



NC Department of Health and Human Services

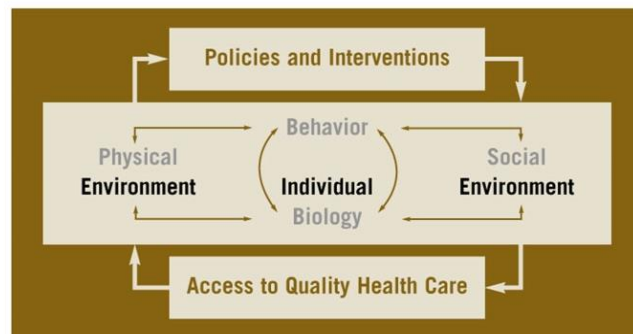
# **North Carolina Vision for Buying Health**

**Elizabeth Cuervo Tilson, MD, MPH**  
**State Health Director**  
**Chief Medical Officer**

**April 11, 2018**

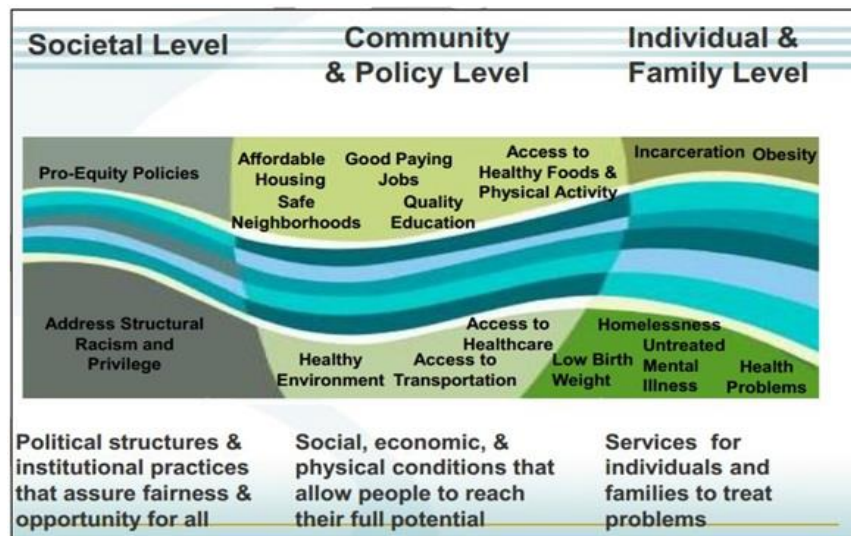
**Justus-Warren Heart Disease & Stroke Prevention Task Force**

## DETERMINANTS OF HEALTH

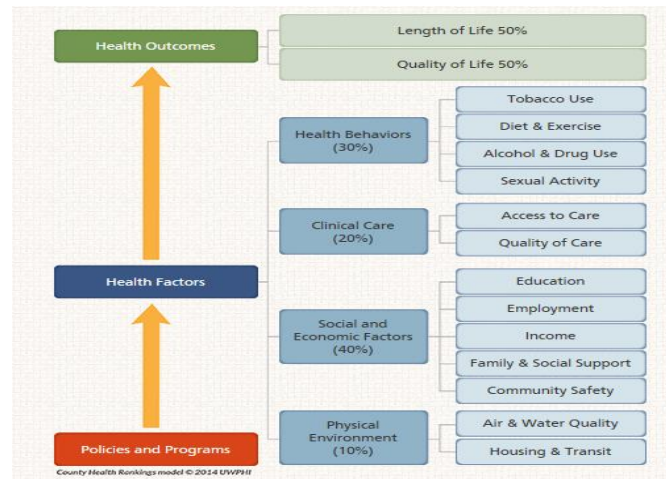


IOM, Healthy People 2010

## Social and Structural Determinants of Health



## Social Determinants of Health (RWJ County Health Rankings)



## Social Determinants of Health

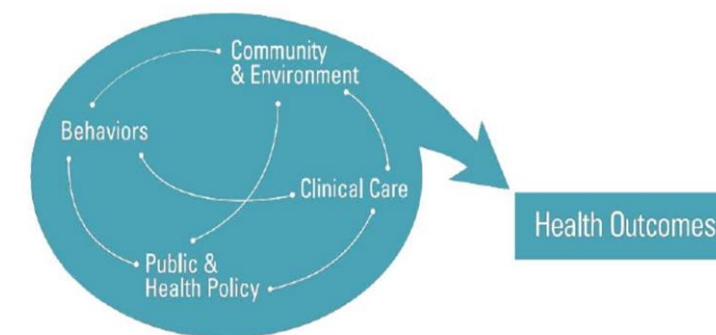
- Conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels and are mostly responsible for health inequities.

20

World Health Organization

## Healthcare in the 21<sup>st</sup> Century: Age of the New Morbidities

Components of Health



10

Joseph L. Wright, MD, MPH. DC Baltimore Research Center on Child Health Disparities

Abraham Flexner:

A Medical Education in the United States and Canada 1910

**The physician has a duty to promote social conditions that conduce to physical well-being.**

# North Carolina Health Indicators

## National Rank

<b>55%</b>	of births in NC are unintended	<b>41</b>
<b>19%</b>	of North Carolinians smoke	<b>33</b>
<b>30.1%</b>	of North Carolinians are obese	<b>30</b>
<b>29%</b>	of low income adults in NC went without care due to cost	<b>46</b>
<b>8.9%</b>	of NC infants are low birth weight	<b>41</b>
<b>23.7%</b>	of NC kids live in poverty	<b>43</b>
<b>16.7%</b>	of NC households are food insecure	<b>42</b>
<b>47.3%</b>	of NC women have experienced intimate partner violence	<b>47</b>

# Food Insecurity

## Burden in NC

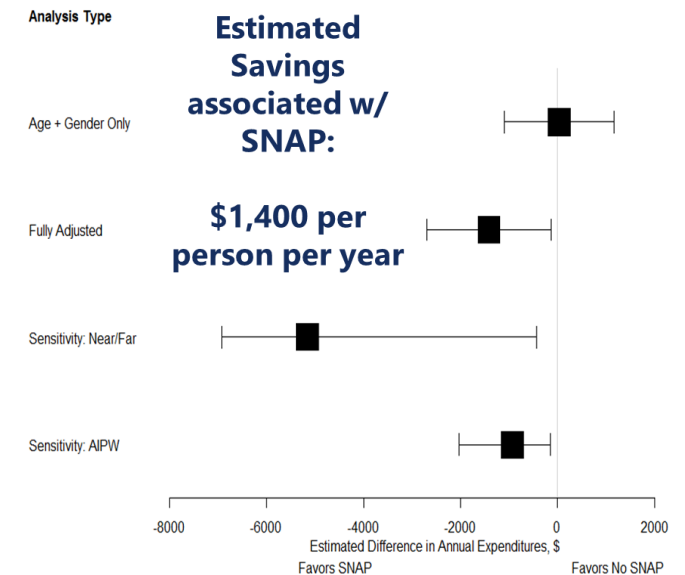
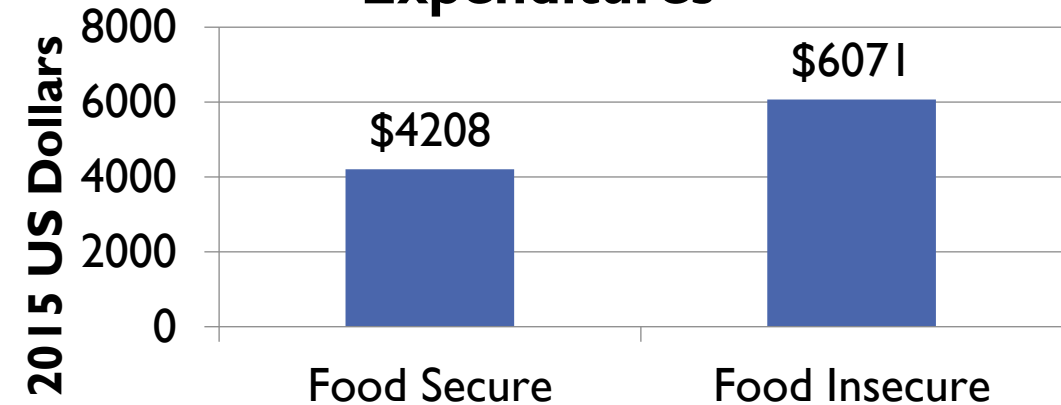
- 8<sup>th</sup> highest rate of food insecurity overall & 2<sup>nd</sup> highest rate among kids in US
- Over 1 in 5 children living in food insecure households

## Health Outcomes & Cost

People experiencing food insecurity...

- Iron deficient, lower bone density, obesity
- Developmental delays, cognitive impairment, impaired school function, reduced academic achievement
- Increased risk of adult diabetes, cardiovascular disease, depression, anxiety

## Annualized Estimated Expenditures



# Housing Instability

## Burden in NC

- More than 1.2 million North Carolinians cannot find affordable housing
- 1 in 28 of NC children under age 6 is homeless
- Housing instability linked to other health factors (e.g. family violence, food insecurity, transportation instability)

## Health Outcomes & Cost

- Poor physical health, emotional, behavioral, learning outcomes
- Children who experience homelessness more likely to have been hospitalized, costing \$238m annually
- Housing interventions increase health outcomes & decrease emergency department visits, hospitalizations, and costs with good ROI

# Transportation Barriers

## Burden in NC

- 10–51% of patients reported transportation as a barrier to HC access
- Over 1.85 million people in NC —almost 20% of the total state population—have low access to a grocery store

## Health Outcomes & Cost

- Older adults and individuals with disabilities who live in their community and do not have access to transportation report higher rates of social isolation.
- Research shows that socially isolated adults undergo early admission to residential or nursing care, and have an increased use of emergency rooms and physician visits. In addition, social isolated adults have increased risk for depression.



# Interpersonal Violence

## Burden in NC

- 47% of North Carolina women experienced intimate partner violence—ranking NC 47<sup>th</sup>

## Health Outcomes & Cost

- Violence against women linked to:
  - Arthritis, asthma, chronic pain, digestive problems, heart disease, irritable bowel syndrome, problems sleeping, migraine headaches, stress
  - Mental Health Problems
  - Increased risk for infections and high blood pressure, pre-term and low birth weight babies.

# Trauma/Adverse Childhood Events - ACEs

## Research Article

### Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults

#### The Adverse Childhood Experiences (ACE) Study

Vincent J. Felitti, MD, FACP, Robert F. Anda, MD, MS, Dale Nordenberg, MD, David F. Williamson, MS, PhD, Alison M. Spitz, MS, MPH, Valerie Edwards, BA, Mary P. Koss, PhD, James S. Marks, MD, MPH

Am J Prev Med 1998;14(4)

© 1998 American Journal of Preventive Medicine

Collaborative effort between Kaiser Permanente and Centers for Disease Control and Prevention



# Adverse Childhood Experiences (ACEs)

## Traumatic or stressful life events experienced before age 18

- **Childhood Abuse**
  - Physical abuse\*
  - Sexual abuse
  - Emotional abuse
- **Household Dysfunction**
  - Household member who was depressed, mentally ill, or suicidal\*
  - Alcohol or drug abuse in household
  - Incarcerated household member
  - Violence between adults in the household
  - Parental divorce or separation\*

# ACES can have lasting effects on....



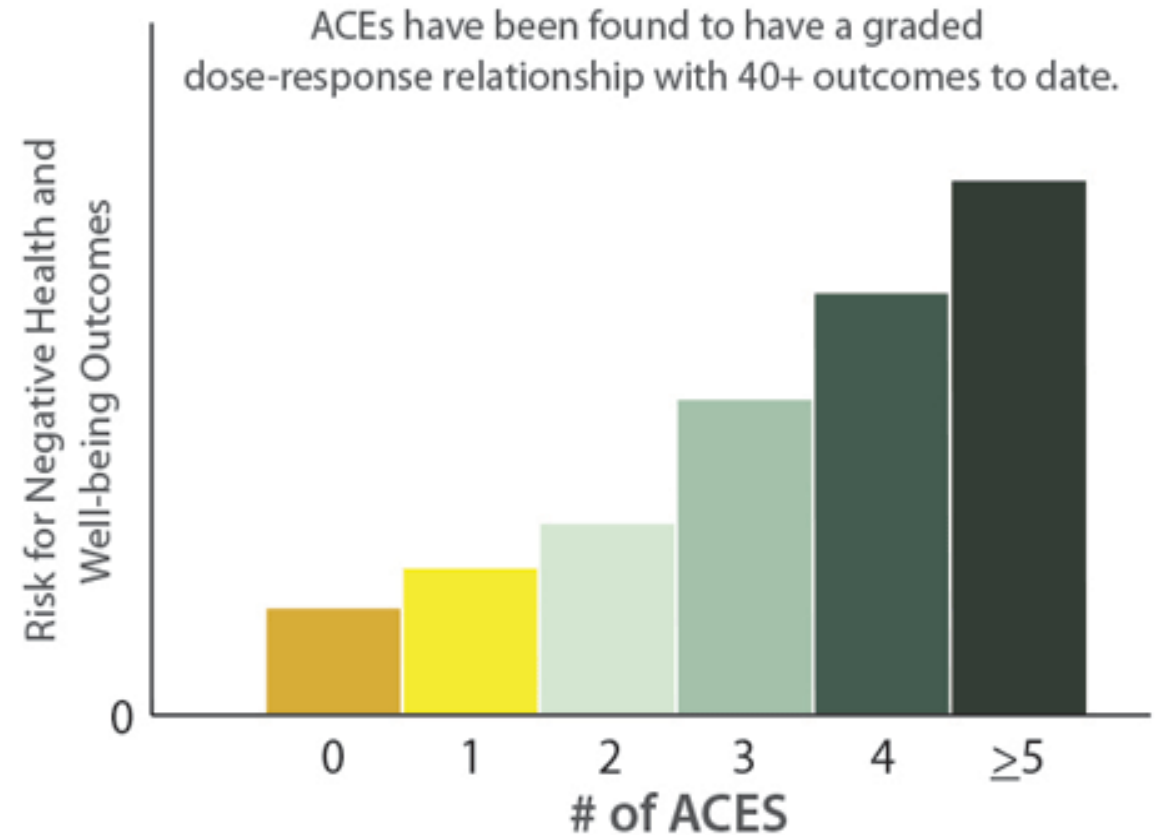
Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)



Behaviors (smoking, alcoholism, drug use)



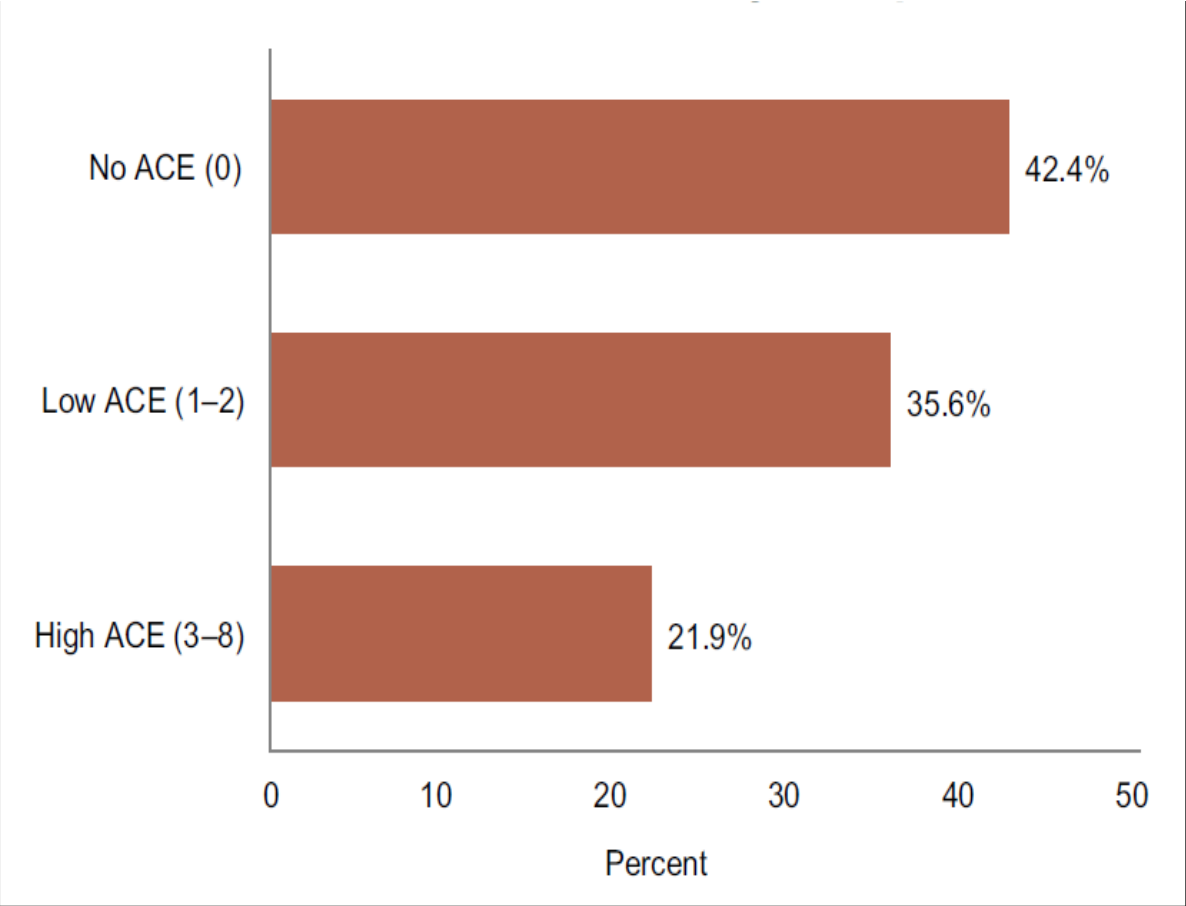
Life Potential (graduation rates, academic achievement, lost time from work)



\*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.

# ACEs in North Carolinians

## ACEs among NC Adults



Source: NC BRFSS 2012

**30<sup>th</sup> – US rank in ACEs prevalence**

**24.3% - Children with 2+ ACEs**

**21.9% - Adults with 3+ ACEs**

**41% - Adults covered by Medicaid  
3+ ACEs**

# What *can* Be Done About ACEs?

These wide-ranging health and social consequences underscore the importance of preventing ACEs before they happen. **Safe, stable, and nurturing relationships and environments** (SSNREs) can have a positive impact on a broad range of health problems and on the development of skills that will help children reach their full potential. Strategies that address the needs of children and their families include:

Voluntary home visiting programs can help families by strengthening maternal parenting practices, the quality of the child's home environment, and children's development.  
**Example: Nurse-Family Partnership**



Home visiting to pregnant women and families with newborns



Parenting training programs



Intimate partner violence prevention



Social support for parents



Parent support programs for teens and teen pregnancy prevention programs



Mental illness and substance abuse treatment



High quality child care



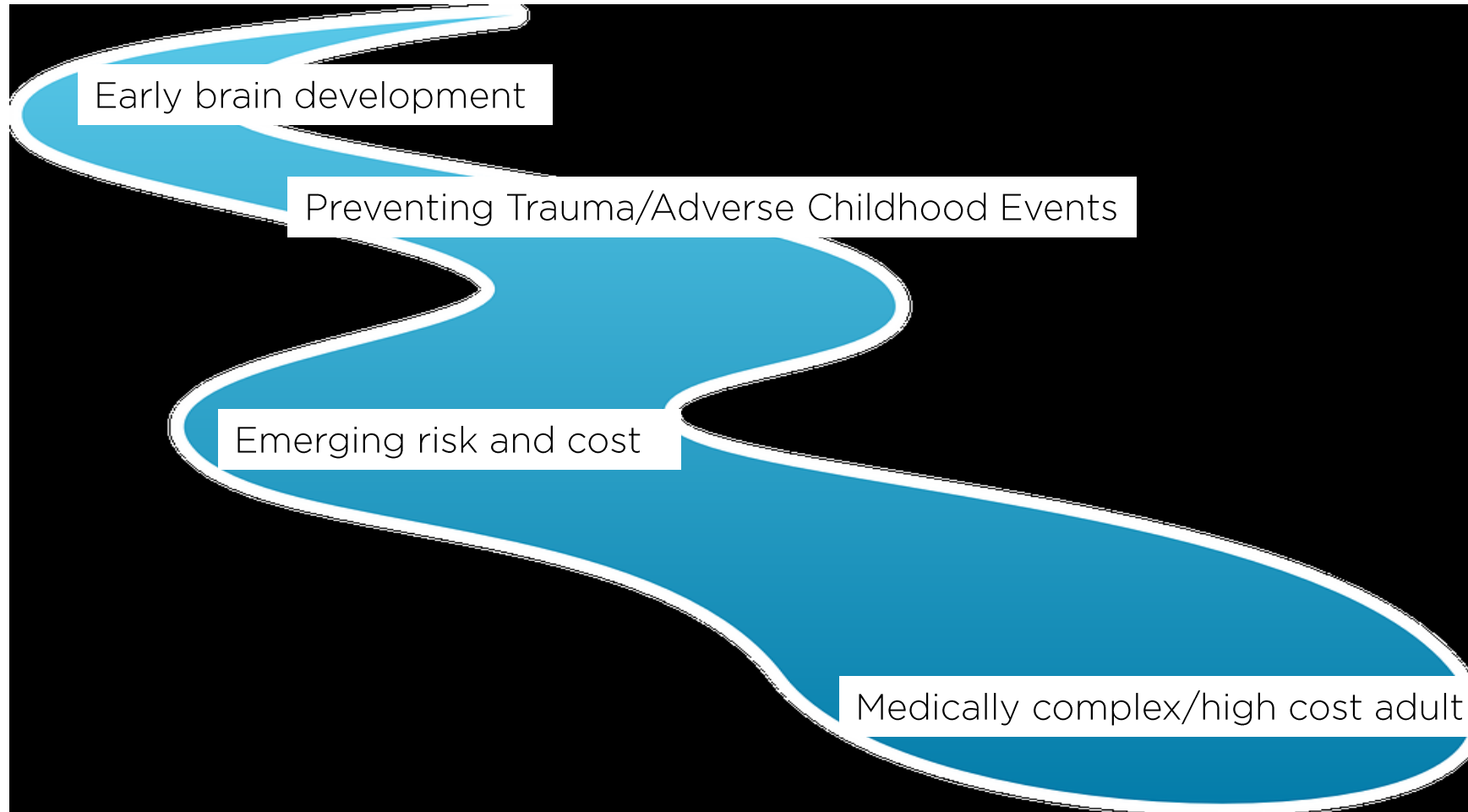
Sufficient income support for lower income families

# DHHS Vision

***We envision a North Carolina that optimizes health and well-being for all people by effectively stewarding resources that bridge our communities and our healthcare system.***

# Go As Far Upstream As We Can

with a balanced portfolio to improve health and decrease costs





# **Multi-Layered Approach for Addressing Health-Related Resource Needs**

- **Mapping of Social Drivers of Health Indicators**
- **Standardized screening for unmet resource needs**
- **Statewide Resource Platform**
- **Medicaid Managed Care – 1115 Innovation Waiver**
- **Work force capacity (e.g. Community Health Workers)**
- **Re-aligning or connecting existing resources where possible**

# Questions?