Child Adversity, Anxiety, and Resilience, an Example of a Population Data Approach: Urban, Rural & Vermont

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Disclaimer

The views, opinions, and content expressed in this presentation do not necessarily reflect the views, opinions, or policies of the Center for Mental Health Services (CMHS), the Substance Abuse and Mental Health Services Administration (SAMHSA), or the U.S. Department of Health and Human Services (HHS).
- Maternal and Child Health Epidemiology Program
  - Located within CDC / ONDIEH / NCCDPHP / DRH / FSB
  - 14 assignees and about 6 fellows in the field, including Vermont

- Assignment first of its kind
  - VT, CDC, NCBDD, SAMHSA, HRSA / MCHB
  - Primary focus on child and family behavioral, emotional, and mental health and wellness
  - Significant investment
  - VT selected for its innovation, collaboration, and size

http://www.cdc.gov/reproductivehealth/mchepi/assignees.htm
Implementation of Population Health in Vermont’s Department of Mental Health Children’s Unit

- Adverse childhood experiences and resilience
- Suicide, suicidal ideation, and non-suicidal self-harm
- Anxiety, depression, conduct disorders
- ADHD
  - School performance
  - Impact of inattention
  - Use of Individualized Education Programs (IEPs) and 504 Plans
  - Use of psychotropic prescription medications
- Behavioral, emotional and mental health and wellness indicators
- Neonatal abstinence syndrome
What is the population health approach and evidence-based public health?

**Population Health** is an approach that

- focuses on **interrelated conditions and factors that influence the health of populations over the life course**, 
- identifies **systematic variations in their patterns of occurrence**, and 
- applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations.

**Evidence-based public health** is the mechanism by which population health information is used for the

- development, implementation, and evaluation of effective programs and policies in public health through application of principles of scientific reasoning, including systematic uses of data and information systems, and appropriate use of behavioral science theory and program planning models.

What are adverse experiences and how common are these experiences?

Source: Wordle from Baltimore City Health Department 2017 presentation
## Sources of Data for Adverse Experiences

<table>
<thead>
<tr>
<th>ADVERSE CHILDHOOD EXPERIENCES</th>
<th>ADVERSE EXPERIENCES BEFORE BIRTH</th>
<th>ADVERSE FAMILY EXPERIENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samples 1 in 100 Vermont adults</td>
<td>Samples 1 in 5 Vermont births</td>
<td>Samples 1 in 106 Vermont children</td>
</tr>
<tr>
<td>Respondents recall their own childhood</td>
<td>Respondents recall their own experiences before and during pregnancy</td>
<td>Parents / guardians respond for child</td>
</tr>
</tbody>
</table>

All 3 of these surveillance systems
- Are designed and data collected in a manner that allow **valid state-to-state, regional, and national comparisons**
- **Yield weighted** data **prevalence estimates** for comparable non-institutionalized populations **in each state and nationally**
Which adverse experiences are measured?

Live with anyone (parent / guardian) who ...
- Was **depressed, mentally ill, or suicidal**?
- Was a **problem drinker or alcoholic**?
- Used **illegal street drugs / abused prescription medications**?
- Served time / was sentenced to **serve time in a prison, jail or other correctional facility**?
- Got **separated or divorced**?

See / hear 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 anyway (does not include spanking)?
  - Swear at you, insult you, or put you down?
- Did anyone at least 5 years older than you or an adult
  - Touch you sexually?
  - Try to make you touch them sexually?
  - Force you to have sex?

Adult Questions

Child Questions
- Ever the victim or violence / witness **neighborhood violence**?
- Ever **treated / judged unfairly** because of race or ethnic group?
- Live in a **household where it was hard to cover basics like food or housing**?
- Live with a parent/guardian who **died**?
- **Moved** more than 4 times since birth
Prevalence of **Adverse Family Experiences** among Children and Youth 3-17 years: National, Core-based Statistical Areas & Vermont

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percentages)</th>
<th>0 AFEs</th>
<th>1-2 adverse experiences</th>
<th>3+ adverse experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIONAL</td>
<td>48</td>
<td>37</td>
<td>15</td>
</tr>
<tr>
<td>IN A CBSA</td>
<td>48</td>
<td>36</td>
<td>17</td>
</tr>
<tr>
<td>NOT IN A CBSA</td>
<td>43</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>VERMONT</td>
<td>51</td>
<td>34</td>
<td>15</td>
</tr>
</tbody>
</table>

Data source: 2016 National Survey of Children’s Health

Core-Based Statistical Areas (CBSAs) are defined as a county or counties with at least one urbanized area or urban cluster (a core) of at least 10,000 population, plus adjacent counties that have a high degree of social and economic integration with the core (as measured through commuting ties). There are two types of CBSAs: Metropolitan Statistical Areas (MSAs) and Micropolitan Statistical Areas (μSAs).
9 Domains of Resilience

- Parent-child connections
- Structure
- Consequences
- Rights and responsibilities
- Safety and support
- Strong / key relationships
- A powerful identity
- A sense of control
- A sense of belonging and purpose

Source: Resilience Research Centre, 2014

What buffers adversity? Prevalence of Resilience among Children and Youth 3-17 years: National, Core-based Statistical Areas & Vermont

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percentages)</th>
<th>NATIONAL</th>
<th>IN A CBSA</th>
<th>NOT IN A CBSA</th>
<th>VERMONT</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>53</td>
<td>45</td>
<td>54</td>
<td></td>
</tr>
</tbody>
</table>

Data source: 2016 National Survey of Children’s Health
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Example of a population approach to adverse experiences, anxiety and resilience and taking data to action

Source: Wordle from Baltimore City Health Department 2017 presentation
How common is **anxiety** among this population?

Prevalence of Anxiety among Children and Youth 3-17 years: National, Core-based Statistical Areas & Vermont

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percentages)</th>
<th>NATIONAL</th>
<th>IN A CBSA</th>
<th>NOT IN A CBSA</th>
<th>VERMONT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence Percentage</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>11</td>
</tr>
</tbody>
</table>

Data source: 2016 National Survey of Children’s Health

Core-Based Statistical Areas (CBSAs) are defined as a county or counties with at least one urbanized area or urban cluster (a core) of at least 10,000 population, plus adjacent counties that have a high degree of social and economic integration with the core (as measured through commuting ties). There are two types of CBSAs: Metropolitan Statistical Areas (MSAs) and Micropolitan Statistical Areas (μSAs).
Are children and youth 3-17 years with adverse experiences at higher odds of having anxiety compared to those with no adverse experiences?

Behavioral, emotional, mental health conditions – like anxiety – and learning disorders are significantly associated with adverse experiences, particularly when there are 3 or more adverse experiences present.

Data Source: 2016 NSCH; * denotes statistical significance
If resilience buffers adverse experiences, would it have an effect on anxiety among children and youth 3-17 years?

Data Source: 2016 NSCH; Note: all of the statistical associations are significant
Relevance of a Population Approach & Findings

- A population approach allows us to look at the prevalence of conditions or characteristics of everyone in the population. We also can estimate the burden of disease for the whole population and, in some cases, better understand severity, “hot spots”, potential areas of service gaps, and disparities.

- This approach allows us to quantify the prevalence and statistical associations of adverse experiences, co-morbidities, school engagement, and buffering factors that moderate or mediate those associations.

- Our findings help the Vermont Department of Mental Health and Department of Health to explore opportunities for collaborative work among public health, mental health and
  - Families
  - School systems
  - School-based mental health clinicians and school nurses
  - Substance use / mental health counselors
  - Early childhood systems
  - Communities
  particularly in building skills in resilience, coping, emotional regulation, and using community supports and services.
What works? Where can the greatest impact be achieved?

Evidence based practice
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen economic supports to families</td>
<td>- Strengthening household financial security</td>
</tr>
<tr>
<td></td>
<td>- Family-friendly work policies</td>
</tr>
<tr>
<td>Change social norms to support parents and positive parenting</td>
<td>- Public engagement and education campaigns</td>
</tr>
<tr>
<td></td>
<td>- Legislative approaches to reduce corporal punishment</td>
</tr>
<tr>
<td>Provide quality care and education early in life</td>
<td>- Preschool enrichment with family engagement</td>
</tr>
<tr>
<td></td>
<td>- Improved quality of child care through licensing and accreditation</td>
</tr>
<tr>
<td>Enhance parenting skills to promote healthy child development</td>
<td>- Early childhood home visitation</td>
</tr>
<tr>
<td></td>
<td>- Parenting skill and family relationship approaches</td>
</tr>
<tr>
<td>Intervene to lessen harms and prevent future risk</td>
<td>- Enhanced primary care</td>
</tr>
<tr>
<td></td>
<td>- Behavioral parent training programs</td>
</tr>
<tr>
<td></td>
<td>- Treatment to lessen harms of abuse and neglect exposure</td>
</tr>
<tr>
<td></td>
<td>- Treatment to prevent problem behavior and later involvement in violence</td>
</tr>
</tbody>
</table>

**What does success look like? An example from the Technical Package on Preventing Child Abuse and Neglect**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Potential Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen economic supports to families</td>
<td>- Improvements in children’s health, development and health insurance coverage</td>
</tr>
<tr>
<td></td>
<td>- Reductions in physical abuse of children and child neglect</td>
</tr>
<tr>
<td></td>
<td>- Reductions in maternal depression and parental stress</td>
</tr>
<tr>
<td></td>
<td>- Reductions in adolescent risky health behaviors</td>
</tr>
<tr>
<td></td>
<td>- Reductions in chronic disease among adults and the leading causes of death</td>
</tr>
<tr>
<td>Change social norms to support parents and positive parenting</td>
<td>- Shift in perceived responsibility for children – from personal to shared</td>
</tr>
<tr>
<td></td>
<td>- Increase in public support for policies supportive of children and families</td>
</tr>
<tr>
<td></td>
<td>- Increase in seeking help for parenting</td>
</tr>
<tr>
<td>Provide quality care and education early in life</td>
<td>- Reduced encounters with child welfare services</td>
</tr>
<tr>
<td></td>
<td>- Lower rates of out of home placement, juvenile arrests / incarceration, grade retention and special education services, and disability</td>
</tr>
</tbody>
</table>

Translating Data into Action: What Does it Take?

**Context**
- Need
  - Identify needs, gaps, potential stakeholders

**Partnerships, Analysis & Interpretation**
  - Build trust and partnerships across the State
  - Analyze, interpret, synthesize data from multiple sources

**Translation & Dissemination**
  - Present data to State and federal stakeholders
  - Testify to State legislative workgroups
  - Engage stakeholders in the use of and talking about the data
  - Create products for disseminating the data for consumption of multiple stakeholder types

**Utilization & Implementation**
  - Use data in performance measurement and evaluation, on scorecards, in grant applications
  - Use data to support and justify trauma-informed work in the State – communities, pediatric practices, schools, health departments, prisons

**Improving population health**

**Utilization Implementation**

**Transfer Disseminate Diffusion**

**Data Access Analysis Interpretation**

**Need**
- Identify needs, gaps, potential stakeholders

**Products**
- Disseminate
  - Engage stakeholders in the use of and talking about the data
- Create products for disseminating the data for consumption of multiple stakeholder types
Changing the Context
to make individuals’ environments healthy

Ameliorating poverty and inequities in education, housing, access to healthcare

Health in all Policies, Strengthening Families Approach, PBiS, Flourishing Communities, universal childcare

SBIRT for substance use, home visiting

Therapeutic treatment for children and families to mitigate health consequences of abuse and neglect exposure, prevent problem behaviors, reduce violence

Teaching parents about child development stages, 5 protective factors

Socioeconomic Factors

Long-lasting Protective Interventions

Clinical Interventions

Counseling & Education

Discussion & Questions

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Additional Slides Highlighting Other NSCH Questions that Tap into Resilience
FAMILY STRENGTHS & RESILIENCE

Data Source for next section: 2016 National Survey of Children’s Health
Family Coping & Emotional Support among Vermont Children 17 years and Younger

### COPING WITH THE DEMANDS OF RAISING CHILDREN & SHARING IDEAS / TALKING ABOUT THINGS THAT MATTER

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percent)</th>
<th>Children &lt;1-17 years living with parents / guardians who are coping with the demands of raising children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very well</td>
</tr>
<tr>
<td>65.7</td>
<td>33.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percent)</th>
<th>Children 6-17 years living in a family that share ideas and talk about things that matter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very well</td>
</tr>
<tr>
<td>70.3</td>
<td>26.1</td>
</tr>
</tbody>
</table>

### CHILDREN AGES 0-17 LIVING WITH PARENTS WHO HAVE SOMEONE TO TURN TO FOR EMOTIONAL SUPPORT

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percent)</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>83.9</td>
<td>16.1</td>
<td></td>
</tr>
</tbody>
</table>

Data Source: 2016 National Survey of Children’s Health

Varies by age group
Family Resilience among Vermont Children 17 Years and Younger

FAMILY RESILIENCE

Does family know where to go for help in their community?

When your family faces problems, how often are you likely to do each of the following?

- Talk together about what to do
- Work together to solve our problems
- Know we have strengths to draw on
- Stay hopeful even in difficult times

FAMILY RESILIENCE SCORE

Data Source: 2016 National Survey of Children’s Health
COMMUNITY STRENGTHS & RESILIENCE
## Neighborhood / Community Attributes among Vermont Children, <1-17 years: Supportive Neighborhoods

### People Help Each Other Out

<table>
<thead>
<tr>
<th>Prevalence (weighted Percent)</th>
<th>Somewhat disagree / definitely disagree</th>
<th>Somewhat agree</th>
<th>Definitely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.8</td>
<td>48.0</td>
<td>41.2</td>
<td></td>
</tr>
</tbody>
</table>

### People Watch Out for Other’s Children

<table>
<thead>
<tr>
<th>Prevalence (weighted Percent)</th>
<th>Somewhat disagree / definitely disagree</th>
<th>Somewhat agree</th>
<th>Definitely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.7</td>
<td>42.2</td>
<td>45.1</td>
<td></td>
</tr>
</tbody>
</table>

### Know Where to Go for Help

<table>
<thead>
<tr>
<th>Prevalence (weighted Percent)</th>
<th>Somewhat disagree / definitely disagree</th>
<th>Somewhat agree</th>
<th>Definitely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.3</td>
<td>34.3</td>
<td>56.4</td>
<td></td>
</tr>
</tbody>
</table>

Data Source: 2016 National Survey of Children’s Health
Neighborhood / Community Attributes among Vermont Children, <1-17 years: Supportive Neighborhoods, continued

CHILDREN WHO LIVE IN A SUPPORTIVE NEIGHBORHOOD

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percent)</th>
<th>39.6</th>
<th>60.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>does not live in a supportive neighborhood</td>
<td>lives in a supportive neighborhood</td>
<td></td>
</tr>
</tbody>
</table>

CHILDREN WHO LIVE IN A SAFE NEIGHBORHOOD

<table>
<thead>
<tr>
<th>Prevalence (Weighted Percent)</th>
<th>3.3</th>
<th>22.4</th>
<th>74.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat disagree / definitely disagree</td>
<td>Somewhat agree</td>
<td>Definitely agree</td>
<td></td>
</tr>
</tbody>
</table>

Data Source: 2016 National Survey of Children’s Health