbs	12%
Normal(BMI of 19.8 to 26)	25-35 lbs	37.5%
High(BMI>26-29)	15-25 lbs	67.7%
BMI>29	15 lbs	46.3%

Study Conclusions:

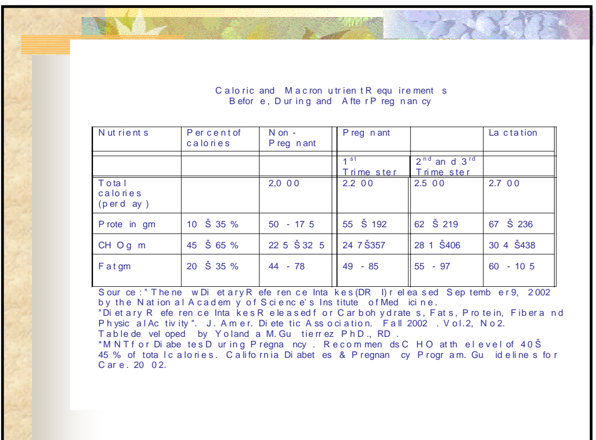
- Excessive gestational weight gain appears to be a very important factor in the development of obesity in this primary rural white population of women.
- In the sample there were 38 incident cases of obesity. In other words, 38 women who had not been obese in early pregnancy according to the IOM/BMI >29 were obese at one year PP.

Message to All Health Care Providers

- Health care providers should make every effort to encourage pregnant women to "stay in the range" of weight gain recommended by the Institute of Medicine
- Overweight/Obesity ≠ Over nourished

Clinical Identification of the Metabolic Syndrome

Risk Factor	Defining Level
Abdominal Obesity	Waist Circumference
Men	>102 cm (>40 in)
Women	>88 cm (>35 in)
Triglycerides	≥ 150 mg/dl
HDL cholesterol	HDL cholesterol
Men	<40 mg/dl
Women	<50 mg/dl
Blood pressure	≥ 130/≥ 85 mmHG
Fasting glucose	≥ 110 mg/dl



Caloric and Macronutrient Requirements
Before, During and After Pregnancy

Nutrients	Percent of calories	Non-Pregnant	Pregnant		Lactation
			1st Trimester	2nd and 3rd Trimester	
Total calories (per day)		2,000	2.200	2.500	2.700
Protein gm	10 Š 35 %	50 - 175	55 Š 192	62 Š 219	67 Š 236
CHO gm	45 Š 65 %	225 Š 325	247Š357	281 Š406	304 Š438
Fat gm	20 Š 35 %	44 - 78	49 - 85	55 - 97	60 - 105

Source: "The new Dietary Reference Intakes (DRI) released September 9, 2002 by the National Academy of Science's Institute of Medicine.
"Dietary Reference Intakes Released for Carbohydrates, Fats, Protein, Fiber and Physical Activity". J. Amer. Dietetic Association. Fall 2002. Vol.2, No2.
Table developed by Yolanda M. Gutierrez PhD., RD.
*MNT for Diabetes During Pregnancy. Recommends CHO at the level of 40Š 45 % of total calories. California Diabetes & Pregnancy Program. Guidelines for Care. 2002.

Top 25 All-Star Foods

- Yogurt
- Skim Milk
- Cheese
- Coldwater fish
- Shellfish
- Eggs
- Lean beef
- Lean pork
- Lean Poultry
- Tofu
- Beans, peas, lentils, chickpeas
- Asparagus
- Broccoli
- Cabbage
- Pumpkin

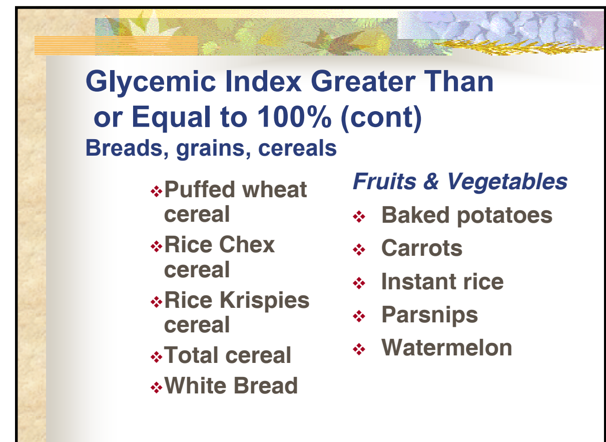
Top 25 All-Star Foods (cont.)

- Spinach
- Sweet potatoes
- Yams
- Tomatoes
- Apples
- Avocados
- Cherries
- Oranges
- Oatmeal
- Wheat germ

Glycemic Index of Common Foods

Glycemic Index Greater Than or Equal to 100%
Breads, grains, cereals

- Bagels
- Bread stuffing
- Cheerios cereal
- Corn Chex cereal
- Corn Chips
- Corn Flakes cereal
- Crispix cereal
- French bread
- Golden Grahams cereal
- Puffed Rice cereal

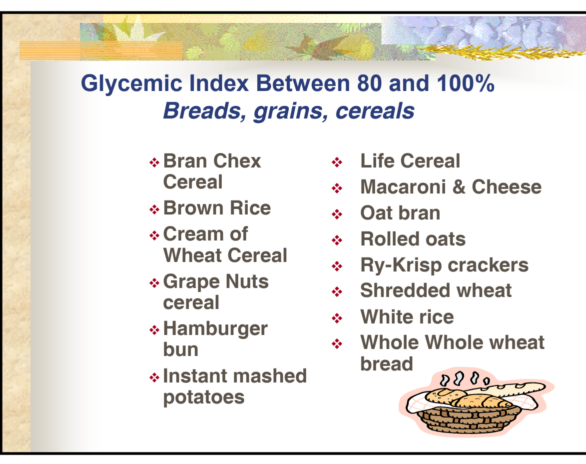


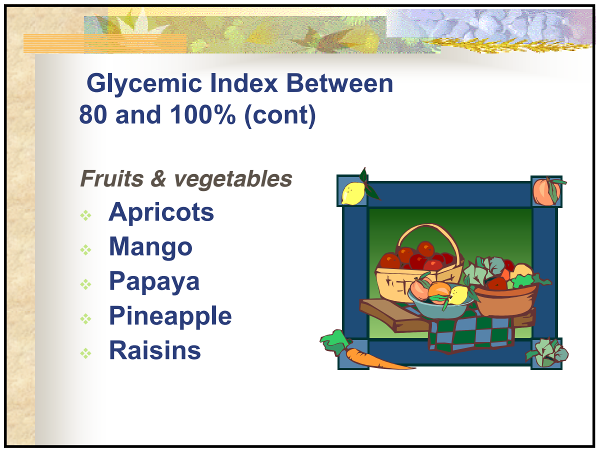
Glycemic Index Greater Than or Equal to 100% (cont)
Breads, grains, cereals

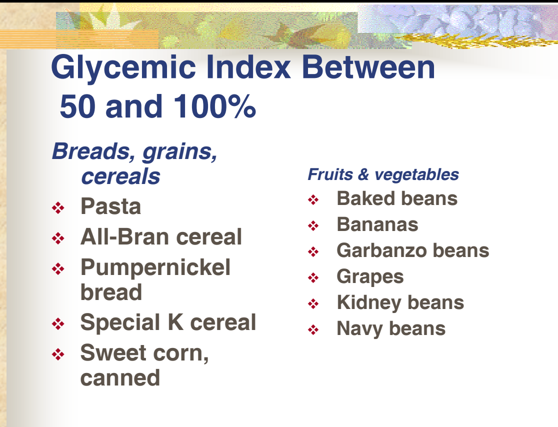
- Puffed wheat cereal
- Rice Chex cereal
- Rice Krispies cereal
- Total cereal
- White Bread

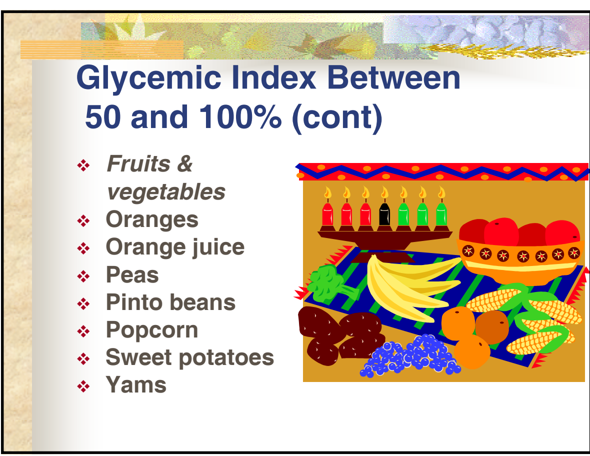
Fruits & Vegetables

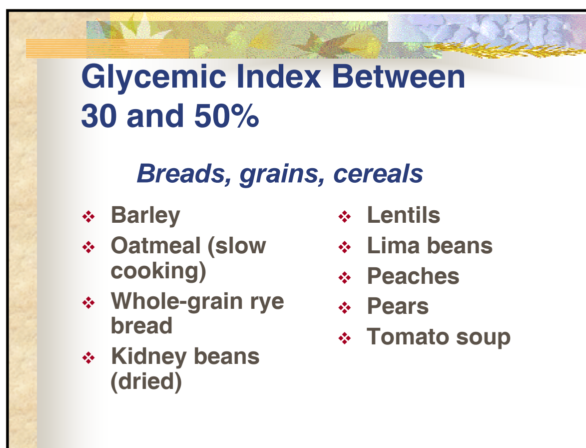
- Baked potatoes
- Carrots
- Instant rice
- Parsnips
- Watermelon

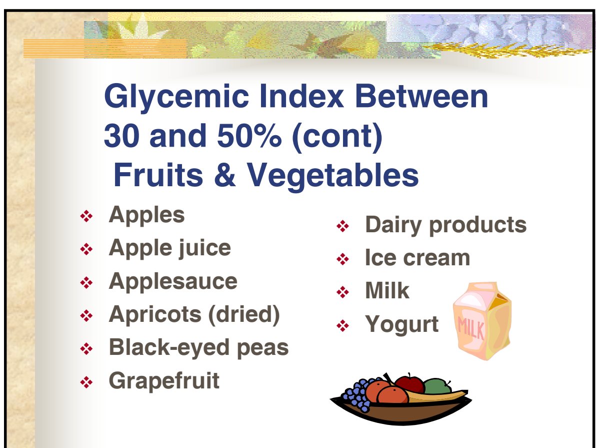

Glycemic Index Between 80 and 100%
Breads, grains, cereals
Bran Chex Cereal
Brown Rice
Cream of Wheat Cereal
Grape Nuts cereal
Hamburger bun
Instant mashed potatoes
Life Cereal
Macaroni & Cheese
Oat bran
Rolled oats
Ry-Krisp crackers
Shredded wheat
White rice
Whole Whole wheat bread


Glycemic Index Between 80 and 100% (cont)
Fruits & vegetables
Apricots
Mango
Papaya
Pineapple
Raisins


Glycemic Index Between 50 and 100%
Breads, grains, cereals
Pasta
All-Bran cereal
Pumpernickel bread
Special K cereal
Sweet corn, canned
Fruits & vegetables
Baked beans
Bananas
Garbanzo beans
Grapes
Kidney beans
Navy beans


Glycemic Index Between 50 and 100% (cont)
Fruits & vegetables
Oranges
Orange juice
Peas
Pinto beans
Popcorn
Sweet potatoes
Yams


Glycemic Index Between 30 and 50%
Breads, grains, cereals
Barley
Oatmeal (slow cooking)
Whole-grain rye bread
Kidney beans (dried)
Lentils
Lima beans
Peaches
Pears
Tomato soup


Glycemic Index Between 30 and 50% (cont)
Fruits & Vegetables
Apples
Apple juice
Applesauce
Apricots (dried)
Black-eyed peas
Grapefruit
Dairy products
Ice cream
Milk
Yogurt
MILK

Glycemic Index of 30% or Less

- Cherries
- Peanuts
- Peas
- Plums
- Soybeans

Omega-3 fatty acid

Also called linolenic acid, can be found in:

- All fish and seafood
- Egg yolks
- The leaves and seeds of many plants
- Soybeans
- Nuts
- Oils such as canola, flaxseed, olive, walnut

Omega-6 fatty acid

Also called linoleic acid, can be found in:

- Nuts, including walnuts,peanuts,almonds
- Seeds such as sunflower seeds
- Oils such as corn, safflower, sunflower, soybean

Conclusions

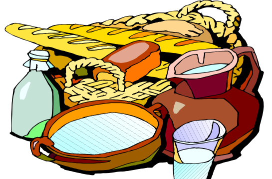
- The in utero environment is increasingly recognized as a critical player for future well-being and longevity
- We became what we are, not only through genetic information passed from generation to generation, but also through the influence of environment
- But just how does under-nourishment / over-nourishment reprogram metabolism?

Conclusions (cont)

- Scientists are racing to answer this and more questions
- Understanding this process and increasing our knowledge about the interplay between genes and the prenatal environment is cause for both concern and hope
- Concerns because maternal and prenatal health care often ranks last on the political agenda
- Hope because by changing our priorities, we may be able to reduce the incidence of both birth defects and serious adult diseases

Conclusions (cont)

- Our job as Health Care Providers is to make sure that our clients have the "BEST NUTRITION" before, during and after pregnancy.



The Fetal and Infant Origins of Adult Disease

The womb may be more important than the home

British Medical J. 301:1111, 1990

Nancy Gelbard has worked for over twenty-five years in the field of public health, concentrating in the areas of maternal, child, adolescent and community health. Ms. Gelbard is currently program chief of the California Obesity Prevention Program (COPI), a program of the Department of Health Services (DHS). COPI works in partnership with other national, state, and local organizations to address the societal, technological and environmental influences of obesity.

In addition, Nancy also serves as chief of DHS' School Health Connections, where she is part of a cross-departmental team with the California Department of Education. School Health Connections overall goal is to improve the health status and academic success of California's children and youth.

Prior to her work with COPI and School Health, Nancy was chief of DHS' California Project LEAN, a social marketing campaign designed to create healthier communities through policy and environmental change.

Ms. Gelbard has worked at the local level in community programs, taught at the university level and served as public health consultant in a variety of capacities.

Ms. Gelbard has a bachelor's degree in nutrition, a master's degree in preventive medicine and environmental health. She is a registered dietitian.

Moving to Action:
Reversing the Obesity Epidemic in California
***
A Population-Based Approach

Nancy Gelbard, M.S., R.D., Chief
California Obesity Prevention Initiative
Family Health Outcomes Project Workshop
October 13 and 18, 2004

What's COPI?

- A program of DHS' Chronic Disease Control Branch
- Works in partnership with other national, state, and local organizations
- Addresses the societal, technological, and environmental influences of obesity

Looking at the landscape ~
❶ *The problem*
❷ *Contributing factors*
❸ *Big picture approaches*

Just the facts …..

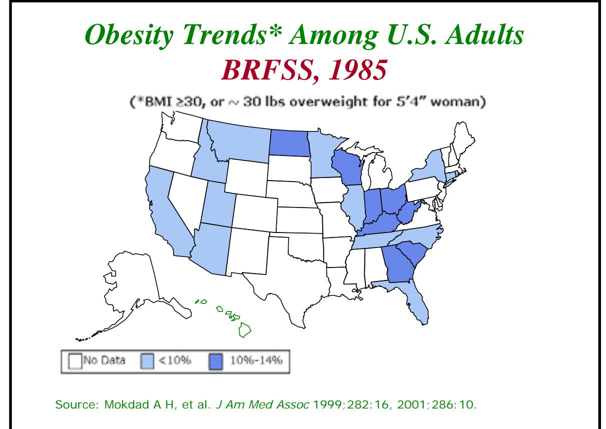
California is experiencing an unparalleled obesity epidemic

- Over one in two adults
- One in five children

are overweight or obese.

Obesity Trends Among U.S. Adults*
BRFSS, 1985

(*BMI ≥30, or ~ 30 lbs overweight for 5'4" woman)



Source: Mokdad A H, et al. *J Am Med Assoc* 1999:282:16, 2001:286:10.

Obesity Trends Among U.S. Adults*
BRFSS, 1989

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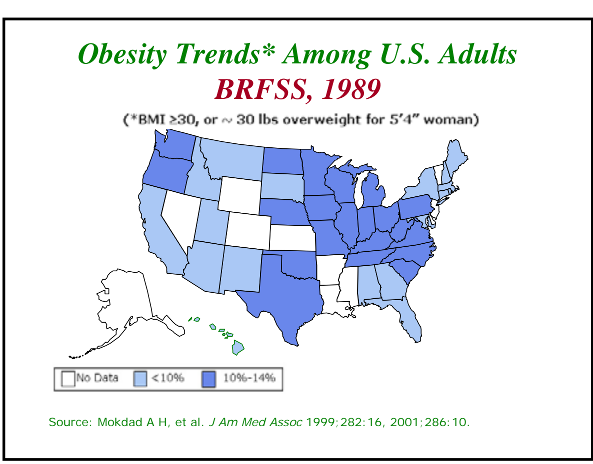
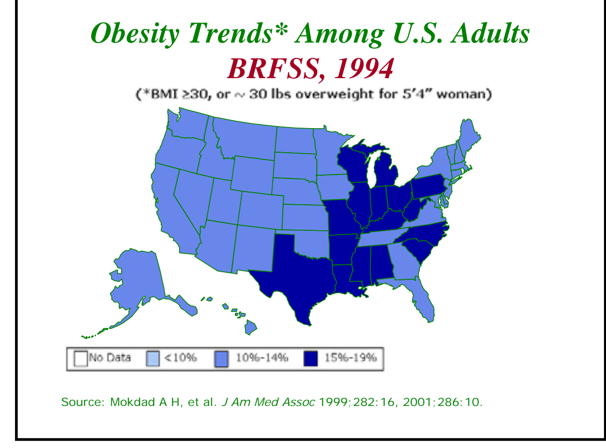


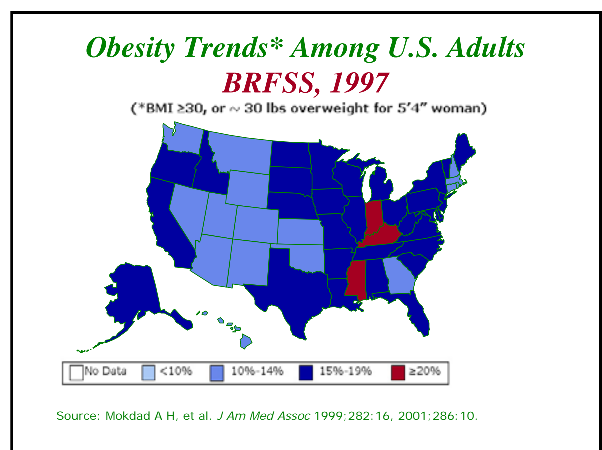
Source: Mokdad A H, et al. *J Am Med Assoc* 1999:282:16, 2001:286:10.

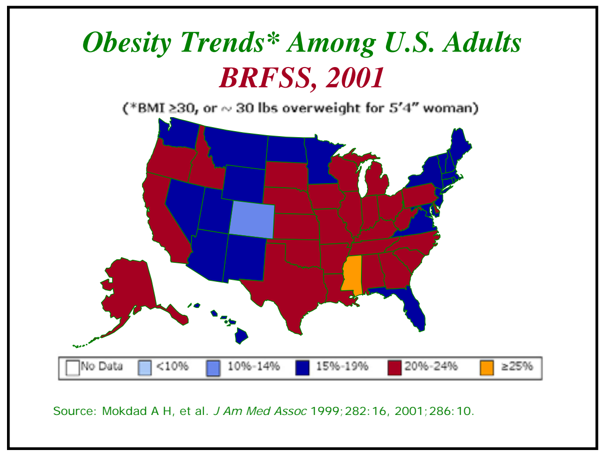
Obesity Trends Among U.S. Adults*
BRFSS, 1991
(*BMI ≥30, or ~ 30 lbs overweight for 5'4" woman)

No Data | <10% | 10%-14% | 15%-19%

Source: Mokdad A H, et al. *J Am Med Assoc* 1999:282:16, 2001:286:10.







Implications

- **With obesity comes associated health problems:**
  - ✓ Heart disease
  - ✓ Type 2 diabetes
  - ✓ High blood pressure
  - ✓ Depression and other mental health problems
- **And increased costs**
  - ✓ $7.7 billion in California for obesity-attributable medical expenditures. (CDC)

Diabetes link to obesity

- **The risk of diabetes increases even with modest weight gain**
  - ✓ gain of 11-18 lbs. doubles a person's risk
- **18.2 million people in the U.S. have diabetes**
  - ✓ 90-95% type 2

Diabetes link to obesity

- If the current trend continues, of those children born in 2000:
  - ✓32.8% of boys and 38.5% of girls will develop diabetes
  - ✓Close to 50% of African American and Hispanic children will develop diabetes

Do Obese Children Become Obese Adults?

- About a third (26-41%) of obese preschool children are obese as adults.
- About half (42-63%) of obese school-aged children are obese as adults.

California's children are unfit!

Annual California Fitnessgram

- Conducted in Grades 5, 7, and 9
- Measures 6 major fitness areas
  (e.g. aerobic capacity, body composition, flexibility)
- 2003 Results: Who passed all standards?
  - 23% ➔Grade 5
  - 27% ➔Grade 7
  - 24% ➔Grade 9

Healthy Kids Make Better Students. Better Students Make Healthy Communities.

❷*Contributing Factors*

- *VERY* complex issue!
- Variety of factors play a role:
  - ✓ behavior
  - ✓ environment
  - ✓ genetic
  - ✓ culture
  - ✓ socioeconomic status

Personal responsibility v.s. changing societal norms

"It is easy to blame parents, but they face off every day with an environment that grabs children and won't let go."

Food Fight
Kelly Brownell, Ph.D.
Yale University

Pestering Parents:

How Food Companies Market Obesity to Children

(Center for Science in the Public Interest)

What's the role of corporate accountability?

Weight maintenance basics

- **Energy in = Energy out**

However ~

- ✓ Lifestyle factors plays havoc with this equation!
- ✓People make decisions based on their environment!

Energy in (calorie consumption)

- **Changing environment**
  - ✓increased accessibility (restaurants, vending)
  - ✓Increased availability (food options, snacking, 24 hours)
  - ✓ increased convenience (gas stations)
  - ✓ increased portion sizes (super-sizing)
  - ✓ heavily promoted (often deceptively)
    - ➔television = 40,000 commercials/yr
  - ✓ cheap

Energy out (calories used)

- **Physical activity plays a key role!**
- **Most Americans are sedentary.**
- **Technology impacts:**
  - ✓ elevators
  - ✓ cars
  - ✓garage door openers
  - ✓remote controls

Environmental factors

- **Changes are taking place in a variety of settings:**
  - ✓ home (e.g.screen time)
  - ✓ school (e.g. food and physical activity options)
  - ✓ work (e.g. access to stairs)
  - ✓ community (e.g. parents reluctant to let kids roam free to play, fast foods/drive-thru, urban sprawl)

❸*Big Picture Approaches ~ Home*

- **Reduce screen time**
- **Increase skills of parents and children to make healthy choices**
- **Build physical activity into regular routines**

TV Turnoff week ➔ www.tvturnoff.org

~ Schools

- Reduce commercialism in schools
- Promote media literacy
- Promote joint planning with cities (land use issues)

~ Schools

Recent opinion surveys from

Robert Wood Johnson & National Education Association

"…remarkable agreement between parents and teachers on what schools should do to help stop the epidemic of obesity."

Schools -findings from poll

Vending Machines

- Convert selection in vending to healthy foods and beverages (92% teachers/91% parents)
- Oppose allowing vending machines with unhealthy snacks and candy in elementary schools (86% teachers/83 % parents)

Schools -findings from poll

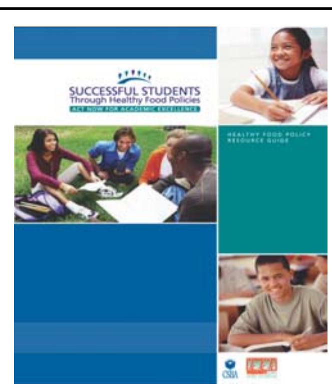
Physical Education

- Require students to take P.E. daily at every grade level (81% teachers/85% parents)
- Develop "lifestyle"approach to P.E. (94% teachers/89% parents)

Schools -findings from poll

Physical Education (con't)

- School boards should not eliminate P.E. for budgetary reasons. (87% teachers/88% parents)
- Schools should not eliminate P.E. classes in order to focus on meeting stricter academic standards. (87% teachers/77% parents)



Healthy Food Policy Resource Guide

~ Communities

- **Promote change through the built environment**

  Examples:

  ✓buildings (schools, workplaces)

  ✓land use (industrial or residential)

  ✓public resources (parks)

  ✓zoning regulations

  ✓transportation (bike paths, walkable communities)

~ Communities

- **Increase access to grocery stores.**
- **Curb food commercialism in public and community institutions.**
- **Make communities more bike and walk friendly**

Shift people from cars to… walking and biking

Contact Information:

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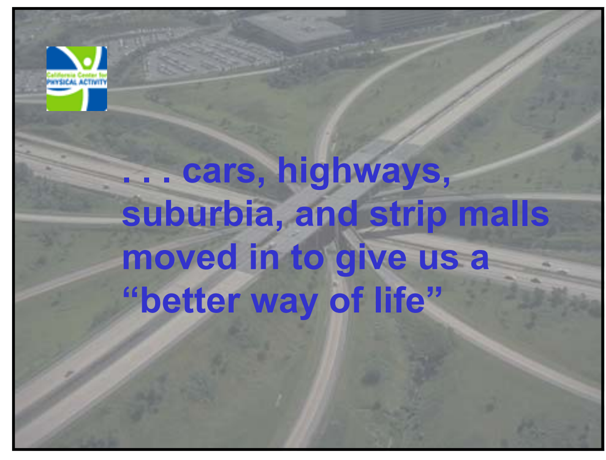
Lisa Cirill is the Acting Chief for the California Center for Physical Activity, a program within the California Department of Health Services. Prior to serving as Acting Chief, Ms. Cirill oversaw the Center's Active Aging projects which focus on improving older adults' strength, balance and flexibility to increase walking behavior among seniors, and developing local coalitions responsible for making environmental and policy changes to enhance community walkability. Ms. Cirill started at the local level working as Special Projects Coordinator for the City of Sacramento, Parks and Recreation Department, Older Adult Services Section where she managed healthy aging projects such as the city and county-wide senior "Neighborhood Walk" program. Ms. Cirill is frequently called upon to serve on advisory committees for associations, philanthropic foundations and various programs within the California Department of Health and Human Services focused on developing strategies to increase physical activity and health among Californians of all ages. Ms. Cirill received a Graduate Certificate in Gerontology from California State University, Sacramento, and she is currently enrolled in the Masters of Science Program in Kinesiology at California State University, Sacramento.

Promoting Community Walkability

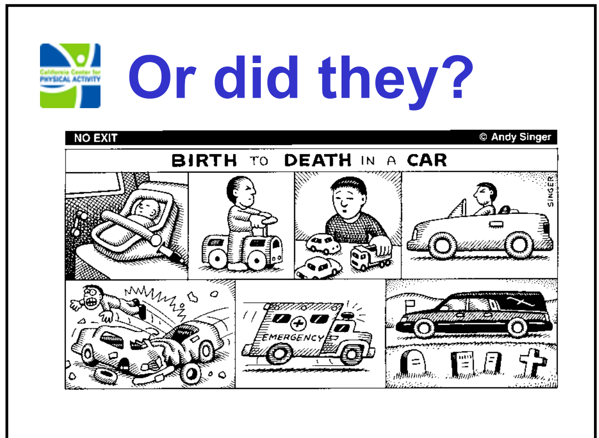
Lisa A. Cirill
CA Center for PA
CA Dept. of Health Services
MCAH Workshops
October 13th and 18th, 2004

Encouraging Children to Walk

- Connection between children's health and community design
- Best practices



Or did they?



Whatever happened to walking?

- Average U.S. household makes 12 trips per day
- 1/4 of all trips are < 1 mile, yet 3/4 of them are made by car

The Built Environment = More Risks Than Just Obesity

- Heart disease
- Cancers
- Diabetes
- Injury
- Asthma
- Bone health
- Depression, stress
- Air quality
- Noise
- Climate change
- Sense of community
- Economic vitality
- Children's development

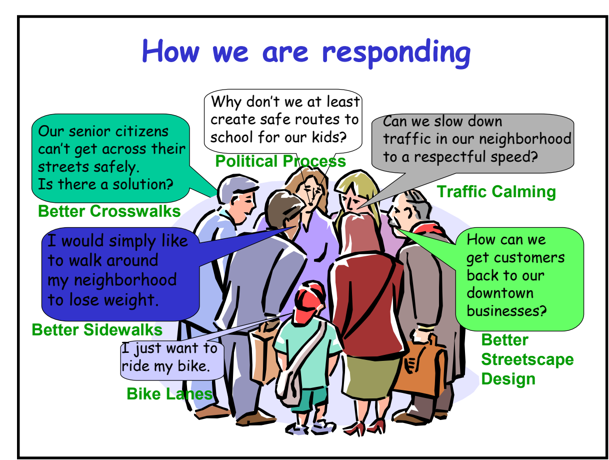
Our kids are in trouble!

- 78% of children fall short of the recommended minimum dose of activity: 60 minutes a day
- 35% of children watch 5+ hours of TV a day (assume pretty sedentary)
- Children don't walk anymore
  - In 1970s, 70% of youngsters walked or rode bikes to school
  - Today, only 14% walk or bike

In a nut shell: Our legacy?

- 1/3 of all children will be diabetics
- Life span shortened by 15 years
- First generation in history who may not live as long as their parents

How we are responding



Walkability must be an option.

Public Health must be involved in land use and transportation decisions *BECAUSE these are also health decisions*

Transportation engineers need to deliver safe, inviting ways to get around on foot

Land use planners need to give people destinations to walk *to* (bring homes, shops, schools and jobs closer together)

Urban designers/architects need to make places more attractive - pay attention to human scale of public places

Public health practitioners need to make sure that land use and transportation decisions are healthy; that places feel safer (traffic safety and violence prevention); that communities want to be active

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Best Practices for Encouraging Walking

- Walk to School Headquarters
- Safe Routes to School (SR2S)
- Walkable Community Workshops w/ SR2S, SR4S, SR2T
- Walk and Bike Across America
- Traffic Tamers
- Healthy Transportation Network

Walk to School Headquarters

Encourage children to walk through awareness

- Walk to School Week aims to get more children walking and biking to and from school:
  In California, 800 + schools participate in Walk to School activities the first week of October each year.
- Parents, teachers, children and community leaders work together to plan activities
- Activities focus on safety skills, community design, traffic hazards and air quality to demonstrate how easy walking is and the steps needed to create more walkable communities

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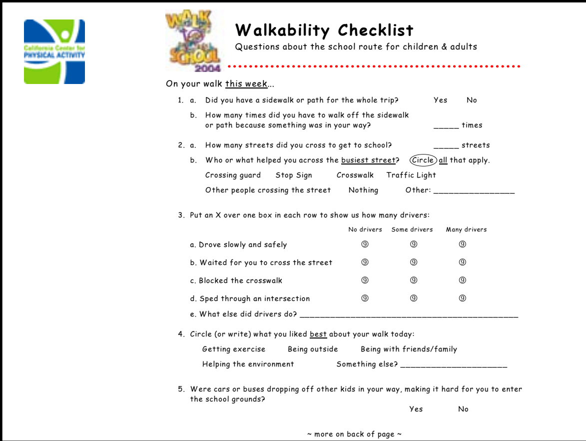
Walk to School Resources

- Starter-kit (poster, brochures, etc.)
- Walkability checklists (14 languages)
- Teleconference calls w/ local coordinators
- Incentives
- Kids' Plates mini-grants

www.cawalktoschool.com



Walkability Checklist

Questions about the school route for children & adults

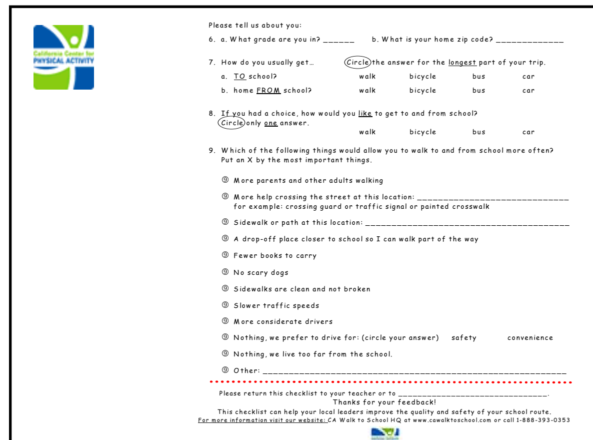
On your walk this week...

1. a. Did you have a sidewalk or path for the whole trip? Yes No
   b. How many times did you have to walk off the sidewalk or path because something was in your way? _____ times
2. a. How many streets did you cross to get to school? _____ streets
   b. Who or what helped you across the busiest street? Circle all that apply.
   Crossing guard Stop Sign Crosswalk Traffic Light
   Other people crossing the street Nothing Other: _______________
3. Put an X over one box in each row to show us how many drivers:

	No drivers	Some drivers	Many drivers
a. Drove slowly and safely	⑨	⑨	⑨
b. Waited for you to cross the street	⑨	⑨	⑨
c. Blocked the crosswalk	⑨	⑨	⑨
d. Sped through an intersection	⑨	⑨	⑨

   e. What else did drivers do? ____
4. Circle (or write) what you liked best about your walk today:
   Getting exercise Being outside Being with friends/family
   Helping the environment Something else? ____________________
5. Were cars or buses dropping off other kids in your way, making it hard for you to enter the school grounds?
   Yes No

~ more on back of page ~



Please tell us about you:

6. a. What grade are you in? ______ b. What is your home zip code? _____________
7. How do you usually get… Circle the answer for the longest part of your trip.
   a. TO school? walk bicycle bus car
   b. home FROM school? walk bicycle bus car
8. If you had a choice, how would you like to get to and from school? Circle only one answer.
   walk bicycle bus car
9. Which of the following things would allow you to walk to and from school more often? Put an X by the most important things.
   ⑨ More parents and other adults walking
   ⑨ More help crossing the street at this location: ______________________________
   for example: crossing guard or traffic signal or painted crosswalk
   ⑨ Sidewalk or path at this location: ____
   ⑨ A drop-off place closer to school so I can walk part of the way
   ⑨ Fewer books to carry
   ⑨ No scary dogs
   ⑨ Sidewalks are clean and not broken
   ⑨ Slower traffic speeds
   ⑨ More considerate drivers
   ⑨ Nothing, we prefer to drive for: (circle your answer) safety convenience
   ⑨ Nothing, we live too far from the school.
   ⑨ Other: ____

Please return this checklist to your teacher or to ______________________________.
Thanks for your feedback!
This checklist can help your local leaders improve the quality and safety of your school route.
For more information visit our website: CA Walk to School HQ at www.cawalktoschool.com or call 1-888-393-0353

Safe Routes to School

Encourage children to walk by creating safe places

- Promoting non-motorized trips to and from school: Feet, Bikes, Skateboards and Scooters
- Ultimately: create places and a culture for all to safely walk and bike
  - Education
  - Engineering
  - Enforcement
  - Environment
  - Equity
  - Encouragement
  - Enrichment

Safe Routes to School

- Legislation: On September 9, 2004 Governor Schwarzenegger signed SB 1087 (Soto) extending the Safe Routes to School program for three more years.
- The program provides funding through Caltrans grants for construction projects near schools, with the intent of increasing pedestrian and bicyclist safety and improving the environment for non-motorized transportation to and from school.
- Safe Routes to School Trainings

Walkable Community Workshops

Encourage walking by uniting key stakeholders

- Educate participants on community design
- Let participants experience the environment via walkability audit focused on school connections
- Engage participants in consensus building
- Establish recommendations for next steps

Walkable Community Workshops

Safe Routes to School; Safe Routes for Seniors; Safe Routes to Transit

Walk and Bike Across America

Encourage children to walk through interactive game

- An interactive web-based game to encourage students to walk
- Students track miles they spend walking and biking to and from school
- Students log their miles onto the web site and visit a U.S. destination

Traffic Tamers

Encourage children to walk through education

- The goal of Traffic Tamers is to increase children's independent mobility by creating vibrant, safe streets
- Six week 'starter event':
  — Kids sign up adults to be "Tamed-n-Trained"
  — Kids undertake a challenge to walk to or from school 10 times in two weeks
  — Kids keep a record of the adventures they have walking in an "Adventure Diary"

Pace Car:
Adults sign a pledge to drive within the speed limit for one year with a badge indicating their pledge

CALIFORNIA BICYCLE COALITION

An Innovative Collaboration Among Partners

A Project of the California Center for Physical Activity

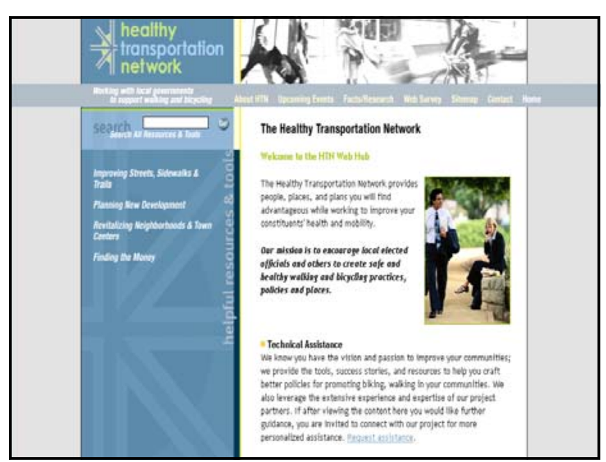
Healthy Transportation Network

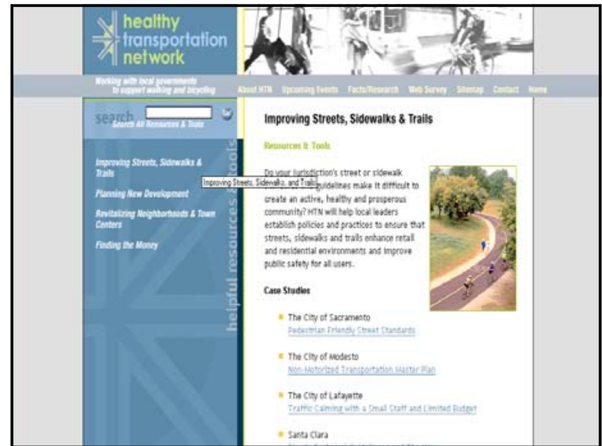
Encourage local officials to improve community walkability

- Clearinghouse of resources to guide elected officials and city managers - *HTN web site*
- Network of experienced walking and bicycling implementers - *HTN Direct Technical Assistance*
- Identify opportunities for HTN's assistance - *HTN Dinner Invitationals*

HTN Categories

1. Improving Streets, Sidewalks and Trails
2. Planning New Development
3. Revitalizing Neighborhoods and Town Centers
4. Finding the Money





During the process of crafting and adopting the new pedestrian friendly street standards, public works officials learned a few valuable lessons. While developers were willing to narrow streets, they were opposed to building larger rights-of-way. Since the new standards include wider bike lanes and planter strips, some of the rights-of-way are larger under the new standards. The local bicycle advocacy group also surprised city officials by advocating for a smaller gutter pan (5' instead of 6') to help narrow the right-of-way. Public works officials figured that an extra foot would not do much to slow traffic and would not be as safe as a wider bike lane.

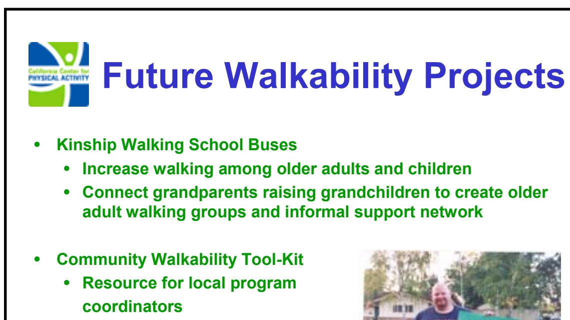
Another lesson had to do with public outreach and education surrounding the new street standards. After initial confusion, the public works department realized the importance of clearly stating who would be responsible for what, and how the new standards would be applied. To help with this, the public works department created implementation recommendations for developers. City officials found it valuable to approach developers for input but made it clear that the new standards were not negotiable.

Finally, the political support of the mayor and city council helped propel the new street standards forward. Their support also helped smooth over many of the concerns from the development community.

For more information, contact
Jesse Gothan, Assistant Civil Engineer
City of Sacramento Department of Public Works
Phone: (916) 264-6897
email: jgothan@cityofsacramento.org,
Sacramento, CA

Sacramento's new Pedestrian Friendly Street Standards:
http://www.pwsacramento.com/traffic/streetrevisions.html

Future Walkability Projects



- Kinship Walking School Buses
  - Increase walking among older adults and children
  - Connect grandparents raising grandchildren to create older adult walking groups and informal support network
- Community Walkability Tool-Kit
  - Resource for local program coordinators

Erica Monasterio, MSN, FNP is a Family Nurse Practitioner in the Division of Adolescent Medicine at University of California, San Francisco, and Clinical Professor of Pediatrics and Nursing. She is the Nurse Faculty in the Leadership Education in Adolescent Health program, an interdisciplinary training program designed to enhance health professional's abilities to provide health, mental health and social services to youth, as well as to develop and implement programs on a local, state and national levels to promote wellness among young people.

Ms. Monasterio's expertise is in working with high risk youth in community based settings and developing and monitoring primary care programs to serve marginalized youth. She is also a trainer whose focus has been training health care and social service professionals to increase their knowledge base, sensitivity and skills in working with adolescent clients, particularly in the areas of adolescent development, risk and resilience, sexuality, sexual minority youth, substance involvement and designing interventions to support youth in modifying their risk. Her special interests are in developing accessible, interdisciplinary, community-based services for youth and integrating mental health, reproductive health, STD and HIV services for youth into primary care settings.

Improving the Health and Well-being of Adolescents: Shifting the Paradigm

Erica Monasterio, MSN, FNP
UCSF Division of Adolescent Medicine

What *REALLY* is our goal?

- ***COMPETENCE*** in academic, social and vocational areas
- ***CONFIDENCE*** or a positive self-identity
- ***CONNECTIONS*** to family, peers, school and community
- ***CHARACTER*** or positive values, integrity & moral commitment
- ***CARING AND COMPASSIONATE***

Not just problem free….

But FULLY PREPARED

What is "Youth Development"

A process which prepares young people to meet the challenges of adolescence and adulthood through a coordinated, progressive series of activities and experiences which help them to become socially,morally, emotionally, physically and cognitively competent. Positive youth development addresses the broader developmental needs of youth, in contrast to deficit-based models which focus solely on youth problems.

Critical Elements of Youth Development Programs

Youth Development Programs must provide youth with a sense of:

- Safety and structure
- Belonging and membership
- Self-worth and an ability to contribute
- Independence and control over one's life
- Closeness and several good relationships
- Competence and mastery

Primary Components in Youth Development

- Focus on education and life skills
- Improve opportunities for employment and community service
- Build on youths' assets and strengths
- Develop positive peer and adult relationships
- Value youth as resources
- Focus on the person rather than the behavior
- Foster hope for the future

Historical Examples of Youth Development Programs

- YMCA/YWCA
- Boys and Girls Clubs of America
- 4-H Clubs
- Big Brothers/Big Sisters
- Boy Scouts/Girl Scouts

What is Resilience

"Resiliency can be defined as the capacity to spring back, rebound successfully, adapt in the face of adversity, and develop social and academic competence despite exposure to severe stress…

Or simply the stress of today's world."

"Resiliency is an innate self-righting and transcending ability within all children, youth, adults, organizations, and communities."

- From "The Philosophy of Resiliency in Action, Inc." by Nan Henderson, Bonnie Benard, Nancy Sharp-Light

Findings from the National Longitudinal Study on Adolescent Health

- Parent/family connectedness and perceived school connectedness were protective against every health risk behavior measure
- Perceived student prejudice at school was associated with emotional distress and suicidality among both younger and older student
- Parental expectations for school achievement were associated with lower level of health risk behaviors

Comparing the Perspectives: Risk and Resilience

	<u>Risk</u>	<u>Resilience</u>
Unit of Change	**Individual**	**Environment**
Focus	**Deficits**	**Assets and Strengths**
Goal	**Problem prevention**	**Healthy development**
Attitude toward youth	**Youth-as-Problem/Recipients**	**Youth-as-Resources/ Partners**
Attitude toward diversity	**Euro centric**	**Multicultural**
Strategies emphasize	**Program and content**	**People and Place**
Locus of control	**External**	**Internal**
Philosophy	**Control**	**Connectedness**
Whose needs are met?	**Adults'**	**Young peoples'**

Protective Factors (Assets)

"Protective factors…moderate, buffer, insulate against and thereby do mitigate the impact of risk on adolescent behavior development."

- Richard Jessor, PhD, Institute of Behavior Science, University of Colorado

Clusters of Protective Factors

- Temperament of the individual
- Skills and values which allow the individual to maximize their abilities
- Characteristics and care giving style of parents which foster self esteem and competence
- Supportive adults who foster trust
- Opening of opportunities at major life transitions

(Werner EE, 1992)

How Do We Define "What Works"?

- Consider programs which have done an outcome evaluation
- Evaluations are generally focused on reduction of risk behaviors or measurable outcomes of risk behaviors (i.e. participants delaying first or subsequent pregnancies)

Characteristics of Programs that Work

- There are some common characteristics
- Some characteristics are specific to the specific risk which the evaluation (but not necessarily the program) focuses on

Characteristics of Programs that Work

- Intensive individualized attention;
- Community-wide multi-agency collaborative approaches;
- Early identification and intervention;
- Locus in schools
- Administration of school programs by agencies outside of schools

Dryfoos, Joy Adolescents at Risk:
Prevalence and Prevention, 1990

Characteristics of Programs that Work

- Linkage to programs outside of schools;
- Arrangements for training of involved adults;
- Social skills training;
- Engagement of peers in interventions;
- Involvement of parents;
- Links to the world of work

Dryfoos, Joy. Adolescents at Risk:
Prevalence and Prevention, 1990.

What's Different About Asset Building?

An asset-building perspective transforms the way communities address youth issues and think about youth. Some of the difference are:

Common Approaches to Youth Issues		An Asset-Building Approach
Focusing on problems	....	Focusing on the positive
Pointing fingers and assigning blame	....	Taking personal responsibility for making a difference
Reactive	....	Proactive
Heavy reliance on professionals	....	Mobilizing the public as well ad all youth-serving organizations in a community
Viewing youth as problems	....	Viewing youth as resources
A crisis-management mentality	....	A vision-building perspective
Competition among sectors and service providers	....	Cooperation within the community
Heavy reliance on public funding to provide service	....	Unleashing the caring potential of all residents and organizations so that public resources can be focused on areas of greatest need
Despair about entrenched problems	....	Hope that change is possible

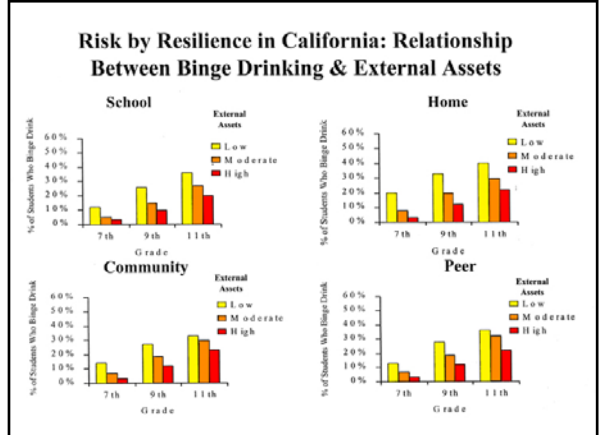
From Peter L. Benson, *Uniting Communities for Youth* (Minneapolis, MN: Search Institute, 1995).

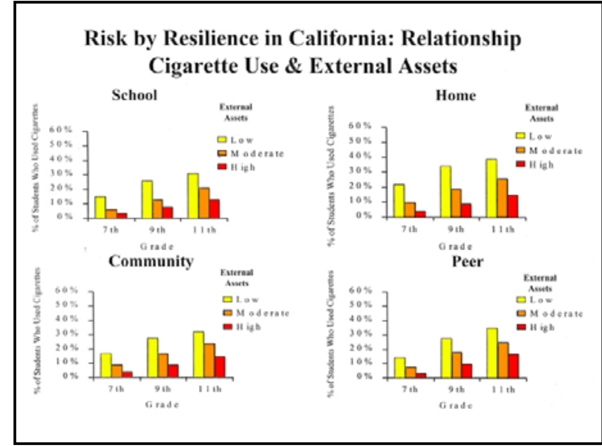
Creation of Alternatives

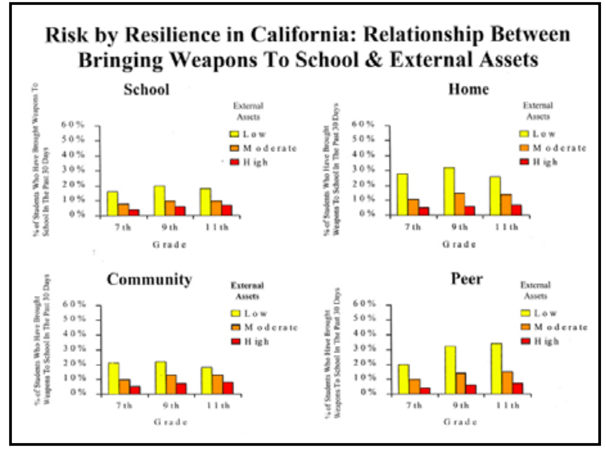
- Alternative environments
- Alternative roles
- Alternative social networks
- Alternative activities

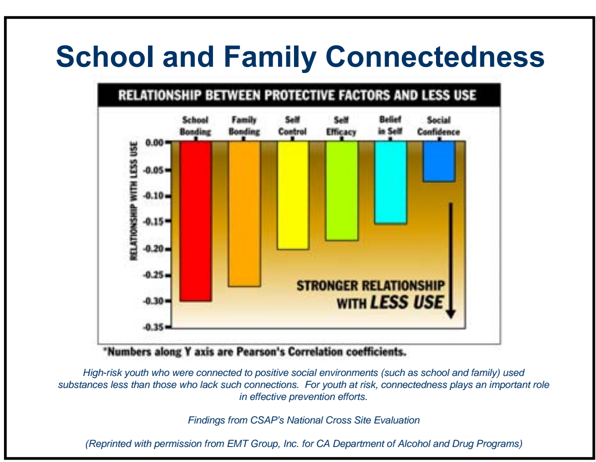
Examples of Effective Pregnancy Prevention Programs

- Programs that focus on sexual antecedents of adolescent pregnancy
- Programs that focus on non-sexual antecedents of adolescent pregnancy
- Programs that focus on both









High-risk youth who were connected to positive social environments (such as school and family) used substances less than those who lack such connections. For youth at risk, connectedness plays an important role in effective prevention efforts.

Findings from CSAP's National Cross Site Evaluation

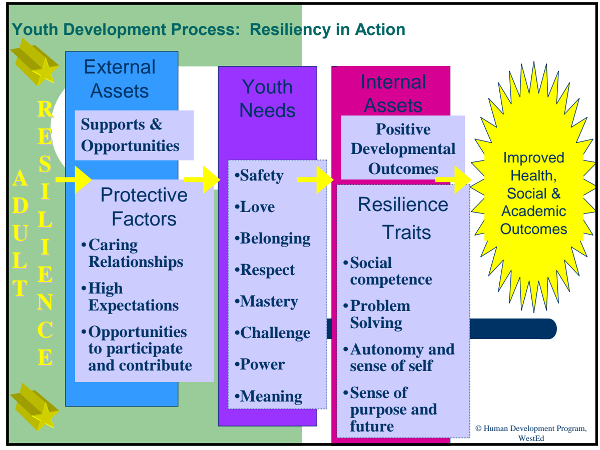
(Reprinted with permission from EMT Group, Inc. for CA Department of Alcohol and Drug Programs)

Youth Involvement: From Being Part of the Problem to Being Part of the Solution

- Youth empowerment
- Meaningful role
- Legitimacy of having “been there”
- Opportunities for both mentee and mentor role
- Adult skills building/attainment

Challenges of Youth Involvement

- Recruitment from target population brings the problems of the target population
- Need for intensive training and adult support
- Must formulate developmentally appropriate expectations
- Loss of peer status for peer counselors/educators



The National Initiative to Improve Adolescent Health (NIIAH)

- A collaborative effort to improve the health, safety, and well-being of adolescents and young adults (ages 10-24)
- Launched in a unique partnership of two federal agencies:
  - Centers for Disease Control and Prevention’s Division of Adolescent and School Health (CDC-DASH)
  - Health Resources and Services Administration’s Maternal and Child Health Bureau’s Office of Adolescent Health (HRSA-MCHB)

Purpose of NIIAH

- To help guide state and local agencies and organizations in:
  - Community coalition building
  - Needs and assets assessment
  - Priority Setting, Program Planning Implementation and Evaluation
- To build national efforts for improving adolescent health

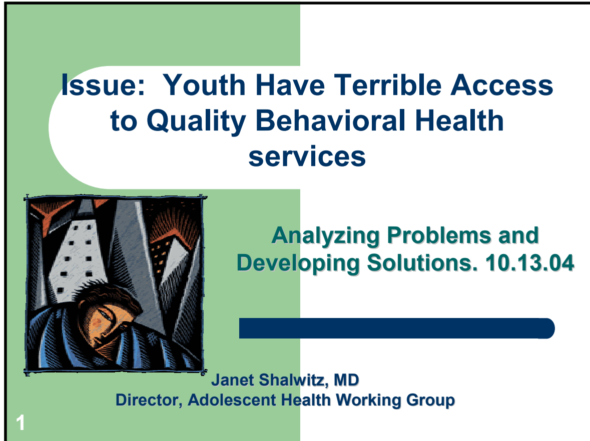
Grounded in Healthy People 2010

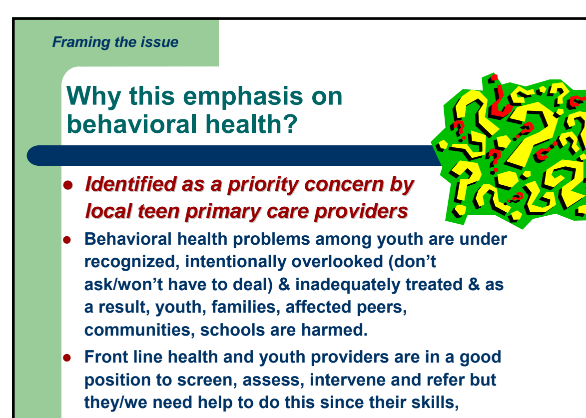
- A comprehensive set of national disease prevention and health promotion objectives that measure the nation's progress over time
- Two overarching goals of Healthy People 2010:
  - Increase quality and years of life
  - Eliminate health disparities

Mobilizing to Eliminate Health Disparities

www.healthypeople.gov

Dr. Janet Shalwitz began working with youth as a peer educator in the late 1960s. She received her medical degree from SUNY Buffalo and her pediatric and adolescent medicine training at the Children's Hospital of Buffalo and the University of California, San Francisco Department of Pediatrics. Over the last two decades, Janet has been involved in many aspects of youth health work including the provision of direct clinical services, clinic and program administration, training and education, epidemiologic and clinical research, and policy development and advocacy. In September 2001, after 20 years in the San Francisco Department of Public Health, Janet was awarded a Soros Advocacy Fellowship for Physicians and became the Director of the Adolescent Health Working Group (AHWG), a community collaborative committed to improving youth health and adolescents' unimpeded access to quality health programs and services. Janet is also Professor of Pediatrics at UCSF where she is an active member of the clinical faculty and advisor to medical students and residents. Janet 's current interests include developing of an Adolescent Health Provider Toolkit, improving youth access to behavioral health services and ensuring health insurance coverage for young adults. Janet and her husband Burt have raised 3 terrific children who are now 27, 24 and 19 years.





Framing the issue

Why this emphasis on behavioral health?

- Youth & parents trust front line health providers & want more guidance & help than they are currently receiving.
- We don't have a common language and a basic set of guidelines to further policy and multi/interdisciplinary & practice improvements.
- The role of front line health providers (with regard to behavioral health) is not understood by PCPs, BHPs, child-serving institutions and agencies and greater clarity is needed.

3

Framing the issue

Definition: Behavioral Health Care (BHC)

In the past, mental health care, treatment for substance abuse, & behavioral medicine have been separate fields. In the old days, many psychotherapists knew little about substance abuse, many drug & alcohol counselors knew little about psychotherapy, & neither group knew much about applying psychological interventions in medical settings. This fragmentation often interfered with providing effective treatment for patients. ``Behavioral Health'' is a term that has recently been coined to encompass all 3 fields as part of an attempt to improve the quality of care which patients receive. BHC is most commonly provided by Psychologists, Psychiatrists, Social Workers, and Counselors but can also be provided by Physicians and Nurses who have appropriate training.

http://www.behavioralhealthassoc.com/ Health_Care_Providers/health_care_providers.html

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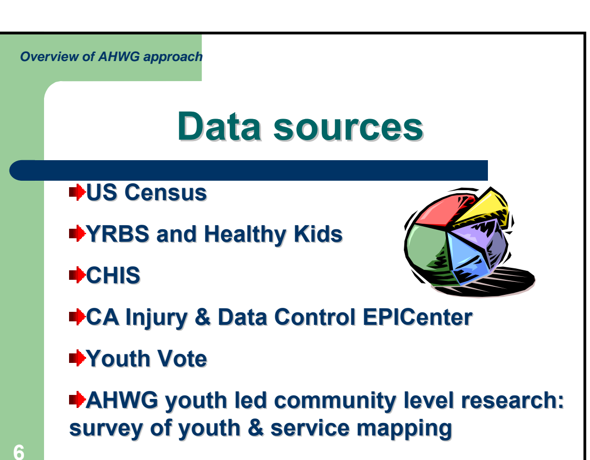

Overview of AHWG approach

Convened experts & interested parties

- SF Health Department – public health, primary & behavioral health care
- UCSF/Langley Porter – psych, peds
- Hospitals – Kaiser, CPMC, St. Mary's
- Health Plans – Blue X, SFHP, Kaiser
- CBOs – youth programs
- Schools
- Youth

7

AGENDA SETTING

We set a lofty mission

- To address pressing issues around youth and their mental well-being.
- To make sure that SF teens with situational, early and or previously unrecognized or under-treated behavioral and emotional health risks/problems are appropriately screened, assessed and cared for by school, hospital and community-based health care providers so that they are as healthy, thriving and fully functional as possible.

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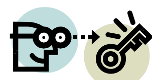
AGENDA SETTING

And…then we seized an opportunity

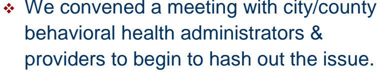


- Child Crisis withdrew *(with no advanced warning after 15 + years)* 24/7 services to privately insured kids seen in the medical setting!!!
  - EDs went a little crazy (ED, Peds, Psych, SW)
  - Front line staff (especially residents) got scared
  - People fought over who wouldn't respond to the kids
  - Community agencies got confused
  - Kids got screwed; thankfully no one died

9

Safety First

Switching gears - Safety First: Preventing Youth Suicide in SF



GOAL: Respond to overwhelming community concern about suicide prevention & crisis intervention.

- We convened a meeting with city/county behavioral health administrators & providers to begin to hash out the issue.
- A smaller committee was convened to develop community-based action steps to address suicide crisis response as a community priority and to organize a community meeting, *Safety First: Preventing Youth Suicide in San Francisco*.

10

Safety First

Safety First – Our Hopes

- Increase knowledge about health plans, hospitals, community (youth) crisis services
- Establish a level of accountability by compiling and publishing crisis response policies/procedures by SFUSD, SFPD, CCCS, Kaiser, UCSF, CPMC, St. Mary's, MHN, UBH, Blue Cross, crisis lines/services
- Develop tools and resources for community providers
- Create momentum for ensuring a solid safety net for youth in our community

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Safety First

OUR ACHIEVEMENTS

- Developed & compiled best practices & recent research findings about suicide intervention
  - Engaged teens in research
- Engaged many new local stakeholders in policy and practice activities and established a precedent for future collaborations between the public and private sector to address adolescent behavioral health – contract between MHN and CCCS!!
- Learned and disseminated crisis response policies from the SF Police Dept, SF School District, behavioral health plans, hospital EDs, and youth crisis programs and local hotlines.
- Addressed challenges related to stigma & cultural considerations

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Safety First
OUR ACHIEVEMENTS
Developed a foundation for developing new practice tools by using latest research, best practices, local wisdom in a consensus decision-making process
Developed easily adaptable tools and tips templates for programs, organizations and institutions that encounter young people who may be at risk for suicidal crisis.
Established a mechanism for ongoing communication and problem solving with DPH
Ensured a more solid safety net for SF suicidal teens
Ensured that 24/7 Comprehensive Child Crisis Services (CCCS) was available for consultation to all providers seeing suicidal teens regardless of their insurance status.
Local hospitals developed protocols for crisis intervention
Solidified widespread community attention & support
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Safety First
WE CREATED COOL TOOLS
Taking Care of Myself - A Youth Follow Up Plan
Techniques for Talking with a Suicidal Youth
Myths and Facts About Youth Suicide
San Francisco Crisis Resources for Teens
Responding to Youth Suicide Crisis – Quick Reference
All resources can also be downloaded from our website: www.ahwg.net/headsup.htm.
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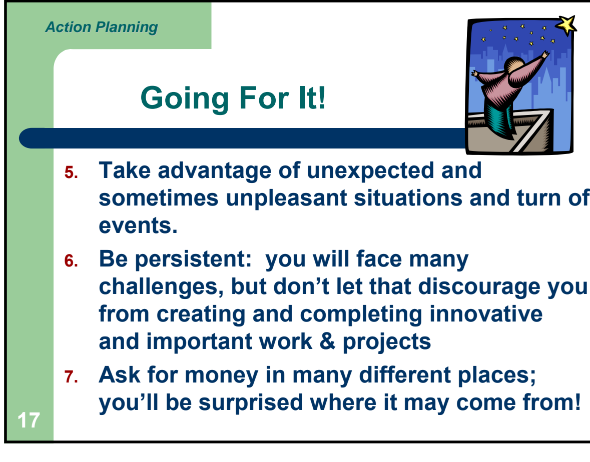
Current Activities
And now…we're moving beyond crisis!!
Communication and problem solving via quarterly meetings with people who can make a difference: minor consent, ACCESS Line, training, communication between DPH BH & primary care & ED staff, transitional age youth
Trainings – adolescent depression
Standards – Essential Components
Practice Tools: Adolescent Provider Toolkit – Behavioral Health Module
15

Action Planning
Going For It!
1. Research data, best practices AND wisdom
2. Collaborate with and listen to old and new partners – identify different people for behind the scenes and up- front work
3. Take a multifaceted yet practical approach: attack from many angles (policy, outreach, & education)
4. Keep track of stories & cases and use them for policy & advocacy; sometimes they're more effective than the facts!!!!!
16


Action Planning
Going For It!
5. Take advantage of unexpected and sometimes unpleasant situations and turn of events.
6. Be persistent: you will face many challenges, but don't let that discourage you from creating and completing innovative and important work & projects
7. Ask for money in many different places; you'll be surprised where it may come from!
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Goodbye!
Thank you!
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EXCLUSIVE BREASTFEEDING PROBLEM ANALYSIS AND INTERVENTION DEVELOPMENT EXAMPLE

(EXAMPLE OF SECTION III C IN A COUNTY'S ACTION PLAN REPORT)

III. C. 2: PRIORITY PROBLEM 2: LOW RATE OF EXCLUSIVE BREASTFEEDING

1. SUMMARY OF THE PROBLEM

- Breast milk is the optimal infant food. It has nutritional properties superior to formula and transmits protective immunoglobulins to the newborn. [1]
- Preliminary research findings demonstrate breast feeding may be protective against increased BMI through adolescence and adulthood.[2]
- The Healthy People 2010 objective is to increase the proportion of mothers who breastfeed their babies to 75% in the early postpartum period, to 50% at 6 months and to 25% at 1 year.
- 57% of women in X County are exclusively breastfeeding postpartum, within the first few weeks[3]
- Local survey results showed that only 68% of Caucasian women in the County chose to breastfeed and 30% of African American Women.
- Among 150 women surveyed in the county, the two most often cited reasons for not breastfeeding were embarrassment about breastfeeding in public and feeling there was no benefit to breastfeeding. Women who were planning to return to work were also less likely to breastfeed. [4]

2. DESCRIPTION OF THE PLANNING GROUP AND ITS PROCESS

The Intervention Planning Workgroup of the Breastfeeding Coalition was formed at the end of the Needs Assessment year, and consists of staff from MCAH, WIC, Public Health Nursing, and CPSP and a lactation specialist from the local nurses association. (See Appendix C for a complete list of planning group members). A survey and focus groups were used to obtain community level input. Following identification of problem analysis pathways a representative from the local chamber of commerce and physician and nurse

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[1] U.S. Preventive Services Task Force (USPSTF). Behavioral interventions to promote breastfeeding: recommendations and rationale. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003 Jul 27. p. 11

[2] Parson TJ, Power C, Manor O. Infant feeding and obesity through lifecourse. *Arch Dis Child*. Sept. 2003; 88 (9): 793-4.

[3] Maternal and Child Health Branch, California Department of Health Services

[4] X County survey results (2004)

representatives from the local health plan were asked to come to a session to discuss intervention development.

A. The epidemiologist gave a brief overview of the data findings, from last year's report
B. A health educator went over the survey and focus group results
C. The epidemiologist was the lead and asked the workgroup group members to brainstorm possible precursors for low breastfeeding rates
D. After some discussion, the planning group placed the precursors in the appropriate categories in the diagram and began identifying causal pathways
E. Three causal pathways and four intervention points were identified as described in Section 4 below and "Figure 1. Exclusive Breastfeeding Problem Analysis Diagram".
F. The group took its work to our full Coalition and MCAH staff coordinated the development of interventions and the identification of member's roles and responsibilities in intervention planning and implementation. See "Figure 2. The Community Plan to Promote Breastfeeding," (Logic Model) below.

3. PROBLEM ANALYSIS DIAGRAM:

The Group began with a breastfeeding problem analysis diagram from the FHOP website. After reviewing the local data, data from the surveys, focus groups and the literature review, the group adjusted the diagram to reflect our local problem. The pathways and intervention points, although initially developed on separate sheets, have been entered by MCAH staff on the Problem Analysis diagram. See "Figure 1. Exclusive Breastfeeding Problem Analysis Diagram."

4. SUMMARY OF THE RATIONALE FOR THE SELECTED INTERVENTIONS

- Indicator data demonstrated that only 57% of women in X County were exclusively breastfeeding at discharge. Because some planning group members expressed concern over how well these data actually reflect breastfeeding rates in X county, the group decided to gather additional local information about breastfeeding through a survey.
- Exit Surveys were conducted at two hospitals in the county to collect data on exclusive breastfeeding at time of hospital discharge. A Public Health Nurse visited the women before discharge and either asked the survey questions or left the survey with the women. The survey asked what decision the woman had made about breastfeeding and her two main reasons for her decision. Demographic data was collected. Additional data was obtained from WIC regarding rates of women who report

exclusive breastfeeding 3 months following the delivery of their infant. The survey questions and a summary of the results can be found in Appendix D.

- A literature review showed that a number of factors contribute to the problem: provider's attitude about breastfeeding (lack of advocacy/referral), lack of parental education about breastfeeding benefits and techniques, no staff support within the hospital and after discharge, and no support from the family. The literature also revealed that there is a lack of knowledge among health care professionals, lack of knowledge among the general population, and the lack of consistent information regarding breastfeeding.[5]
- A national survey indicates that many women are aware of breastfeeding, but by the time of discharge, only a small percentage are exclusively breastfeeding, and many have chosen to adopt formula, over breast milk[6].
- Focus groups were conducted with women who were recruited at two WIC sites and two supermarkets. They received Safeway food certificates for participating. These focus groups again demonstrated women's general concern regarding breastfeeding in public: "There is nowhere private in a restaurant or shopping mall to breastfeed. It's much easier to just give the baby a bottle." "I just don't like when people stare at me." Focus groups also showed that women found it difficult to exclusively breastfeed upon returning to work.[7]
- One literature article stated that education and support interventions to promote breastfeeding appear to improve breastfeeding initiation and maintenance up to 6 months. Educational sessions that review the benefits of breastfeeding, principles of lactation, myths, common problems, solutions, and skills training appear to have the greatest single effect. [8]

Based on this analysis, the group decided that they would focus on the following intervention points. Because the Coalition has a broad spectrum of members, the group felt that different members of the Coalition would be called upon to address the different intervention points. The intervention points are

A. providers' knowledge and practice
B. hospital policy (local)
C. breast feeding environments/policies

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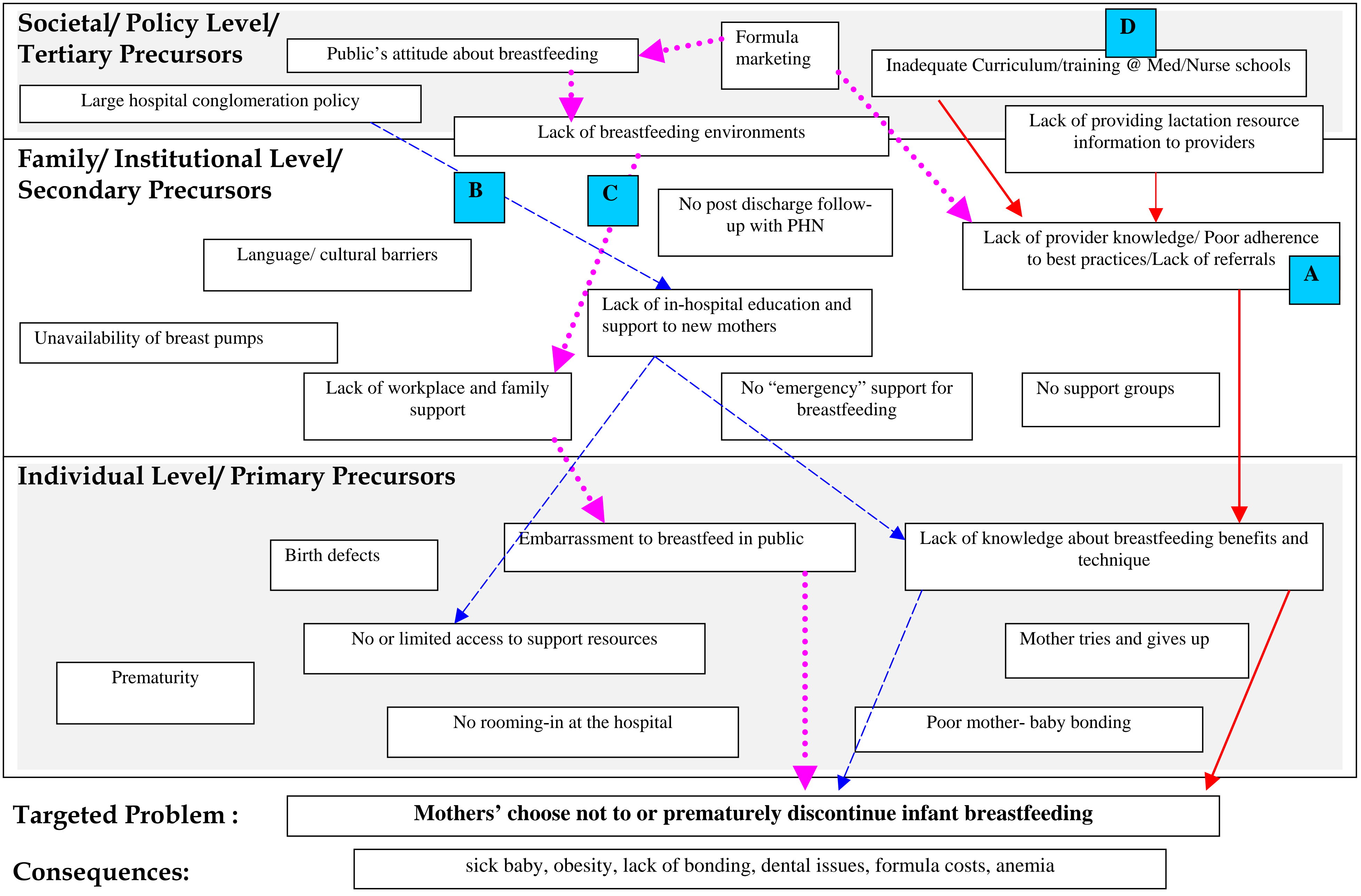
[5] Li R, Hsia J, Fridinger F et al Public beliefs about breastfeeding policies in various settings. *J Am Diet Assoc* July 2004; 104(7): 1162-8.
[6] Li R, Hsia J, Fridinger F et al Public beliefs about breastfeeding policies in various settings. *J Am Diet Assoc* July 2004; 104(7): 1162-8.
[7] PHN focus group results report, 2003
[8] Guides J, Palda V, Westhoff C et al Effectiveness of Primary Care-Based Interventions to Promote Breastfeeding. *Ann Fam Med* 2003; 1(2): 70-8.

D. It was also decided that through members of the Coalition an attempt will be made to influence the curriculum content of the local nursing school

5. Intervention Development / Logic Model

The Coalition is in the process of planning and implementing identified interventions. See “Figure 2. The Community Plan to Promote Breastfeeding.”

FIGURE 1. EXCLUSIVE BREASTFEEDING PROBLEM ANALYSIS DIAGRAM



<u>Causal Pathways for Low Rates of Exclusive Breastfeeding in X County</u>:
The following is an alternate method of representing causal pathways from the problem analysis diagram. This is not required. It is intended to be an example of how one might illustrate causal pathways if the word processor used for the problem analysis diagram is unable to insert arrows properly into the diagram.

Causal Pathway 1:

Formula marketing has a direct influence on the *public's attitude about breastfeeding*. This leads to a *lack of environments conducive to breastfeeding* in the community, and a *lack of workplace and family support*. This lack of support further contributes to a *mother's sense of embarrassment* and hesitation to breastfeed in public, making her less likely to choose not to breastfeed, or to discontinue breastfeeding of her infant.

Formula Marketing→ public's attitude about breastfeeding→ lack of breastfeeding environments → lack of workplace and family support → embarrassment to breastfeed in public → mothers choose not to breastfeed/discontinue breastfeeding prematurely

Causal Pathway 2:

Formula marketing AND *lack of medical/nursing school curricula* AND *lack of providing lactation resource information* affects *providers' knowledge about breastfeeding* in general, and *decreases the likelihood that providers will adhere to best practices* (which support breastfeeding over formula feeding), nor will providers refer patients to breastfeeding services. This has a direct impact on *mothers' knowledge about the benefits of breastfeeding, and the proper techniques.* As a result, the mother may try to breastfeed and give up, or may choose not to breastfeed altogether.

Formula marketing AND lack of medical/nursing school curricula AND lack of providing lactation resource information → lack of provider knowledge/poor adherence to best practices/lack of referrals → lack of knowledge about breastfeeding benefits and technique → mothers choose not to or prematurely discontinue breastfeeding

Causal Pathway 3:

A large *hospital conglomeration policy* contributes to an overall *lack of in-hospital education and support to new mothers*. This in turn, creates an overall *lack of knowledge about breastfeeding benefits and technique among new mothers*, and also limits their *access to breastfeeding support resources*.

Large hospital conglomeration policy → lack of in-hospital education and support to new mothers → mothers' lack of knowledge about breastfeeding benefits and technique AND limited access to support services → mothers choose not to or prematurely discontinue breastfeeding their infants.

TIPS for a Successful Problem Analysis and Identification of Points of Intervention

Planning Group

- Assign roles to people best suited to a task. Determine where expertise is necessary. Who will facilitate a meeting with the planning group? Who will present data to the planning group?

- Assure a representative, planning group with people from various backgrounds who can contribute to a discussion about the problem, its causes and possible interventions. Include representatives who can give insights about those actually experiencing the problem.

- Suggested script for introducing the problem analysis process to your planning group:

  "Our MCH program is required to create a problem analysis diagram for all of the priority health problems that have been identified in our Title V Needs Assessment Report. This diagram is intended to present a picture of the problem as we see it in our community. It provides a simple way to explain our best conclusions as to the causes of or risk factors associated with the problem in our community. It is also intended to present a more comprehensive understanding of how larger societal, local community and individual characteristics interact in creating the problem. The process also requires that we define the short or long term consequences of not intervening. We think that this understanding will help us to develop rational strategies, realistic objectives and evaluation measures that will reflect the impact of our strategies."

Problem Analysis/Diagram Development

- Turn the problem into a clear statement. Instead of placing "Breastfeeding" in the target indicator/problem area of the diagram, state "Mothers choose not to continue breastfeeding." Try to be as specific as possible.

- Use the correct levels of the diagram for your precursors. Using the correct levels will assist in a useful problem analysis. The levels help in identifying whether and how the factors are related to each other.

  What do the three levels include? The three levels reflect different domains that can impact an individual.

  1. The first level includes factors relevant to the particular individual or group of individuals with the identified problem, e.g., genetic factors, biological factors and personal behaviors that are directly or indirectly related to the identified problem.
  2. The second level includes factors in the environment/community in which the individual(s) resides, that affect the individual or are related to individual level factors e.g. family poverty, poor quality schools, and inadequate health resources.

3. The third level includes larger societal factors that have a more global affect on the health and well-being of anyone exposed to their effects e.g. state or national conditions, policies or attitudes.

Can the same factor be active at more that one level?
Yes, depending on whether your planning group thinks that there are ways to intervene at the local level, e.g., there may be lack of a national policy on universal health insurance for children but county or city action can be initiated to redirect local funds to provide insurance. In the latter case, lack of insurance can be a factor at both the local institution level and the societal level.

How are the levels useful?
The levels can assist in identifying whether and how factors relate to one another. This in turn helps us to make decision about where to intervene, i.e., directly with the affected individuals, with the family or local institutions or through policy or legislative action at the state or national level.

- To determine causal pathways answer the question, "How do these factors relate to one another and the problem statement?" Place your causal pathways on the diagram or use separate sheets to draw pathways. Once a pathway is visualized, it presents possibilities for interventions.

  How are decisions made about those causal pathway(s) in which to intervene and best intervention point(s)?
  This is the time to consider findings from the peer review literature, risk analysis and local input, such as special population concerns or resource availability.
  - Use literature reviews, survey results, interviews with experts and relevant data to assess the information presented in the diagram so far.
  - Know your county resources—what can your county feasibly do with its resources? How many intervention strategies can be accomplished? In larger counties or those with more resources or where collaborations are able to tap multiple resources, more than one pathway and/or several points of interventions can be addressed.
  - Be sure to keep a record of the factors used in intervention decision-making so that you can summarize the process and supporting factors in your Action Plan Report.

FIGURE 2. LOGIC MODEL: COMMUNITY PLAN TO PROMOTE BREASTFEEDING

Problem Statement: Mothers choose not to exclusively breastfeed or prematurely discontinue infant breastfeeding

INPUTS (Resources)	OUTPUTS		OUTCOMES – IMPACT		
	Activities	Participation (those affected)	Short	Intermediate	Long-Term
• Breastfeeding Coalition • Breastfeeding Promotion Grant $(60,000) • Breastfeeding promotion is a priority Maternal and Child Health Program function • Staff with expertise in breastfeeding information • Access to staff with assessment skills • Liaison with County Hospital • Relationship with local provider organization / professional groups	• Assess provider breastfeeding promotion/education policies & practices • Develop culture appropriate breast-feeding promotion materials • Provide lactation resource information to providers • Educate providers • Develop system of Provider referral to breastfeeding classes • In-hospital education of new mother • Collaborate w/ local Hospital to develop "Baby-Friendly" policy • Collaborate on nursing school breastfeeding curriculum • Promote "Baby-Friendly" workplace policy for City of ___ • Educate businesses about "baby-friendly" practices • Develop directory of businesses friendly to breastfeeding • Promote "Baby-Friendly" rest area at County Fair	• OB-GYN Physicians • Family Practice Physicians • Provider Staff • Pediatricians • Businesses/ business organizations • City and County representatives • Pregnant Women • Lactating Women • Local Hospital Staff • ______ College Nursing Program Faculty and Staff • Local Medical Association	• Completed assessment of provider policies and practices • 95% of providers educated about breastfeeding • 90% of providers have educational material displayed in their offices • 25% of businesses display "Baby-Friendly" stickers • 95% of new mothers receive in-hospital nurse education • Directory of "Baby Friendly" businesses on internet • Establishment of "Baby-Friendly" rest area at County Fair • Nursing School curriculum incorporates breastfeeding • ↑ (from baseline) provider referrals to lactation resources	• ↑ # / % (from baseline) of women completing a breastfeeding class who choose to breastfeed • "Baby-Friendly" policy adopted by local Hospital • Local College Nursing Program incorporates new curriculum • 50% of businesses will display baby friendly stickers • "Baby-Friendly" policy adopted by City of _______ • 50 % of women choose to breastfeed exclusively at hospital discharge • 90% of providers implement a breastfeeding education policy	• 70 % of mothers in the county choose to breastfeed at hospital discharge • 50% of mothers continue to breastfeed up to 6 months of age (HP2010) • Better infant health outcome as measured by: anemia rates

Model Adapted from Taylor-Powell, E. (1996). The Logic Model: A Program Performance Framework, University of Wisconsin-Extension.

OPTIONAL BOXES FOR LOGIC MODEL

ASSUMPTIONS

- Breast milk is the optimal infant food. It has nutritional properties superior to formula and transmits protective immunoglobulins to the newborn.
- Lactation resources are available in the community
- Although previous attempts to influence African American women's intent to breastfeed have been unsuccessful in this community, successful programs have been reported in the literature

ENVIRONMENTAL FACTORS

Negative:

- State budget crisis could result in funding cuts for many members of the Collaborative.
- There is an increase in formula marketing in the media

Positive:

- There is a grant application pending for a program that would increase resources for several members of the Collaborative for breastfeeding promotion