Behavioral Health and Well-being -- Making the Case for Upstream Prevention

Vickie Boothe, MPH
Acting Senior Evaluator
Division of Community Health
ASU 17th Annual Summer Institute
July 20, 2016
Agenda

- Describe Shifting Public Health, Population Health, & Healthcare Landscape
- Discuss Causes of These Shifts
- Introduce the Social Determinants of Health (Causes of Causes)
- Provide Information of New Resources and Tool for Better Understanding and Addressing the Causes of Causes
- Describe Successful Applications of the New Resources and Tools
Testing Our Knowledge

1. According to the 2015 World Bank’s Ranking of Life Expectancy (LE) among the top 100 countries, the U.S. ranks:
   a. 19th
   b. 35th
   c. 53rd

2. The U.S. subpopulation with currently declining LE and rising mortality rates is:
   a. Non-Hispanic Whites
   b. Non-Hispanic Blacks
   c. American Indian/Alaska Natives
   d. Hispanics

3. The declines in LE for this subpopulation is primarily driven by increases in which of the following leading causes of deaths?
   a. Diabetes Mellitus
   b. Lung Cancer
   c. Drug and Alcohol Poisonings
4. In some U.S. cities, differences in LE for residents of “healthier neighborhoods” compared to those in “unhealthier neighborhoods” can been as large as:
   a. 15 years
   b. 23 years
   c. 30 years

5. The number of Americans living in poverty has decreased since the end of the most recent recession six years ago.
   a. True
   b. False

6. The percentage of U.S. apartment residents that are housing insecure is:
   a. 23%
   b. 35%
   c. 49%
8. What percent of Americans could **not** pay for an unexpected $400 expense with savings or credit cards, without selling something or borrowing money:
   a. 17%
   b. 27%
   c. 47%

9. If 100% of Americans has full access to free, high quality healthcare, overall population health could improved by what percentage?
   a. 10%
   b. 20%
   c. 40%

10. Evidenced-based interventions with positive returns on investment have been demonstrated effective in **preventing mental, emotional, & behavioral disorders** among children & young adults are available.
    a. True
    b. False
Q & A Instructions

- Each question will reappear slides throughout the presentation as introductions to the various topics I will cover.

- After I read each reintroduced question, I will ask anyone that thinks they know the answer, to raise their hand.

- The first person correctly answering the question will win a limited distribution prize from the CDC gift store.
What is Life Expectancy?

- Average number of years a newborn can be expected to live given current prevailing mortality rates

- Reliable indicator of overall population health; frequently used for research and public health surveillance

- Useful for comparisons of health status across geographic units (e.g., countries, states) and over time

- More easily understood by general public than other summary measures (e.g., age adjusted mortality rates, years of potential life lost, etc.)
According to the World Bank’s 2016 Ranking of Life Expectancy (LE) among the top 100 countries, which place does the U.S. population occupy?

a. 19\textsuperscript{th}

b. 35\textsuperscript{th}

c. 53\textsuperscript{rd}
## Life Expectancy (2015)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Years</th>
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<tbody>
<tr>
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<td>2</td>
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Source: Geogetteer.geoba.se
We are doing something wrong

Spending on Health Care

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<th>US $</th>
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Life Expectancy

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<td>United States</td>
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Source: Laurent A. Public Health Seattle King County
The U.S. subpopulation experiencing a loss in length of LE and a rise in mortality rates over the last few years is:

a. Non-Hispanic Whites
b. Non-Hispanic Blacks
c. American Indian/Alaska Natives
d. Hispanics
Life expectancy at birth

NOTE: Life expectancy data by Hispanic origin were available starting in 2006 and were corrected to address racial and ethnic misclassification.

SOURCE: CDC/NCHS, Health, United States, 2015, Figure 18. Data from the National Vital Statistics System (NVSS).
All-cause mortality, ages 45–54 for US White non-Hispanics (USW), US Hispanics (USH), and six comparison countries: France (FRA), Germany (GER), the United Kingdom (UK), Canada (CAN), Australia (AUS), and Sweden (SWE).

Source: Anne Case, and Angus Deaton PNAS 2015;112:15078-15083 ©2015 by National Academy of Sciences
The LE declines in U.S. subpopulations is primarily being driven by increases in which of the following leading causes of deaths?

a. Diabetes Mellitus
b. Lung Cancer
c. Drug and Alcohol Poisonings
Harvard Study Conclusions

- There was a marked increase in the all-cause mortality of middle-aged white non-Hispanic men and women in the United States between 1999 and 2013.

- This change reversed decades of progress in mortality and was unique to the United States.

- The midlife mortality reversal was confined to white non-Hispanics.

- This increase was largely due to increasing death rates from drug and alcohol poisonings, suicide, and chronic liver diseases and cirrhosis.

Source: Anne Case, and Angus Deaton PNAS 2015;112:15078-15083
Mortality by cause, white non-Hispanics ages 45–54.

Source: Anne Case, and Angus Deaton PNAS 2015;112:15078-15083
Selected causes of death

NOTES: CLRD is chronic lower respiratory diseases. A change in the coding rules for nephritis, nephrotic syndrome and nephrosis caused an increase in the number of deaths attributed to diabetes beginning with 2011 data. Thus, the trend for diabetes death rates should be interpreted with caution.

SOURCE: CDC/NCHS, Health, United States, 2015, Figure 2 and Table 17. Data from the National Vital Statistics System (NVSS).
Life Expectancy and Neighborhood Poverty
Poverty Within the Bay Area

FIGURE 3: NEIGHBORHOOD POVERTY VERSUS LIFE EXPECTANCY AT BIRTH, BARHII REGION, 2009-2011
Life Expectancy by Race and Ethnicity (2013 and 2014)

The Washington Post

To Your Health
Life expectancy for white females in U.S. suffers rare decline

This CDC chart shows females' life expectancy at birth in 2013 and 2014 in the United States.
Beverly Layman, 58, died in March from complications due to liver failure. Layman's liver failed as the result of long-term use of alcohol, painkillers, anti-anxiety medications and illicit drugs. She died two weeks before her 59th birthday. In her will, Layman left $100,000 to Teen Challenge, a faith-based organization that helps teen-agers struggling with drug and alcohol addiction.

(Bonnie Jo Mount/The Washington Post)
In some U.S. cities, differences in LE for residents of “healthier neighborhoods” compared to those in “unhealthier neighborhoods” can been as large as:

a. 15 years  
b. 23 years  
c. 30 years
Historic and projected life expectancy of the longest-lived countries, by year, 1950 to 2050

Average 81.8

US, 78.2

16 years

Source: Institute for Health Metrics and Evaluation, Univeristy of Washington and Public Health - Seattle & King County, APDE
Life expectancy, by county, compared to the world’s 10 best countries
New Orleans Life Expectancy

New Orleans, LA

The average life expectancy for babies born to mothers in New Orleans can vary by as much as **25 years** across neighborhoods just a few miles apart.

Phoenix, AZ

Babies born in different parts of Phoenix face up to a **14-year** difference in life expectancy.

Baltimore, MD

(Average life expectancy varies from a low range of 57-63 years up to a range of 81-86 years.)
In this great country we see huge disparities in terms of how long people live. In many ways the stress of poverty is a death sentence, which results in significantly shorter life expectancy. Parts of Boston and Baltimore have a lower life expectancy than Ethiopia and Sudan.

-Sen. Bernie Sanders
Life expectancy, by county, compared to the world’s 10 best countries

Source: Institute for Health Metrics and Evaluation
Life Expectancy in King County by Census Tract

- Difference of 30 years! (Low of 63; High of 96)
- King County Average: 81.6
- Tracts with the lowest life expectancy are more than 40 years behind the longest lived countries
Physical & Mental Health and Risk Factors by Neighborhood

Adapted from Wong E. Public Health Seattle King County
Shared Measurement Supported Prioritization of Goals and Communities

- Policy and system change
- Place-based investment in neighborhoods
- Toolkits and Learning Community to support all of King County

Adapted from Wong E. Public Health Seattle King County
Comparison of Drug Poisoning Death Rates by County in 2002 and 2013

RESULTS: Age-adjusted death rates (per 100,000) due to drug poisoning - 2002

RESULTS: Age-adjusted death rates (per 100,000) due to drug poisoning - 2013

SOCIAL DETERMINANTS OF HEALTH: THE CAUSES OF CAUSES
Tips for Staying Healthy: A Lifestyle Approach

1. Don’t smoke. If you do stop.
2. Eat a balanced diet, include fruits/vegetables.
4. If you drink, do so in moderation.
5. Cover up in the sun and protect your children.
6. Practice safe sex.
7. Participate in appropriate health screening.
8. Drive defensively; don’t drink and drive.
10. Maintain social ties.

Tips for Staying Healthy: A Social Determinants Approach

1. Don’t be poor. If you can, stop. If you can’t, try not to be poor for too long.
2. Don’t have poor parents.
3. Don’t live in a poor neighborhood.
4. Own a car – but use only for weekend outings. Walk to work.
5. Practice not losing your job and don’t become unemployed.
6. Don’t be illiterate.
7. Don’t live in damp, low-quality housing.
8. Try not to be part of a socially marginalized group.

Adapted from Gordon, D., Posting (April, 1999) Spirit of 1848 listserv.
Social determinants of Health (SDOH) are “the structural determinants and conditions in which people are born, grow, live, work and age.”

SDOH include income, housing, education, neighborhood safety, social relationships, food supply, and transportation.

*Source: Marmot et al. 2008*
The number of Americans living in poverty has decreased since the end of the most recent recession six years ago.

a. True
b. False
Racial Disparities in Poverty

Children in Poverty by Race and Ethnicity

Year(s): 7 selected | Race: 6 selected | Data Type: Percent

Data Provided by: National KIDS COUNT

Source: Section on Medical Students, Residents, & Fellowship Trainees
Food Insecurity

- 2014 Food Insecurity
  - 48.1 M (39%) households

- Health Effects
  - Self-reported poor health
  - Poor nutrition
  - Diabetes
  - BMI
The percentage of U.S. apartment residents that are housing insecure is:

a. 23%
b. 35%
c. 49%
Housing Insecurity

• 2014 Housing Insecurity
  – 21.3 M Renters (49%) > 30% of income
  – 11.4 M (24%) > 50% income

• Health Effects
  – Self-reported poor health
  – Smoking
  – Poor diabetes management
  – ≥ 3 Adverse childhood experiences

Stahre, M., et al. 2011
Knowledge to Action Gap

- Consensus SDOH drives health; yet
  - Public health actions have been sparse
  - Considered outside core functions

- WHO & IOM Recommendations
  - Routine collection, analysis, & reporting of important SDOH data
  - Integrated with health behaviors and outcomes surveillance data
BRFSS SDOH Module Purpose

• Improve understanding of how select SDOHs influence health behaviors, outcomes, and disparities

• Examine the magnitude, distribution, & trends in health outcomes in the context of SDOHs

• Raise awareness & catalyze collaborative multi-sectoral actions
SDOH Question Systematic Search

- Documented associations
  - Direct effects (poor diet)
  - Indirect effects (isolation, stress)

- Demonstrated utility
  - Monitor trends & drive actions

- Evidence-based interventions

- Not routinely available
Housing and Food Insecurity

Proposed Questions

**Housing Insecurity**

During the last 12 months, was there a time when you were not able to pay your mortgage, rent or utility bills?

- [ ] Yes
- [ ] No

In the last 12 months, how many times have you moved from one home to another?

**Food Insecurity**

“The food that I bought just didn't last, and I didn't have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?

- [ ] Often true
- [ ] Sometimes true
- [ ] Never true
- [ ] DK or Refused

“I couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?

- [ ] Often true
- [ ] Sometimes true
- [ ] Never true
- [ ] DK or Refused
Neighborhood Safety

- **Perception of safety**
  - Self-rated health
  - Physical activity
  - Older adult mobility disability
  - BMI
  - Depression

3. How safe from crime do you consider your neighborhood to be?
   - Extremely safe
   - Quite safe
   - Slightly safe
   - Not at all safe

Fish, J.S., et al., 2010
Proposed Financial Insecurity Question

• Document prevalence & distributions of “hidden” populations
  – Working poor
  – Individuals & families in debt
    • Upside down mortgages
    • Credit cards
    • Student loans

6 In general, how do your (family’s) finances usually work out at the end of the month – do you find that you usually:
   1. End up with some money left over,
   2. Just enough money to make ends meet, or
   3. Not enough money to make ends meet?
Proposed Stress Question

- **Chronic stress affects physiologic processes**
  - Diabetes, Asthma, Heart disease

- **Improve understanding**
  - Direct vs Indirect Pathways

Stress means a situation in which a person feels tense, restless, nervous, or anxious, or is unable to sleep at night because his/her mind is troubled all the time. Do you feel this kind of stress these days?

- [ ] Not at all
- [ ] A little bit
- [ ] Somewhat
- [ ] Quite a bit
- [ ] Very much

McEwen and Seeman 1999
What percent of Americans cannot pay for an unexpected $400 expense with savings or credit cards, without selling something or borrowing money:

a. 17%
b. 27%
c. 47%
The Secret Shame of Middle-Class Americans

47 percent of Americans "can't pay for an unexpected $400 expense through savings or credit cards, without selling something or borrowing money."

— Hunter Schwarz on Monday, June 8th, 2015 in a "Washington Post" article

47% say they lack ready cash to pay a surprise $400 bill

By Jon Greenberg on Tuesday, June 9th, 2015 at 12:05 p.m.
QUESTION 9

If 100% of Americans has full access to free, high quality healthcare, overall population health could improved by what percentage?

a. 10%

b. 25%

c. 40%
Evidenced-based interventions with positive returns on investment have been demonstrated effective in preventing mental, emotional, and behavioral disorders among children & young adults are available.

a. True

b. False
3 Buckets of Prevention

1. Traditional Clinical Prevention
   - Increase the use of evidence-based services

2. Innovative Clinical Prevention
   - Provide services outside the clinical setting

3. Total Population or Community-Wide Prevention
   - Implement interventions that reach whole populations

What is a Community Wide Intervention?

- Community-level, population-oriented

- Primary prevention measures to protect populations within the community before individuals get sick and need health care services.

- **Address total populations and high risk subpopulations:**
  - Policies, system, and environmental (PSE) changes in the community (e.g., multi-component school-based obesity prevention)
  - Policies to improve underlying social determinants of health (e.g., state or local earned income tax credits)
  - High touch, coordinated programs to meet the complex needs of vulnerable populations (e.g., multidimensional treatment foster care)
List of CWI: Methods

- Highest evidence level rating:
  - University of Wisconsin County Health Rankings & Roadmaps What Works for Health

- Secondary source (QA/QC)
  - The Guide to Community Preventive Services

- Excluded all clinical interventions
  - Bucket 1: Traditional Clinical
  - Bucket 2: Innovative Clinical
    - 6/18 Initiative

- Results: 150 Potential Interventions
  - One or more systematic reviews
List of CWI: Methods

- **Intervention Inclusion Criteria**
  - 5 Year Timeframe
    - Measurable outcomes, or
    - Surrogate measures
      - Causally linked to outcomes
      - Readily available
  - Costs data
    - Positive Benefit to Cost Ratio or Return on Investments (ROI)

- **CDC Program Review**
  - Additional interventions considered
List of CWI: Results

- **23 Interventions met all criteria**
  - Total population
  - Subpopulations
    - behavioral risk factors (e.g., smoking)
    - low income
  - Social determinants of health

- **Organized by life stage**
  - Before birth & infancy
  - Early childhood
  - School Age
  - Young Adults
  - Adults
  - Older Adults
  - All Life Stages/SDOH
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<td>2. Breastfeeding Promotion Programs</td>
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<tr>
<td>3. Center-Based Early Childhood Education</td>
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<td>4. Clean Diesel Technology Fleet Transition Programs</td>
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<td>5. Comprehensive Statewide Tobacco Programs</td>
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<tr>
<td>6. Early Childhood Home Visitation Programs</td>
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<td>7. Economic Interventions: State and Local Earned Income Tax Credits (EITC)</td>
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<td>8. Economic Interventions: Unit Price for Alcohol Products</td>
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<td>9. Economic Interventions: Unit Price for Tobacco Products</td>
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<td>10. House Rehabilitation Loan and Grant Programs</td>
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<td>11. Housing and Behavioral Health Services Support Programs (Housing First)</td>
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<td>12. Housing Choice Voucher Programs</td>
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<td>14. Multi-component school-based obesity prevention interventions (inc. School-Based Programs to Increase Physical Activity)</td>
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<td>15. Multi-Component Workplace Obesity Prevention Interventions</td>
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<tr>
<td>16. Multidimensional Foster Care Treatment</td>
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<td>17. Needle/ Syringe Programs</td>
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<td>18. Pregnancy Peer Support Programs (CenteringPregnancy)</td>
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<td>19. Public Transportation: System Introduction or Expansion</td>
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<tr>
<td>20. Safe Routes to School (inc. Walking school buses)</td>
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22. Smoke-free policies: Indoor areas
23. Universal Motorcycle Helmets
*Health Plus Interventions: Additional outcomes include increased educational attainment, employment, housing stability, social competency and crime prevention.
The Division of Community Health (DCH)

- DCH strengthens efforts in towns, cities, counties, and tribal areas throughout the nation to help communities prevent disease and promote healthy living.

- The goal of these community-level efforts is to make healthy living easier where people live, learn, work, and play.

- We place a special focus on reaching people who are affected most by death, disability, and suffering from chronic diseases.
DCH Current Funded Programs

- **PICH – Partnerships to Improve Community Health (38 Awardees)**
  - Large Cities and Urban Counties (> 500,000 residents)
  - Small Cities and Counties (50,000-499,999 residents)
  - American Indian tribes and Alaskan Native villages and tribal organizations

- **REACH – Racial and Ethnic Approaches to Community Health (49 Awardees)**
  - 15-year old program
  - Locally tailored evidence- and practice-based population-wide improvements in priority populations

- **Policies, Systems, Environmental (PSE) Strategies**
  - Tobacco, Nutrition, Physical Activity, Community Clinical Linkages
DCH Initial Planning REACH 2.0

- **Build on past REACH effective strategies and lessons-learned**
  - Community-based participatory approach
  - Effective evidence-based interventions
  - Focused on improving health equity

- **Exploring collaborative efforts to address upstream social determinants of health.**

- **Assessing opportunities to leverage health care systems post-ACA activities.**

- **Considering aspects of “collective impact” framework:**
  - Multi-sector partnership
  - Shared agenda and measures
  - Backbone organization
DCH Current CWI Interventions

- Policy, System or Environmental Changes
  - Multicomponent school-based obesity prevention
  - Safe Routes to School
  - Worksite multi-component obesity programs

- Social Determinants of Health
  - Indoor Smoke Free Policies*
PICH & REACH Smoke Free Multi-unit Housing:

Year 1 Actual & Year 2 Projected Reach = 470,286

- **88,786 Low Income Residents**
  - 38,178 children
  - 46,169 older or disabled adults

- **381,500 Private/Market Rate Residents**
  - 152,600 children

- **Short-term Public Health Impact**
  - 9,898 fewer smokers*
  - 32 fewer CVD hospitalizations
  - 115 fewer asthma hospitalizations

- **Annual Cost Savings**
  - $48.7M SHS-related healthcare
  - $1.14M renovations
  - $3.79M fire loss

* Cessation impacts & cost savings not included

Methods from King et al. 2013
Public Health Issue: There is no safe level of second-hand smoke (SHS)

- Each year, among non-smokers* SHS exposure
  - ~ 34,000 heart disease-related deaths
  - > 8,000 deaths from stroke
  - > 7,300 lung cancer deaths

- SHS spread from units, common areas, decks
  - Air vents, hallways, electrical outlets, ceiling cracks, holes in walls

- U.S. residents of multi-unit housing (MUH)**
  - ~ 70 of 80 million in MUH without smoke-free policies
  - ~ 45% higher cotinine levels among children living in MUH

- Public Housing**
  - 88% MUH
  - 52% are older adults & disabled residents; 43% are children

*HHS 2014 **King et al. 2013
Smoking-free Policies: Indoor Air

Scientifically Supported (evidence-based) Intervention

- Community Guide Systematic Review*
  - 82 studies
  - Strong evidence of effectiveness
  - Across varied populations and settings

- Expected Health Benefits
  - 50% reduction in proportion of people exposed to SHS
  - 3.8 percentage point increase in smoking cessation
  - 5.1% reduction in CVD-related hospital admissions
  - 20.1% reduction in asthma-related hospital admissions

- Economic Analysis
  - No impact: restaurants, bars, businesses catering to tourists
  - Health care savings $700 - $1,297 per person
  - $18M annual cost savings for MUH in CA
    - Cleaning; Repairs; Maintenance

*Community Guide 2012
## Estimated Annual Cost-Savings: Subsidized & Public Housing*

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Subsidized Housing</th>
<th>Public Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHS-Related Health Care</td>
<td>$341 million</td>
<td>$101 million</td>
</tr>
<tr>
<td>Renovation Costs</td>
<td>$108 million</td>
<td>$32 million</td>
</tr>
<tr>
<td>Smoking-Attributable Fires</td>
<td>$72 million</td>
<td>$21 million</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$521 million</strong></td>
<td><strong>$154 million</strong></td>
</tr>
</tbody>
</table>

*King et al. 2013
PICH & REACH Smoke Free Multi-unit Housing:

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Methods from King et al. 2013
Example Bucket 3  Chronic Disease interventions: Social Determinants of Health
Federal Section 8 (Low Income Families)

State & Local Programs
- Housing Trust Funds: stable, dedicated revenues (e.g., real estate transfer taxes) for low income housing and related services.
- Public and Private Funding

Short-term effects
- 8% median decrease in depression
- 11% median increase in self-reported good or excellent health
- 15.5% median decrease in exposure to social disorder
- 7.8% median decrease in youth behavioral problems

Economic Evidence
- Net benefits: $650 to $2,800 per recipient case per year
- Social benefit-cost ratio ranges from 1.1 to 1.37

Anderson et al. 2003       Carlson et al. 2010
CWI SDOH: Public Transportation System

- **System introduction or expansion**
  - Available for use by the general public
  - Run on a scheduled timetable
  - Include buses, trains, trams, or rapid transit

- **Short-term effects**
  - Increase of 8–33 minutes of walking/day
  - 1/60th traffic fatalities per 100 million passenger-miles compared to automobiles
  - Reduced air pollution

- **Economic Evidence**
  - $354.86 per capita annual health benefits based on increasing household ridership from 10% to 20%
Parent- and Family-Level Predictors of Income And Hardship
- Parent Work Status
- Job Prestige
- Education Level
- Parent Marital Status
- Race-Ethnicity

Financial Hardship

Parent Distress

Parent Behavior

Parent Investment

Child Physical Development

Child Cognitive Development

Child Social-Emotional Development

Neighborhood- and Community-Level Influences

Adapted from: Halfon 2008
Evidence-Based Home Visiting

• Starts in pregnancy

• Has sufficient intensity and duration to build trust

• Establishes a trusting relationship between mother and visitor – visitor keeps coming back regardless

• Models a trusting relationship for the mother to the infant

• Majority of participants identify wanting to parent differently than they were parented as a goal.
Nurse Family Partnership

- First-time low income mothers received home visits by nurses

- Visits begin during pregnancy and extended until child’s 2nd birthday

- Nurses promote 3 aspects of maternal functioning:
  - health-related behaviors
  - maternal life course development
  - Parental care of children
Nurse Family Partnership Sustainable Results: Mothers

- Verified reports of child abuse and neglect: 79%
- Behavioral problems due to drug or alcohol use: 44%
- Arrests: 69%

Source: Carson and Porter. Adverse Childhood Experiences and Evidence-Based Home Visiting 2011
<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrests</td>
<td>54%</td>
</tr>
<tr>
<td>Convictions</td>
<td>69%</td>
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<tr>
<td>Sexual Partners</td>
<td>58%</td>
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<tr>
<td>Cigarettes Smoked</td>
<td>28%</td>
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<tr>
<td>Number of days consuming alcohol</td>
<td>51%</td>
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</tbody>
</table>

Source: Carson and Porter, *Adverse Childhood Experiences and Evidence-Based Home Visiting* 2011
Home Visiting: Return On Investment

Source: RAND Corporation Analyses of the Nurse-Family Partnership Program (2008)
Home Visiting: Predicted Return On Investment

- By 2031, NFP program enrollments in 1996–2013 will
  - eliminate the need for 4.8 million person-months of child Medicaid spending
  - reduce estimated spending on Medicaid, TANF, and food stamps by $3.0 billion (present values in 2010 dollars).

- By comparison, NFP cost roughly $1.6 billion.
Questions?

For more information please contact Centers for Disease Control and Prevention

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E-mail: cdcinfo@cdc.gov Web: http://www.cdc.gov

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