Resiliency in the Heartland

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The Value of Kansas and Missouri Hospitals

Agenda

- Introduction – Mindy Hatton
- Resilient KC – Tom Bell
- Joint KHA/MHA Report and Action – Herb Kuhn
- Q & A – Mindy Hatton
Resilient KC: A Community-based Model to Address the Health Care Challenges of Childhood Trauma
• What: A partnership that aims to build a healthy and resilient community

• Who: Kansas City Chamber of Commerce and Trauma KC – a multi-system, multi-sector, bi-state network of 40 agencies.

• Why: Adverse childhood experiences (ACEs) can lead to poor health outcomes later in life.
WHAT IMPACT DO ACEs HAVE?

As the number of ACEs increases, so does the risk for negative health outcomes.

RISK

0 ACEs  1 ACE  2 ACEs  3 ACEs  4+ ACEs

Possible Risk Outcomes:

**BEHAVIOR**
- Lack of physical activity
- Smoking
- Alcoholism
- Drug use
- Missed work

**PHYSICAL & MENTAL HEALTH**
- Severe obesity
- Diabetes
- Depression
- Suicide attempts
- STDs
- Heart disease
- Cancer
- Stroke
- COPD
- Broken bones
Target Communities

- Armed Services
- Business
- Education
- Health
- Justice

*Education, Common Language, Toolkits and Best Practices will be developed for these target audiences.*
Resilient KC aims to:

- Raise awareness of the impacts of trauma and adversities on the greater community
- Build a resilient community
- Collect ACEs and resiliency baseline data

www.weareresilientkc.com
Data can help tackle childhood trauma at the community level

The Kansas Hospital Association and Missouri Hospital Association were able to deliver a community score on adverse childhood experiences at the ZIP-code level for communities in both states. FILE PHOTO BY JOHN SLEEZER - jsleezer@kcstar.com

BY TOM BELL
AND HERB B. KUHN

*Special to The Star*

Kansas City’s Resilient KC initiative, a partnership of Healthy KC and Trauma Matters KC, supports the emerging “upstreamist” movement in health care. The concept is to address health problems before they emerge as individual or community-centered health issues. Resilient KC targets community-based trauma.

Long-term and often invisible damage can be caused by childhood abuse and neglect, a troubled home or toxic stress. These factors can influence an individual’s physical and behavioral health throughout life — and even result in early death. Research suggests that this damage is compounded by multiple adverse childhood experiences (ACEs).

No Missouri or Kansas community is immune from these factors. Sadly, some are at high risk for all.
KHA and MHA Research and Action
## Emerging Pediatric Population Health Model

### Adverse Childhood Experiences (ACEs)

#### Latent Variable Model

Landmark study linking traumatic experiences in childhood to disparate health outcomes and premature death in adulthood.

MHA/KHA developed a ZIP code-level ACE risk model using hospital discharge and census-based data.

Intended to inform and augment resilient community initiatives.

Findings were published in October [HIDI HealthStats](http://bit.ly/2dZ6UBG)

### ACE Risk Latent Variable Model Inputs by Domain

<table>
<thead>
<tr>
<th>ACE Domain Measure</th>
<th>Selection Criteria &amp; Rate Base</th>
</tr>
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<tbody>
<tr>
<td><strong>Abuse</strong></td>
<td></td>
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<tr>
<td>Emotional Abuse</td>
<td>Under age 19</td>
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<tr>
<td>Physical Abuse (Child)</td>
<td>Under age 19</td>
</tr>
<tr>
<td>Physical Abuse (Perpetrator)</td>
<td>All</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>Under age 19</td>
</tr>
<tr>
<td>Criminal Household Member</td>
<td>All</td>
</tr>
<tr>
<td>Household Substance Abuse (Adult)</td>
<td>Over age 18</td>
</tr>
<tr>
<td>Household Substance Abuse (Child)</td>
<td>Under age 19</td>
</tr>
<tr>
<td>Mental Illness in Household (MDC 19)</td>
<td>Over age 18</td>
</tr>
<tr>
<td>Mental Illness in Household (Suicide)</td>
<td>All</td>
</tr>
<tr>
<td>Mother Treated Violently (Physical)</td>
<td>Female Ages 18-49</td>
</tr>
<tr>
<td>Mother Treated Violently (Sexual)</td>
<td>All</td>
</tr>
<tr>
<td>Parental Separation or Divorce (Counseling)</td>
<td>All</td>
</tr>
<tr>
<td>Parental Separation or Divorce (Population)*</td>
<td>ZIP Population</td>
</tr>
<tr>
<td><strong>Neglect</strong></td>
<td></td>
</tr>
<tr>
<td>Emotional Neglect (Mental Illness)</td>
<td>Under age 19</td>
</tr>
<tr>
<td>Childhood Poverty Rate*</td>
<td>ZIP Population</td>
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<tr>
<td>Emotional Neglect (Substance Abuse)</td>
<td>Under age 19</td>
</tr>
<tr>
<td>Rate of Female-Headed Households*</td>
<td>ZIP Population</td>
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<tr>
<td><strong>Toxic Stress</strong></td>
<td></td>
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<tr>
<td>Behavioral Responses</td>
<td>Under age 19</td>
</tr>
<tr>
<td>Family Counseling</td>
<td>All</td>
</tr>
<tr>
<td>Family Disruption</td>
<td>Under age 19</td>
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<tr>
<td>Gun Violence</td>
<td>All</td>
</tr>
<tr>
<td>Premature Death</td>
<td>Under age 50</td>
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<tr>
<td>Unemployment and Low Education</td>
<td>All</td>
</tr>
<tr>
<td>Insufficient Housing and Social Supports</td>
<td>Under age 19</td>
</tr>
</tbody>
</table>

*Variables gathered from the 2013-2015 Nielsen Claritas PopFacts Premier databases.*
Increased Risk of Downstream Health and Behavioral Consequences in Adulthood for Children Experiencing 3+ ACEs

Source: Felitti et al. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults
Statewide Results

2013-2015 ZIP-Level ACE Risk Scores
Greater Kansas City Metro Area Results

2013-2015 ZIP-Level ACE Risk Scores for the Kansas City Region

Critical Differences

64113 Country Club District
64128 Knochles Park Area

4 Miles Away A World Apart
Upstream Social Determinants of Health—including ACEs

COUNTRY CLUB DISTRICT

- <1% Percent of ZIP Within Low Income Census Tract and ½ Mile or Greater Access to a Supermarket

- 78.4% Percent of People With a Bachelor’s Degree or Higher

- $306k Median Home Value

KNOCHES PARK AREA

- 100% Percent of ZIP Within Low Income Census Tract and ½ Mile or Greater Access to a Supermarket

- 8.7% Percent of People With a Bachelor’s Degree or Higher

- $50k Median Home Value
Midstream Biological and Psychological Responses

- Psychiatric/Substance Abuse Hospital Diagnosis per 1,000:
  - Country Club District: 16.8
  - Knobes Park Area: 16.8
- Heart Disease Hospital Diagnosis per 1,000:
  - Country Club District: 398.6
  - Knobes Park Area: 398.6
- Hypertension Hospital Diagnosis per 1,000:
  - Country Club District: 818.9
  - Knobes Park Area: 818.9
- Obesity Hospital Diagnosis per 1,000:
  - Country Club District: 249.8
  - Knobes Park Area: 249.8
- Diabetes Hospital Diagnosis per 1,000:
  - Country Club District: 459
  - Knobes Park Area: 459
Severe Downstream Health Outcomes

82 years

1 of 967 Health Outcomes Rank

1 of 967 Health Factors Rank

Average Life Expectancy

71 years

Health Outcomes Rank

953 of 967

Health Factors Rank

965 of 967
Gun Violence—An Emerging Public Health Threat: Rates of Gun-Related Hospital Utilization and Pediatric Stress Diagnoses for Missouri and Kansas: Top 20 Gun Violence Hot Spots vs. Rest of State

Ten Year Trends: FY 2006 to 2015

<table>
<thead>
<tr>
<th></th>
<th>Gun Violence</th>
<th>Childhood Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri</td>
<td>2015: 364 per 100,000</td>
<td>2015: 342 per 100,000</td>
</tr>
<tr>
<td>Kansas</td>
<td>2015: 72 per 100,000</td>
<td>2015: 95 per 100,000</td>
</tr>
</tbody>
</table>

FY 2015 Gun-Related vs. Population

<table>
<thead>
<tr>
<th></th>
<th>Missouri</th>
<th>Kansas</th>
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</thead>
<tbody>
<tr>
<td>Gun-Related Hospital Visits</td>
<td>63%</td>
<td>57%</td>
</tr>
<tr>
<td>Population</td>
<td>93%</td>
<td>83%</td>
</tr>
</tbody>
</table>

All Other ZIP Codes in State
Top 20 Gun-Related ZIP Code Hot Spots
Thank You

Questions?