Using Validated Scales of Risk and Protective Factors to Address Social Determinants of Health and Substance Use and Mental Health Outcomes in Colorado

Culture of Data Conference 2019
Erin Kelly, DrPH, MA
Ali Maffey, MSW

Colorado Communities That Care (CTC)
Social-ecological Model

Health Outcomes

Risk and Protective Factors

Social

Crime

Education

Health Outcomes

Risk and Protective Factors
**Social Determinants of Health**

**Additional Data Sources and Sample Indicators**

<table>
<thead>
<tr>
<th>Population: (2010 Census)</th>
<th>CO (YEAR)</th>
<th>Health Statistics Region (YEAR)</th>
<th>County or Local (YEAR)</th>
<th>Source &amp; Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, ages 0-9</td>
<td>692,563</td>
<td></td>
<td></td>
<td>Colorado State Demography Office</td>
</tr>
<tr>
<td>Population, ages 10-14</td>
<td>332,654</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population, ages 15-19</td>
<td>339,475</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population, ages 20-24</td>
<td>348,615</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Economic Opportunities & Deprivation:**

- % of children below the Federal Poverty Level
- Unemployment rate
- % of public school children eligible for free and reduced price school lunch

**Scales in HKCS (2017)**

**Community**
- Perceived availability of substances
- Laws and norms favorable to substance use
- Opportunities for prosocial involvement (similar indicators)

**School**
- Academic failure
- Low commitment to school
- Rewards for prosocial involvement

**Family**
- Poor family management
- Parental attitudes favorable to substance use
- Opportunities for prosocial involvement

**Individual**
- Early initiation of substance use
- Perceived risk of substance use
- Attitudes favorable to substance use
Family Management Problems (Scale)

**Indicators**

- My parents ask if I’ve gotten my homework done.
- Would your parents know if you did not come home on time?
- When I am not at home, one of my parents knows where I am and whom I am with.
- The rules in my family are clear.
- My family has clear rules about alcohol and drug use.
Exposure to Risk Factors

A high school student in Colorado is more likely to have attempted suicide in the last 12 months if they have high exposure to these risk factors:

**Preliminary Findings**
A middle school student in Colorado is more likely to have attempted suicide in the last 12 months if they have high exposure to these risk factors:

- **Community**: 3.2x as likely if they believe they can easily access substances in their community as compared to those who do not.
- **School**: 2.0x as likely if they are not doing well in school as compared to those who do.
- **Family**: 2.0x as likely if their parents have favorable attitudes towards using substances as compared to those who don’t.
- **Individual**: 5.1x as likely if began using substances before the age of 13 as compared to those who do not.

**Preliminary Findings**

---

A high school student in Colorado is more likely to have used marijuana in the last 30 days if they have high exposure to these risk factors:

- **Community**: 2.0x as likely if they believe the community where they live has laws and norms that are favorable to using substances as compared to those who do not.
- **School**: 3.8x as likely if they believe they can easily access substances in their community as compared to those who do not.
- **Family**: 2.4x as likely if they do not feel committed to school as compared to those who do.
- **Individual**: 6.4x as likely if began using substances before the age of 13 as compared to those who do not.

**Preliminary Findings**
Exposure to **Risk Factors** & **Marijuana Use Among Youth**

A middle school student in Colorado is *more likely* to have used marijuana in the last 30 days if they have high exposure to these *risk factors*:

- **Community**: 10.5x as likely if they believe they can easily access substances in their community as compared to those who do not.
- **School**: 3.1x as likely if they are not doing well in school as compared to those who do.
- **Family**: 5.7x as likely if their parents have favorable attitudes towards using substances as compared to those who do not.
- **Individual**: 91.6x as likely if began using substances before the age of 13 as compared to those who do not.
  - 19.4x as likely if have favorable attitudes towards using substances as compared to those who do not.
  - 8.4x as likely if perceived there are low risks associated with substance use as compared to those who do not.

**Preliminary Findings**

---

---

**CAUTION**

...not to over-simplify interpretation
Use of Risk & Protective Factors in Colorado CTC
Prioritized Risk & Protective Factors

- Community Opportunities for Prosocial Involvement (n=32)
- Laws & Norms Favorable to Substance Use (n=21)
- Youth Favorable Attitudes towards Substance Use (n=17)
- Family Opportunities for Prosocial Involvement (n=15)

Applying a Public Health Lens

Communities That Care

Community and Societal-Level Strategies Menu
For the prevention of adolescent substance abuse in Colorado
## Table of Contents

<table>
<thead>
<tr>
<th>I.E. Opportunities and Rewards for Prosocial Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy I.E.1: Recruit and Reward Youth Participation in Community Coalitions</td>
</tr>
<tr>
<td>Strategy I.E.2: Build Public Support for Creating Community Spaces for Youth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. School - Risk and Protective Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>II.A. Academic Failure Beginning in Late Elementary School</td>
</tr>
<tr>
<td>Strategy II.A.1: Build Public Support for Quality Childcare Early in Life</td>
</tr>
<tr>
<td>Strategy II.A.2: Connect Families to Head Start, Early Head Start, and Preschool Education</td>
</tr>
<tr>
<td>Strategy II.A.3: Promote Academic Achievement</td>
</tr>
<tr>
<td>II.B. Lack of Commitment to School</td>
</tr>
<tr>
<td>Strategy II.B.1: Build Public Support for District-wide Implementation of Evidence-Based School Climate Interventions</td>
</tr>
</tbody>
</table>
Community Laws & Norms Favorable to Substance Use

- 2.0x as likely to use marijuana in the last 30 days
- 1.8x as likely to binge drink in the last 30 days
- 2.6x as likely to use prescription drugs without a prescription in the last 30 days
- 2.6x as likely to smoke a cigarette in the last 30 days
- 1.5x as likely to use an electronic vapor product in the last 30 days

- 1.8x as likely to attempt suicide in the last 12 months
- 1.4x as likely to be sad or hopeless for at least two weeks straight in the last 12 months
- 1.8x as likely to been forced to have sex in the last 12 months
- 2.6x as likely to carry a weapon to school in the last 30 days
- 1.7x as likely to be in a fight in the last 12 months

**Preliminary Findings**

Addressing Shared Risk and Protective Factors May Change the Way We Collectively Address Health & Social Issues
Do you want to learn more?

Do you have ideas?

Questions?

erin.w.kelly@colorado.edu

ali.maffey@state.co.us