

# NOSORH: The Changing Landscape

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# Opportunities on the horizon

Social determinants of health  
Epigenetics  
Infant home visits  
Adverse childhood experiences

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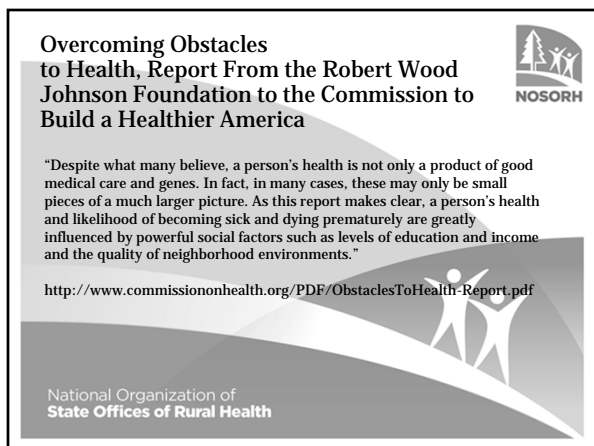
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# Overcoming Obstacles to Health, Report From the Robert Wood Johnson Foundation to the Commission to Build a Healthier America

"Despite what many believe, a person's health is not only a product of good medical care and genes. In fact, in many cases, these may only be small pieces of a much larger picture. As this report makes clear, a person's health and likelihood of becoming sick and dying prematurely are greatly influenced by powerful social factors such as levels of education and income and the quality of neighborhood environments."

<http://www.commissiononhealth.org/PDF/ObstaclesToHealth-Report.pdf>

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## Social Determinants of Health



- Conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
- Conditions (e.g., social, economic, and physical) in these various environments and settings (e.g., school, church, workplace, and neighborhood) have been referred to as "place."
- In addition to the more material attributes of "place," the patterns of social engagement and sense of security and well-being are also affected by where people live.

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## SDH Data



- Babies born to mothers who did not finish high school are nearly twice as likely to die before their first birthdays as babies born to college graduates.
- Children in poor families are about seven times as likely to be in poor or fair health as children in the highest-income families.
- For both men and women, more education often means longer life. College graduates can expect to live at least five years longer than individuals who have not finished high school.
- Adult life expectancy increases with increasing income.
- Although the poor and near-poor are generally most affected, middle-class people frequently have poorer health than the most affluent. Reducing health inequalities can benefit middle-class Americans as well as those living in poverty.

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## Healthy People 2020 Approach to Social Determinants of Health



A "place-based" organizing framework, reflecting five (5) key areas of social determinants of health (SDOH), was developed by Healthy People 2020. These five key areas (determinants) include:

- Economic Stability
- Education
- Social and Community Context
- Health and Health Care
- Neighborhood and Built Environment

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## HP 2020 Key Areas



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## Economic Stability



- Poverty
- Employment
- Food Security
- Housing Stability



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## Education



- High School Graduation
- Enrollment in Higher Education
- Language and Literacy
- Early Childhood Education and Development



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## Social & Community Context



- Social Cohesion
- Civic Participation
- Perceptions of Discrimination and Equity
- Incarceration/Institutionalization



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## Health & Health Care



- Access to Health Care
- Access to Primary Care
- Health Literacy



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## Neighborhood & Built Environment



- Access to Healthy Foods
- Quality of Housing
- Crime and Violence
- Environmental Conditions



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## SDH in Context




Health disparities as a function of health inequities.

Although reducing social disparities in medical care is essential, these efforts alone cannot adequately reduce socioeconomic and racial or ethnic disparities in health.

Resources that enhance quality of life can have a significant influence on population health outcomes.

Examples of these resources include safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins.

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## Health in All Policies Strategy



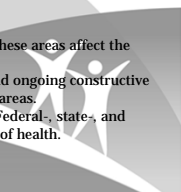
Create an equal opportunity to make the choices that lead to good health.

Advances are needed not only in health care but also in fields such as education, childcare, housing, business, law, media, community planning, transportation, and agriculture.

Making these advances involves working together to:

- Explore how programs, practices, and policies in these areas affect the health of individuals, families, and communities.
- Establish common goals, complementary roles, and ongoing constructive relationships between the health sector and these areas.
- Maximize opportunities for collaboration among Federal-, state-, and local-level partners related to social determinants of health.

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## Social Determinants of Health Resources



Robert Wood Johnson Foundation  
Healthy People 2020  
Centers for Disease Control and Prevention  
World Health Organization

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# Epigenetics

Food for thought for  
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## Epigenetics: the study of how our environment affects the way our genes work



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- When looking at determinants of health, only about 20% can be attributed to clinical services
- The other 80%? Genetics, behaviors, the social and physical environments in which we live



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### Our genes are a strong predictor of premature death

Category	Percentage
Behavioral patterns	40%
Genetic predisposition	30%
Health care	10%
Social circumstances	15%
Environmental exposure	5%

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➤ Maternal diet and stress level determine how the child's genes develop.

➤ Changes to the genes can be permanent, and passed to the next generation.

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• The origins of chronic disease are, to a large degree, set during the critical period of conception through age 2.



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Studies have shown that low birth weight, and high birth weight though to a lesser degree, are powerful predictors of chronic disease in later life



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- ✓Nutrition
- ✓Epigenetics
- ✓Population Health

Why not?



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## Early Interventions



- Scientific advances have shed light on other ways in which economic and social conditions during the first few years of life affect brain development in infants and toddlers.
- Children in more favorable socioeconomic circumstances often receive more positive stimulation from parents and caregivers and high levels of such stimulation are associated with increased brain, cognitive, behavioral and physical development.
- Thus, biological changes due to adverse socioeconomic conditions in infancy and toddler years become literally "embedded" in a child's body, limiting developmental capacity.

**The first five years of life appear to be most crucial.**

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## Home Visiting



Voluntary, home-based programs, also known as home visits, match parents with trained professionals to provide information and support during pregnancy and throughout their child's first three years.

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## Prenatal



Home visitors partner with expectant moms to encourage them to make regular prenatal care visits, quit smoking and drinking and eat a balanced diet—all behaviors that dramatically decrease their chances of having a low birthweight or substance-exposed baby.

- Every low birthweight or preterm birth costs states between \$28,000 and \$40,000 in medical care and other related costs.
- One Cincinnati program found that infant death rates fell by 60 percent among home visiting participants.

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## Support



Home visiting helps parents find healthy solutions to stressful circumstances by connecting them with safe and stable housing and counseling for substance abuse or depression, as well as by teaching them to build positive, loving relationships with their children.

Research shows that kids who have strong bonds with their parents have better lifelong emotional health and have a lower risk of later problems, including alcoholism, depression, eating disorders, heart disease, cancer and other chronic illnesses.



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## Early Learning



By teaching parents to stimulate their children's early learning, home visiting programs help build critical pre-literacy skills and improve achievement test scores.

- At age six, children who participated in the NFP home visiting program in Memphis had higher cognitive and vocabulary scores than those in the control group.
- At age nine, these children had higher grade point averages and achievement test scores in math and reading in first through third grades than those in the control group.



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## Family Education/Economic Attainment



By encouraging parents to continue their education, apply for jobs and improve relationships with the people in their lives, home visitors help families increase their ability to help themselves—and to build a lasting, stable future for their children.

Fifteen years after their participation in a nurse home visiting program, mothers had:

- An 83 percent increase in employment by their child's fourth birthday;
- A 20 percent reduction reduction in welfare use; and
- A 46 percent increase in father's presence in the household.



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## Return on Investment



By reducing long-term costs in state systems, such as human services and special education, home visiting programs can yield more than \$5.00 in returns for every \$1.00 spent.



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## Adverse Childhood Experiences (ACE)



More food for thought for  
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## What are Adverse Childhood Experiences?



- emotional abuse
- physical abuse
- sexual abuse
- emotional neglect
- physical neglect



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## What are Adverse Childhood Experiences?



- witnessing their mothers being treated violently
- growing up around abuse of alcohol and/or drugs
- growing up with a mentally ill person in the household
- losing a parent due to separation or divorce
- growing up with a household member in jail or prison



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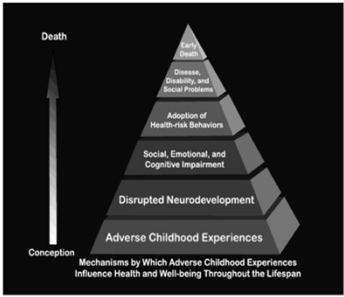
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## The more categories of trauma experienced in childhood, the greater the likelihood of experiencing:



• alcoholism and alcohol abuse	• liver disease
• chronic obstructive pulmonary disease (COPD)	• intimate partner violence
• depression	• multiple sexual partners
• fetal death	• sexually transmitted diseases
• poor health-related quality of life	• smoking
• illicit drug use	• obesity
• ischemic heart disease (IHD)	• suicide attempts
	• unintended pregnancies

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**American Journal of Preventive Medicine, 1998**



“We found a strong graded relationship between the breadth of exposure to abuse or household dysfunction during childhood and multiple risk factors for several of the leading causes of death in adults.”



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**And so...?**



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