Adverse Childhood Experiences (ACE)

Results of Lake County 2009-2010 Survey

Ferron & Associates for Children’s Council of Lake County
May 19, 2010
Mechanisms By Which Adverse Childhood Experiences Influence Adult Health Status

The True Nature of Preventive Medicine (Dr. Vincent J. Felitti, MD)
Surveys Completed

Total of 479 responses from Lake County residents:

- **310 written surveys completed (65%)**
  - LFRC 148
  - AODS 83
  - CWS 47
  - New Beginnings 13
  - Redwood Children’s Services 12
  - Other 7

- **169 online survey responses (35%).**
Results of ACE Survey

- Demographics including age, gender, ethnicity, marital status, number of children in home, employment status, education level, medical home, health insurance and zip code
- Chronic health conditions and behavioral issues
- 10 ACE questions
Results of ACE Survey

Demographics of Survey Respondents
Age of ACE Survey Respondents

- 18-21: 28
- 22-29: 101
- 30-39: 110
- 40-49: 66
- 50-59: 87
- 60-69: 33
- 70+: 5
- NA: 49

Age Ranges
Comparison of ACE Respondents to Countywide: Age Distribution

<table>
<thead>
<tr>
<th>Years</th>
<th>ACES Respondents</th>
<th>Countywide</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>30%</td>
<td>16%</td>
</tr>
<tr>
<td>30-59</td>
<td>61%</td>
<td>44%</td>
</tr>
<tr>
<td>60 and older</td>
<td>9%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Gender of ACE Survey Respondents

- Female: 327
- Male: 102
- NA: 50
Comparison of ACE Respondents to Countywide: Gender

<table>
<thead>
<tr>
<th></th>
<th>ACES Respondents</th>
<th>Countywide*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>76%</td>
<td>49.7%</td>
</tr>
<tr>
<td>Male</td>
<td>24%</td>
<td>50.3%</td>
</tr>
</tbody>
</table>

*US Census, American Factfinder, 2006-2008 American Community Survey for Lake County
Race/Ethnicity of ACE Respondents

- Native Amer.: 23
- Asian/PI: 6
- Black: 8
- Hisp/Lat: 55
- White: 353
- Multiracial: 14
- NA: 50
## Comparison of ACE Respondents to Countywide: Ethnicity/Race

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>ACE Respondents</th>
<th>Countywide*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American</td>
<td>5%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Asian/Pac Islander</td>
<td>1%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Black</td>
<td>2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>12%</td>
<td>15.4%</td>
</tr>
<tr>
<td>White</td>
<td>77%</td>
<td>75.9%</td>
</tr>
<tr>
<td>Multiracial</td>
<td>3%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

*US Census, American Factfinder, 2006-2008 American Community Survey for Lake County
Marital Status of ACE Survey Respondents

- Married: 120
- Never Married: 62
- Unmarried with Partner: 41
- Divorced: 49
- Separated: 6
- Widowed: 5
- NA: 196
Comparison of ACE Respondents to Countywide: Marital Status

<table>
<thead>
<tr>
<th></th>
<th>ACE Respondents</th>
<th>Countywide*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married**</td>
<td>57%</td>
<td>28.4%</td>
</tr>
<tr>
<td>Never Married</td>
<td>22%</td>
<td>45.2%</td>
</tr>
<tr>
<td>Separated</td>
<td>2%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Divorced</td>
<td>17%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Widowed</td>
<td>2%</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

*US Census, American Factfinder, 2006-2008 American Community Survey for Lake County
**Includes Unmarried, but living with a partner.
41% of survey respondents said they had one or more children under 18 living in their home, compared with 34% county-wide*.

*US Census, American Factfinder, 2006-2008 American Community Survey for Lake County.)
Educational Status of ACE Survey Respondents

- Some High School: 29
- HS Grad/GED: 49
- Some college: 83
- 2-year degree: 31
- 4-year degree: 51
- Graduate Degree: 39
- NA: 197
# Comparison of ACE Respondents to Countywide: Educational Status

<table>
<thead>
<tr>
<th></th>
<th>ACE Respondents</th>
<th>Countywide*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some HS</td>
<td>10%</td>
<td>14.1%</td>
</tr>
<tr>
<td>HS Grad/GED</td>
<td>17%</td>
<td>36.6%</td>
</tr>
<tr>
<td>Some college</td>
<td>30%</td>
<td>26.5%</td>
</tr>
<tr>
<td>2-yr degree</td>
<td>11%</td>
<td>7.6%</td>
</tr>
<tr>
<td>4-year degree</td>
<td>18%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>14%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

*US Census, American Factfinder, 2006-2008 American Community Survey for Lake County
Employment Status of ACE Survey Respondents

- Employed: 190
- Unemployed: 55
- Retired: 12
- Not in Labor Force: 24
- NA: 198
Comparison of ACE Respondents to Countywide: Employment Status

<table>
<thead>
<tr>
<th></th>
<th>ACE Respondents</th>
<th>Countywide*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>67%</td>
<td>52%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Not in Labor Force</td>
<td>13%</td>
<td>42%</td>
</tr>
</tbody>
</table>

*US Census, American Factfinder, 2006-2008 American Community Survey for Lake County
62% of those responding said they had a medical home.
<table>
<thead>
<tr>
<th>City</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Lake</td>
<td>95485, 95493</td>
</tr>
<tr>
<td>Nice/Lucerne</td>
<td>95464, 95458</td>
</tr>
<tr>
<td>Clearlake/Glenhaven</td>
<td>95422, 95423, 95424, 95443</td>
</tr>
<tr>
<td>Lower Lake</td>
<td>95457</td>
</tr>
<tr>
<td>Middletown/Cobb/Hidden Valley Lake</td>
<td>95461, 95426, 95467</td>
</tr>
<tr>
<td>Kelseyville</td>
<td>95451</td>
</tr>
<tr>
<td>Lakeport/Finley</td>
<td>95453, 95435</td>
</tr>
</tbody>
</table>
Zip Code/Cities of ACE Survey Respondents

- Upper Lake: 19
- Nice/Lucerne: 35
- Clearlake: 479
- LL: 15
- Middletown: 35
- Kelseyville: 68
- Lakeport: 67
- NA: 61
## Comparison of ACE Respondents to Countywide: Zip Code/City

<table>
<thead>
<tr>
<th>Areas</th>
<th>ACE Respondents</th>
<th>Countywide*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Lake</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Nice/Lucerne</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Clearlake</td>
<td>43%</td>
<td>30%</td>
</tr>
<tr>
<td>Lower Lake</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Middletown/Cobb/HVL</td>
<td>8%</td>
<td>16%</td>
</tr>
<tr>
<td>Kelseyville</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Lakeport</td>
<td>16%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*US Census, 2000
Results of ACE Survey

Chronic Health Conditions and Behavioral Issues
Chronic Behavioral Issues of ACE Survey Respondents

- Tobacco: Male 43%, Female 32%
- Alcohol: Male 30%, Female 26%
- Street Drugs: Male 46%, Female 26%
- Prescription Drugs: Male 9%, Female 12%
Chronic Mental Health/Behavioral Issues of ACE Survey Respondents

- Being overweight: 28% (Male) vs. 30% (Female)
- Lack of exercise: 60% (Male) vs. 60% (Female)
- Anger Management: 15% (Male) vs. 15% (Female)
- Depression/Anxiety: 29% (Male) vs. 55% (Female)
Chronic Health Conditions of ACE Survey Respondents

- Coronary Heart Disease:
  - Male: 3%
  - Female: 4%
- High Blood Pressure:
  - Male: 34%
  - Female: 25%
- Diabetes:
  - Male: 5%
  - Female: 3%
- Asthma:
  - Male: 15%
  - Female: 17%

Legend: Male in light blue, Female in light green.
ACE Survey Respondents who Experienced Depression: By Area

- Upper Lake: 32%
- Nice/Lucerne: 40%
- Clearlake: 24%
- LL: 27%
- Middletown: 37%
- Kelseyville: 46%
- Lakeport: 46%
ACE Survey Respondents who Experienced Being Overweight: By Area

- Upper Lake: 53%
- Nice/Lucerne: 34%
- Clearlake: 21%
- LL: 20%
- Middletown: 49%
- Kelseyville: 35%
- Lakeport: 58%
ACE Survey Respondents who Experienced Lack of Sufficient Exercise: By Area
ACE Survey Respondents who Experienced Difficulty with Anger Management: By Area

Note: Middletown/Cobb area had 0% of survey respondents who said they had experienced difficulty with anger management.
ACE Survey Respondents who Experienced Difficulty Quitting Tobacco: By Area

- Upper Lake: 21%
- Nice/Lucerne: 34%
- Clearlake: 23%
- LL: 13%
- Middletown: 20%
- Kelseyville: 25%
- Lakeport: 22%
ACE Survey Respondents who Experienced Overuse of Alcohol: By Area

- Upper Lake: 26%
- Nice/Lucerne: 34%
- Clearlake: 13%
- LL: 7%
- Middletown: 20%
- Kelseyville: 19%
- Lakeport: 21%
ACE Survey Respondents who Experienced Street Drug Use: By Area

- Upper Lake: 21%
- Nice/Lucerne: 34%
- Clearlake: 22%
- LL: 7%
- Middletown: 14%
- Kelseyville: 15%
- Lakeport: 22%
ACE Survey Respondents who Experienced Overuse of Prescription Drugs: By Area

Note: Lower Lake area had 0% of survey respondents who said they had experienced overuse of prescription drugs.
ACE Survey Respondents who Experienced Coronary Heart Disease or High Blood Pressure: By Area

- Upper Lake: 32%
- Nice/Lucerne: 14%
- Clearlake: 11%
- LL: 7%
- Middletown: 17%
- Kelseyville: 31%
- Lakeport: 25%

Legend:
- High Blood Pressure
- Coronary Heart Disease
ACE Survey Respondents who Experienced Diabetes or Asthma: By Area
Results of ACE Survey

Responses to
10 ACE Questions
Percent of Respondents Indicating “Yes” to Questions #1-10
Percent of Male & Female Respondents Indicating “Yes” to Questions #1-10

ACE Question #

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>10</td>
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</tbody>
</table>
39% of respondents had 5 or more ACE markers.
# Frequency of ACE Markers in Survey Respondents

<table>
<thead>
<tr>
<th>Source* of Completed Survey</th>
<th>Percent with 5 or more ACE Markers</th>
</tr>
</thead>
<tbody>
<tr>
<td>AODS</td>
<td>27%</td>
</tr>
<tr>
<td>Online</td>
<td>30%</td>
</tr>
<tr>
<td>Redwood Children’s Services</td>
<td>33%</td>
</tr>
<tr>
<td>CWS</td>
<td>45%</td>
</tr>
<tr>
<td>LFRC</td>
<td>54%</td>
</tr>
<tr>
<td>New Beginnings</td>
<td>62%</td>
</tr>
</tbody>
</table>

*Note: Program Staff and participants completed surveys.
Frequency of ACE Markers in Male & Female Survey Respondents
Frequency of ACE Markers by Area: Survey Respondents with 5 or more ACE markers.

Note: Lower Lake had 0% of its survey respondents with 5 or more ACE markers.
Results of ACE Survey

Relationship Between ACE Markers and Chronic Health Conditions and Behavioral Issues
Number of ACE Markers Vs. Number of Health/Behavioral Conditions

![Bar chart showing the relationship between the number of ACE markers and the number of health/behavioral conditions. The chart indicates that as the number of ACE markers increases, the percentage of individuals with 5 or more health/behavioral conditions also increases.]
Number of ACE Markers Vs. Difficulty Quitting Smoking

- 0 ACE Markers: 30%
- 1 ACE Marker: 21%
- 2 ACE Markers: 33%
- 3 ACE Markers: 34%
- 4 ACE Markers: 24%
- 5 or more ACE Markers: 47%

Number of ACE Markers
Number of ACE Markers Vs. Overuse of Alcohol

- 0 ACE markers: 18%
- 1 ACE marker: 12%
- 2 ACE markers: 18%
- 3 ACE markers: 34%
- 4 ACE markers: 28%
- 5 or more ACE markers: 44%
Number of ACE Markers Vs. Street Drug Use

Number of ACE Markers

- 0: 21%
- 1: 24%
- 2: 26%
- 3: 25%
- 4: 28%
- 5: 30%
- 6 or more: 55%
Number of ACE Markers Vs. Overuse of Prescription Drugs
Number of ACE Markers Vs. Depression

Number of ACE Markers

0 1 2 3 4 or more

0% 10% 20% 30% 40% 50% 60% 70%

39% 26% 31% 63% 66%
Number of ACE Markers Vs. Difficulty with Anger Management

Number of ACES Markers

0: 8%
1: 2%
2: 5%
3: 9%
4: 32%
5 or more: 31%
Number of ACE Markers Vs. Being Overweight
Number of ACE Markers Vs. Lack of Sufficient Exercise

Number of ACE Markers

0 1 2 3 4 5 or more

39% 44% 46% 53% 68% 69%
Number of ACE Markers Vs. Coronary Health Disease & High Blood Pressure

![Bar chart showing the percentage distribution of ACE markers versus coronary health disease and high blood pressure.]

- 0 markers: 30%
- 1 marker: 22%
- 2 markers: 36%
- 3 markers: 25%
- 4 markers: 28%
- 5 or more markers: 25%

Number of ACE Markers
Number of ACE Markers Vs. Asthma

Number of ACE Markers

- 0: 17%
- 1: 6%
- 2: 15%
- 3: 19%
- 4: 12%
- 5 or more: 22%
Conclusions

- Surveys responses from a higher number of females, married individuals, younger age groups, and more highly educated than is represented in county as whole.
- Geographic spread of health conditions and individuals with 5 or more ACE markers around county.
- Difficult to see relationship between chronic health conditions and ACE in this data.
- Relationship can be seen between behavioral and mental health issues and ACE across respondents.
Next Steps

Consider utilizing results to:

- Provide more education to the community about ACE.
- Plan prevention services.
- Plan intervention services.
- Work with medical community.
Results of ACE Survey

Questions or Comments?

Ferron & Associates
May 19, 2010