Maternal Mortality: Statewide Efforts to Reduce Adverse Outcomes of Pregnancy and Childbirth

Judith T. Burgis, MD
S.C. Summit on Early Childhood Public Health Session
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Judith.burgis@prismahealth.org
Disclosures

Chair of the SC Maternal Mortality and Morbidity Review Committee (MMMRC)

SC ACOG Section Chair

Thanks to Dave Goodman, CDC and to Amy Crockett, SC BOI Clinical Lead
Key Definitions

A pregnancy-associated death is the death of a woman (during pregnancy or within one year of pregnancy) that is temporally related to pregnancy.

A pregnancy-related death is a subset of pregnancy-associated deaths that is related to or are aggravated by pregnancy.

The Maternal Mortality Rate\(^1\) is reported as

\[
\text{# of maternal deaths per 100,000 live births}
\]

The Pregnancy-Related Mortality Ratio\(^2\) is reported as

\[
\text{# of pregnancy-related deaths per 100,000 live births}
\]

\(^1\) Deaths occurring during pregnancy or within 42 days of delivery. Maternal deaths are identified by ICD-10 codes as listed on the death certificate.

\(^2\) Deaths occurring during pregnancy or within one year of pregnancy. Pregnancy-related deaths are identified by the pregnancy checkbox and/or death certificate linked to fetal deaths or birth certificate.
Measuring Maternal Deaths
Measuring Maternal Deaths: NCHS & PMSS

PRMR: Pregnancy-related mortality ratio
MMR: Maternal mortality rate

http://www.cdc.gov/reproductivehealth/maternalinfanthealth/pmss.html
PMSS: Causes of Pregnancy-related Death

Disparity implies inequality often where a greater equality might be reasonably expected
PMSS: Disparity Ratio

Disparity Ratio in Pregnancy-related Mortality Ratio by Race-Ethnicity and Ratio Tertile, 2007-2016

- Black: White
- Native: White
- Asian: White
- Hispanic: White

Preventing Maternal Deaths: Maternal Mortality Review Committees (MMRCs)
Preventing Maternal Deaths: Maternal Mortality Review Committees (MMRCs)

MMRCs have 3 components that the other systems (NCHS and PMSS) don’t have:

1. Robust DATA system dedicated to maternal mortality with multi-level data from multiple sources (including non-traditional sources)

2. A multidisciplinary committee of EXPERTS to review each death, through clinical and non-clinical lens, with a focus on prevention (population level)

3. PH STAFF (usually a state department of public health team) to gather and manage the data, establish and guide the committee, communicate with stakeholders, and conduct and disseminate research and surveillance. (AKA, put it all together)
Preventing Maternal Deaths Committee reporting forms MMRIA
## COMMITTEE DETERMINATION OF CAUSE(S) OF DEATH

### TYPE

<table>
<thead>
<tr>
<th>CAUSE (DESCRIPTIVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMMEDIATE</td>
</tr>
<tr>
<td>CONTRIBUTING</td>
</tr>
<tr>
<td>UNDERLYING</td>
</tr>
<tr>
<td>OTHER SIGNIFICANT</td>
</tr>
</tbody>
</table>

### IF PREGNANCY-RELATED, COMMITTEE DETERMINATION OF UNDERLYING CAUSE OF DEATH

Refer to page 3 for PMSS-MM cause of death list. If more than one is selected, list in order of importance beginning with the most compelling (1-2; no more than 2 may be selected in the system).

### DID OBESITY CONTRIBUTE TO THE DEATH?  
YES  | PROBABLY  | NO  | UNKNOWN

### DID MENTAL HEALTH CONDITIONS CONTRIBUTE TO THE DEATH?  
YES  | PROBABLY  | NO  | UNKNOWN

### DID SUBSTANCE USE DISORDER CONTRIBUTE TO THE DEATH?  
YES  | PROBABLY  | NO  | UNKNOWN

### WAS THIS DEATH A SUICIDE?  
YES  | PROBABLY  | NO  | UNKNOWN

### WAS THIS DEATH A HOMICIDE?  
YES  | PROBABLY  | NO  | UNKNOWN

### IF HOMICIDE, SUICIDE, OR ACCIDENTAL DEATH, LIST THE MEANS OF FATAL INJURY

<table>
<thead>
<tr>
<th>MEAN OF FATAL INJURY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIREARM</td>
</tr>
<tr>
<td>SHARP INSTRUMENT</td>
</tr>
<tr>
<td>BLUNT INSTRUMENT</td>
</tr>
<tr>
<td>POISONING/ OVERDOSE</td>
</tr>
<tr>
<td>HANGING/ SUICOCATION</td>
</tr>
<tr>
<td>FALL</td>
</tr>
<tr>
<td>INTENTIONAL NEGLECT</td>
</tr>
<tr>
<td>OTHER, SPECIFY:</td>
</tr>
</tbody>
</table>

### IF HOMICIDE, WHAT WAS THE RELATIONSHIP OF THE PERPETRATOR TO THE DECEDEENT?

<table>
<thead>
<tr>
<th>RELATIONSHIP</th>
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</thead>
<tbody>
<tr>
<td>NO RELATIONSHIP</td>
</tr>
<tr>
<td>PARTNER</td>
</tr>
<tr>
<td>EX-PARTNER</td>
</tr>
<tr>
<td>OTHER RELATIVE</td>
</tr>
<tr>
<td>OTHER, ACQUAINTANCE</td>
</tr>
<tr>
<td>OTHER, SPECIFY:</td>
</tr>
</tbody>
</table>

### DOES THE COMMITTEE AGREE WITH THE UNDERLYING CAUSE OF DEATH LISTED ON DEATH CERTIFICATE?

<table>
<thead>
<tr>
<th>AGREEMENT</th>
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<tbody>
<tr>
<td>YES</td>
</tr>
</tbody>
</table>
**COMMITTEE DETERMINATION OF PREVENTABILITY**

A death is considered preventable if the committee determines that there was at least some chance of the death being averted by one or more reasonable changes to patient, family, provider, facility, system and/or community factors.

<table>
<thead>
<tr>
<th>WAS THIS DEATH PREVENTABLE?</th>
<th>□ YES</th>
<th>□ NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHANCE TO ALTER OUTCOME?</td>
<td>□ GOOD CHANCE</td>
<td>□ SOME CHANCE</td>
</tr>
</tbody>
</table>

**CONTRIBUTING FACTORS WORKSHEET**

What were the factors that contributed to this death? Multiple contributing factors may be present at each level.

<table>
<thead>
<tr>
<th>CONTRIBUTING FACTOR LEVEL</th>
<th>CONTRIBUTING FACTOR AND DESCRIPTION OF ISSUE</th>
<th>RECOMMENDATIONS OF THE COMMITTEE</th>
<th>LEVEL OF PREVENTION</th>
<th>LEVEL OF IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(SEE BELOW)</td>
<td>(SEE BELOW)</td>
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</tbody>
</table>

**PATIENT/FAMILY**

- Delay
- Adherence
- Knowledge
- Cultural/religious
- Environmental
- Violence
- Mental health conditions
- Substance use disorder - alcohol, illicit/prescription drugs

**PROVIDER**

- Tobacco use
- Chronic disease
- Childhood abuse/trauma
- Access/financial
- Unstable housing
- Social support/isolation
- Equipment/technology
- Policies/procedures
- Communication

**FACILITY**

- Continuity of care/care coordination
- Clinical skill/quality of care
- Outreach
- Enforcement
- Referral
- Assessment
- Legal
- Other

**SYSTEM**

- PRIMARY: Prevents the contributing factor before it ever occurs
- SECONDARY: Reduces the impact of the contributing factor once it has occurred (i.e. treatment)
- TERTIARY: Reduces the impact or progression of an ongoing contributing factor once it has occurred (i.e. management of complications)

**COMMUNITY**

- PRIMARY: Prevents the contributing factor before it ever occurs
- SECONDARY: Reduces the impact of the contributing factor once it has occurred (i.e. treatment)
- TERTIARY: Reduces the impact or progression of an ongoing contributing factor once it has occurred (i.e. management of complications)

**PREVENTION LEVEL**

- SMALL: Education/counseling (community- and/or provider-based health promotion and education activities)
- MEDIUM: Clinical intervention and coordination of care across continuum of care; woman visits through obstetrics (protocols, prescriptions)
- LARGE: System-wide protective intervention (improve readiness, recognition and response to obstetric emergencies/LEAH)
- EXTRA LARGE: Systemic protective intervention (promote environments that support healthy living/ensure available and accessible services)
- GIANT: Address social determinants of health (poverty, inequality, etc.)

**EXPECTED IMPACT LEVEL**

- SMALL: Education/counseling (community- and/or provider-based health promotion and education activities)
- MEDIUM: Clinical intervention and coordination of care across continuum of care; woman visits through obstetrics (protocols, prescriptions)
- LARGE: System-wide protective intervention (improve readiness, recognition and response to obstetric emergencies/LEAH)
- EXTRA LARGE: Systemic protective intervention (promote environments that support healthy living/ensure available and accessible services)
- GIANT: Address social determinants of health (poverty, inequality, etc.)
Maternal Mortality Review Information Application (MMRIA)

A common language for reviews to work together
MMRCs: Equity Framework

Understanding community contributing factors requires a shift in thinking

1. We can link MMRIA data to community context
2. Assigning contributing role of community in individual cases is challenging
3. Community factors may be more evident in aggregate data
4. Adaptation, implementation, and evaluation of a Health Equity Toolkit in process(!)

MMRCs Equity Framework
MMRCs: Equity Framework

Health Care Service Environ

Social Environ

Pregnancy-related Mortality Ratio
Definition
A death is **considered preventable** if the committee determines there was at least some chance of the death being averted by one or more reasonable changes to patient, family, provider, facility, system and/or community factors.

Why
MMRCs determine preventability to prioritize interventions with the greatest opportunity for impact.
Committee established by statute – 2016

Meets quarterly

Voluntary reporting

Annual report to the legislature

https://www.scstatehouse.gov/reports/DHEC/MMMR%202019%20Legislative%20Brief%20-%20Revised%2003182019.pdf
SC Maternal Morbidity and Mortality Review Committee (MMMRC)

Multidisciplinary
Actively practicing
Based on ACOG and CDC recommendations
Three- to four-year terms
75% attendance requirements
Renewable once
**SC Maternal Morbidity and Mortality Review Committee (MMMRC)**

<table>
<thead>
<tr>
<th>3 YEARS</th>
<th>4 YEARS</th>
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<tbody>
<tr>
<td>• ACOG</td>
<td>• OB Anesthesia</td>
</tr>
<tr>
<td>• MRM/OB each Regional Perinatal Center (RPC)</td>
<td>• Cardiology</td>
</tr>
<tr>
<td>• SC Perinatal Association</td>
<td>• Domestic Violence</td>
</tr>
<tr>
<td>• Coroner</td>
<td>• Midwife</td>
</tr>
<tr>
<td>• SC Hospital Association</td>
<td>• Law Enforcement</td>
</tr>
<tr>
<td>• SC Department of Health and Human Services (DHHS)</td>
<td>• Alcohol and Drug Abuse</td>
</tr>
<tr>
<td>• OB MD FQHC</td>
<td>• Regional Systems Developers (RSDs)</td>
</tr>
<tr>
<td>• OB MD Level II hospital</td>
<td>• Family Medicine</td>
</tr>
<tr>
<td></td>
<td>• Psychiatry/Behavioral Medicine</td>
</tr>
</tbody>
</table>
South Carolina Pregnancy-Related Death by Race, 2013-2017

Rate per 100,000 live births

- South Carolina: 24.7
- White: 13.7
- Black and Other: 46.3
- Healthy People 2020 Goal: 11.4

https://www.scstatehouse.gov/reports/DHEC/MMMR%202019%20Legislative%20Brief%20-%20Revised%2003182019.pdf
SC Maternal Morbidity and Mortality Review Committee (MMMRC)

Scope of Case Review

- pregnancy-associated deaths
- pregnancy-related deaths

Primary Focus: preventable pregnancy-related deaths

MMMR Committee Findings

During the 2016-2018 review period, 13 of the 15 maternal deaths reviewed in South Carolina were determined to be pregnancy-related. One death was determined to be pregnancy-associated but not related to pregnancy, and the other could not be determined. Among the 13 pregnancy-related deaths, 54% were determined to be preventable.

54%

As reported nationally, the findings from South Carolina’s MMMR Committee show that the common causes of maternal death include cardiovascular and coronary conditions, hemorrhage, infection, and embolism.

https://www.scstatehouse.gov/reports/DHEC/MMMR%202019%20Legislative%20Brief%20-%20Revised%2003182019.pdf
SC Maternal Morbidity and Mortality Review Committee (MMMRC)

SC MMMRC ACCOMPLISHMENTS

SC uses the MMRIA reporting format

CDC-developed
Assist with identifying social determinants
Includes community factors
SC Maternal Morbidity and Mortality Review Committee (MMMRC)

SC MMMRC ACCOMPLISHMENTS

Annual Report to the South Carolina Birth Outcomes Initiative (SC BOI) each Spring

Annual Report to the SC General Assembly

https://www.scstatehouse.gov/reports/DHEC/MMMR%202019%20Legislative%20Brief%20-%20Revised%2003182019.pdf
Moving from Thought to Action: State Level
South Carolina SimCoach
Moving from Thought to Action: Local Level
GHS Postpartum Hemorrhage Cart

A standardized PPH cart that contains all equipment needed for any staff in any setting within the Women’s Hospital.
Thanks

Judith.burgis@prismahealth.org
Maternal and Child Health in Rural Communities

Elizabeth Crouch, PhD, Deputy Director
Rural and Minority Health Research Center
University of South Carolina Arnold School of Public Health
Our center’s mission

To illuminate and address the problems experienced by rural and minority populations in order to guide research, policy, and related advocacy.

Director: Jan M. Eberth, PhD
Deputy Director: Elizabeth Crouch, PhD

Findings briefs are produced 2-3 times/year on a variety of topics related to rural health and healthcare. Briefs are available at www.ruralhealthresearch.org.
## Unique issues facing rural communities

<table>
<thead>
<tr>
<th>DISPARITIES IN HEALTH</th>
<th>DISPARITIES IN HEALTH CARE</th>
</tr>
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<tbody>
<tr>
<td>• Increased mortality rates</td>
<td></td>
</tr>
<tr>
<td>• Lower life expectancies</td>
<td></td>
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<tr>
<td>• Higher % of overweight adults</td>
<td></td>
</tr>
<tr>
<td>• Higher rates of pain and suffering</td>
<td></td>
</tr>
<tr>
<td>• Higher rate of teen births</td>
<td></td>
</tr>
<tr>
<td>• Higher rate of children hospitalized for unintentional injuries</td>
<td></td>
</tr>
<tr>
<td>• Geographic isolation</td>
<td></td>
</tr>
<tr>
<td>• Lower socio-economic status</td>
<td></td>
</tr>
<tr>
<td>• Higher rates of health risk behaviors</td>
<td></td>
</tr>
<tr>
<td>• Limited job opportunities</td>
<td></td>
</tr>
<tr>
<td>• Lack of health care coverage</td>
<td></td>
</tr>
<tr>
<td>• Higher % of adults who delay seeing a doctor due to cost</td>
<td></td>
</tr>
<tr>
<td>• Lower % of screening for cervical, breast, and colorectal cancers</td>
<td></td>
</tr>
</tbody>
</table>
Gaps to be addressed...

Prenatal Care

“More than 860 pregnant women gave birth in South Carolina last year having received no prenatal care — the highest number in more than 20 years.”

Source: S.C. Department of Health and Environmental Control.
https://gis.dhec.sc.gov/chp/
There are 708 persistent child poverty counties.  

558 of them are rural.

Persistent child poverty counties are those where 20 percent or more of county related children under 18 were poor, measured in the 1980, 1990, 2000 censuses, and the 2007-11 American Community Survey.

Note that county boundaries are drawn for the persistent child poverty counties only.


Nationwide: Children by rural/urban residence

- 82% Urban
- 9% Large rural
- 9% Small rural

Urban: 58.9 million children
Large rural: 6.5 million children
Small rural: 6.4 million children
Children in rural areas

- Compared to urban children, rural children are:
  - less likely to be breastfed
  - more likely to be overweight or obese
  - more likely to live with someone who smokes
    - less likely to have preventative health & dental care
    - more likely to travel far for specialized care
    - more likely to require hospital readmissions
  - more **likely to die**, largely due to unintentional injury
Lots of bad news

- Infant Death Rates Are Higher in Rural America - but Not for All Causes
- Eroding Access and Quality of Childbirth Care in Rural US Counties
- Delivering rural babies: Maternity Care Shortages in Rural America
- A Shrinking Number of Rural Texas Hospitals Still Deliver Babies
- Rural Maternity Care Losses Lead to Childbirth Risks
- Diminishing Access to Rural Maternity Care and Associated Changes in Birth Location and Outcomes
Maternal and Child Health Collaborations

Children’s Trust Maternal, Infant, and Early Childhood Home Visiting Evaluation

Community Support for Young Parents Evaluation

Fact Forward

This Photo is licensed under CC BY-NC-ND downloaded from Microsoft Office
Maternal Infant and Early Childhood Visiting Program

MIECHV was created under the 2010 Affordable Care Act

*Home visits* by a nurse, social worker, early childhood educator, or other trained personnel during early parenting improve the lives of children and families.
Legislatively mandated benchmark measures

1. Improve maternal, newborn, and child health
2. Prevent child maltreatment & injury-related ER visits
3. Improve school readiness
4. Reduce crime and domestic violence
5. Improve family economic self-sufficiency
6. Improve coordination of community resources
Maternal Infant, and Early Childhood Home Visiting Program (MIECHV)

Aimed at breaking intergenerational patterns related to poverty, neglect, and poor health outcomes
MIECHV is in:
- all 50 states
- District of Columbia
- 25 Tribal grantees

3.3 million home visits made in 2012-2016
SC MIECHV: rural vs. urban coverage

2015
thank you

Elizabeth Crouch, PhD
CROUCHEL@mailbox.sc.edu
The Rural and Minority Health Research Center receives funding from a variety of federal, state, and local grants and contracts including a cooperative agreement with the Federal Office of Rural Health Policy.
Live Healthy SC: The Blueprint for Achieving Health and Racial Equity across South Carolina
“THE TEST OF OUR PROGRESS IS NOT WHETHER WE ADD MORE TO THE ABUNDANCE OF THOSE WHO HAVE MUCH, IT IS WHETHER WE PROVIDE ENOUGH FOR THOSE WHO HAVE LITTLE.”

FRANKLIN D. ROOSEVELT
SC Health and Racial Equity Blueprint

Key Populations

• Racial and rural gaps in maternal/child care access and health outcomes
• Children living in poverty that experience major gaps in social support, educational performance and academic advancement opportunities
• Racial and rural gaps in access to preventive care screening and chronic disease rates
• Equity gaps in access to non-emergent behavioral healthcare services for low income populations
• Higher rates of suicide in adolescents/young adults who suffer from discrimination and social isolation
• Health Outcomes Map
The Neighborhood and The Need

The 5.6 square mile area of CPN is marked by under-education, teenage pregnancy, poor healthcare, violent crime, unemployment, and intergenerational poverty.

We aim to break that cycle.

Note: 2016 Federal Poverty Line for a family of 4 (200% FPL) = $48,500

Area Comparison
Mt. Pleasant, Charleston County, CPN Neighborhood

The 5.6 square mile area of CPN is marked by under-education, teenage pregnancy, poor healthcare, violent crime, unemployment, and intergenerational poverty. We aim to break that cycle.
Specific Equity-Based Health Disparities

**FIGURE 5.7**
Low Birthweight, by Race/Ethnicity

Percent

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>non-Hispanic White</td>
<td>7.5%</td>
</tr>
<tr>
<td>non-Hispanic Black</td>
<td>14.6%</td>
</tr>
<tr>
<td>non-Hispanic Other</td>
<td>9.2%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>6.8%</td>
</tr>
</tbody>
</table>


South Carolina Pregnancy-Related Death by Race, 2013-2017

Rate per 100,000 live births

- Black and Other
- Hispanic/Latino
- Non-Hispanic Black
- Non-Hispanic Other
- Non-Hispanic White

- Healthy People 2020 Goal
Specific Equity-Based Health Disparities

Nonfatal Child Maltreatment, by Race

Rate per 1,000

Note: Ages less than 18.
South Carolina Graduation Rate, by Demographics

Demographic Characteristic

- White: 84.3%
- Black: 76.5%
- Hispanic: 79.5%
- Male: 75.3%
- Female: 87.4%
- Economically Disadvantaged: 78.7%
- Noneconomically Disadvantaged: 94.2%

Specific Equity-Based Health Disparities

Stroke Deaths, by Race/Ethnicity and Sex
Rate per 100,000 population

Note: Age-adjusted.
• Mission:
  • Coordinating action on shared goals to improve the health of ALL people in South Carolina.

**SHARED PRIORITIES**

**Healthy Babies**
Improve the health of moms and babies from preconception through the first year of life

**Healthy Minds**
Improve access to appropriate behavioral health services and other necessary critical and support services

**Healthy Children**
Improve the health and educational outcomes of children

**Healthy Bodies**
Improve physical health through good nutrition, physical activity, and increased access to high quality primary care

**Healthy Aging**
Improve the environment and opportunity to live a long and healthy life

**At a lower per-capita cost**
Reduce the cost of care for every individual in the state
SOCIAL DETERMINANTS AND SOCIAL NEEDS: MOVING BEYOND MIDSTREAM

COMMUNITY IMPACT

STRATEGIES
- Improve Community Conditions

TACTICS
- Laws, policies, and regulations that create community conditions supporting health for all people.

INDIVIDUAL IMPACT

upstream
- Addressing Individuals’ Social Needs

midstream
- Providing Clinical Care

Social workers, community health workers, and/or community-based organizations providing direct support/assistance to meet patients’ social needs

downstream
- Medical interventions

include patient screening questions about social factors like housing and food access; use data to inform care and provide referrals.
Live Healthy SC

Behavioral Health Improvement

Obesity & Chronic Disease Prevention

Maternal & Child Health and Wellbeing

Health System Transformation  Focus on Social Determinants of Health

Health Equity
South Carolina State Health Improvement Plan

OBJECTIVES for 2023:

1. Decrease the rate of nonfatal child maltreatment to 14.2 per 1,000 children
   - 2016: 15.8 per 1,000
   - 2017: 15.5 per 1,000
   - 2018: 15.0 per 1,000
   - 2019: 14.7 per 1,000

2. Increase the high school graduation rate to 88.8%
   - 2017: 84.6%
   - 2019: 86.1%

3. Decrease the percent of adults ages 20 years or older who are obese to 31.5%
   - 2016: 33.2%
   - 2018: 35.2%

4. Decrease the percent of adults who smoke to 18.5%
   - 2016: 20.6%
   - 2018: 18.6%

5. Decrease the stroke death rate to 43.1 per 100,000
   - 2016: 45.4 per 100,000
   - 2018: 45.5 per 100,000

6. Decrease the suicide rate from to 14.9 per 100,000
   - 2016: 15.7 per 100,000
   - 2018: 15.4 per 100,000

7. Decrease the rate of drug overdose deaths to 17.1 per 100,000
   - 2016: 18.0 per 100,000
   - 2018: 22.2 per 100,000

LiveHealthySC.com
Blueprint for Health and Racial Equity in SC

• A call to action focused on achieving health and racial equity across all SC communities:

• Built on 4 collective action categories:
  ➢ Cultural awareness and humility
  ➢ Health equity in all policies
  ➢ Equity targeted improvement programs/practices
  ➢ Investments in upstream SDOH solutions

• Focus on specific areas with the greatest equity gaps:
  ➢ Maternal/child health
  ➢ Obesity and chronic disease prevention
  ➢ Access to behavioral health services
Achieving Health Equity as our Primary Goal

• Create a “safe space” for candid dialogue about the root causes of health and racial inequities
• Build the capacity for cultural humility and the capability to counter the implicit biases that most contribute to inequity
• Ensure that all key population and community health data indicators are equity-stratified and geo-mapped
• Target collective policy and programmatic actions to the major equity-driven gaps in healthcare access and health outcomes
• Give an active voice to those who are most impacted by health and social inequities—realizing the “power of with”
#thisispublichealth

The Impact of Adverse Childhood Experiences in South Carolina

Dr. Aditi Srivastav Bussells
@aditisrivastav
@childrenstrusts
Adverse Childhood Experiences (ACEs)

- Built Environment
- Economic Stability
- Health and Wellness
- Social and Community Context
- Social Supports and network
- Education
The Original ACE Study

Adverse Childhood Experiences

Disrupted neurodevelopment

Social, Emotional and Cognitive Impairment

Adoption of Health Risk Behaviors

Disease, Disability and Social Problems

Early Death

DEATH

CONCEPTION
Adverse Childhood Experiences

Household Dysfunction
- Domestic violence
- Incarceration of a parent
- Mental illness in the household
- Substance use in the household
- Parent divorce/separation

Abuse
- Physical
- Emotional
- Sexual

Neglect
- Emotional
- Physical
ACE Score = Number of Yes’s to Questions

Did you live with anyone who was depressed, mentally ill, or suicidal?

Did you live with anyone who was a problem drinker or alcoholic?

Did you live with anyone who used illegal street drugs or who abused prescription medications?

Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?

Were your parents separated or divorced?

Did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?

Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?
Key Findings of The CDC-Kaiser ACE Study

• ACEs are common (63%)

• ACEs are interrelated (87%)

• ACEs have a dose-response relationship with health and social outcomes
Three in five South Carolinians report ACEs.
ACEs are common in South Carolina

- Parental Divorce/Separation: 31%
- Emotional Abuse: 30%
- Household Substance Use: 28%
- Household Domestic Violence: 20%
- Household Mental Illness: 18%
- Physical Abuse: 14%
- Sexual Abuse: 13%
- Household Incarceration: 9%
Lower income is associated with higher ACEs

- $75,000+: 57%
- $35-49,999: 63%
- $20-24,999: 68%
- 0-$9,000: 70%
To understand the impact of ACEs, we can examine their links to:

- Risk Behaviors
- Mental Health
- Chronic Disease
- Healthcare Access
South Carolinians who engage in **risky behaviors** also report high rates of ACEs

- **Current smoker**: 76%
- **Binge drinker**: 71%
- **Never use seatbelt**: 68%
- **Ever smoked**: 68%
More than a majority of South Carolinians who report depressive disorder also report ACEs.
South Carolinians who report **chronic physical health conditions** also report high rates of ACEs

<table>
<thead>
<tr>
<th>Condition</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPD</td>
<td>68%</td>
</tr>
<tr>
<td>Asthma</td>
<td>68%</td>
</tr>
<tr>
<td>Kidney disease</td>
<td>65%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>62%</td>
</tr>
<tr>
<td>Stroke</td>
<td>59%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>57%</td>
</tr>
<tr>
<td>Heart disease</td>
<td>56%</td>
</tr>
<tr>
<td>Heart attack</td>
<td>56%</td>
</tr>
<tr>
<td>Skin cancer</td>
<td>49%</td>
</tr>
</tbody>
</table>
South Carolinians who report lack of access to healthcare also report high rates of ACEs.

- Medical Cost Barrier: 81%
- No Health Coverage: 76%
- Checkup Never: 72%
- No Personal Care Provider: 71%
- Checkup Over 2 Years Ago: 66%
88% of the South Carolinians who reported ACEs, 88% reported more than one ACE.
ACEs are common, interrelated, powerful

- High ACE scores in population
- Increased risk of multiple health and social problems
- Opportunity for prevention
Impact of ACEs in South Carolina: Equity & Impact
ACEs are more common among people of color in South Carolina.

- White: 68% (59% ACEs present)
- Hispanic: 79% (4% ACEs present)
- Black: 65% (25% ACEs present)
ACEs are Experienced Differently By People of Color in South Carolina

- 34% of Hispanic adults report domestic violence in childhood
- 14% of Black adults reported a parent being incarcerated in childhood
- 10% Higher prevalence of health consequences associated with ACEs
Early Death
Disease, Disability and Social Problems
Adoption of Health Risk Behaviors
Social, Emotional and Cognitive Impairment
Disrupted neurodevelopment
Adverse Childhood Experiences
Historical and Systemic Inequities
### Household Dysfunction
- Domestic violence
- Incarceration of a parent
- Mental illness in the household
- Substance use in the household
- Parent divorce/separation

### Abuse
- Physical
- Emotional
- Sexual

### Neglect
- Emotional
- Physical

### Community Disadvantage
- Neighborhood violence
- Discrimination
- Lack of economic mobility
- Poverty

**ACEs = Adverse Community Experiences?**
Three Keys to Resilience

Positive Self-view

Safe, stable, nurturing Relationships

Supportive, Equitable Community
Increased well-being for individuals, families and communities

Resilient Community

Equitable Opportunity
- Adequate living wages
- Local wealth
- Quality education

People
- Strong social networks
- Trust
- Willingness to act for the common good
- Norms/culture that support health and safety

Place
- Safe parks and open spaces
- Arts and cultural expression
- Perceptions of safety
- Availability of healthy products
- Availability of quality housing

Arrows indicate the interconnections between the elements.
“Nothing that is worth doing can be achieved in our lifetime; therefore we must be saved by hope.”

-Reinhold Neibuhr
Thank you!

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Empower Action Model™

Public Policy
Community
Organization
Interpersonal (Family)
Individual (Child)