



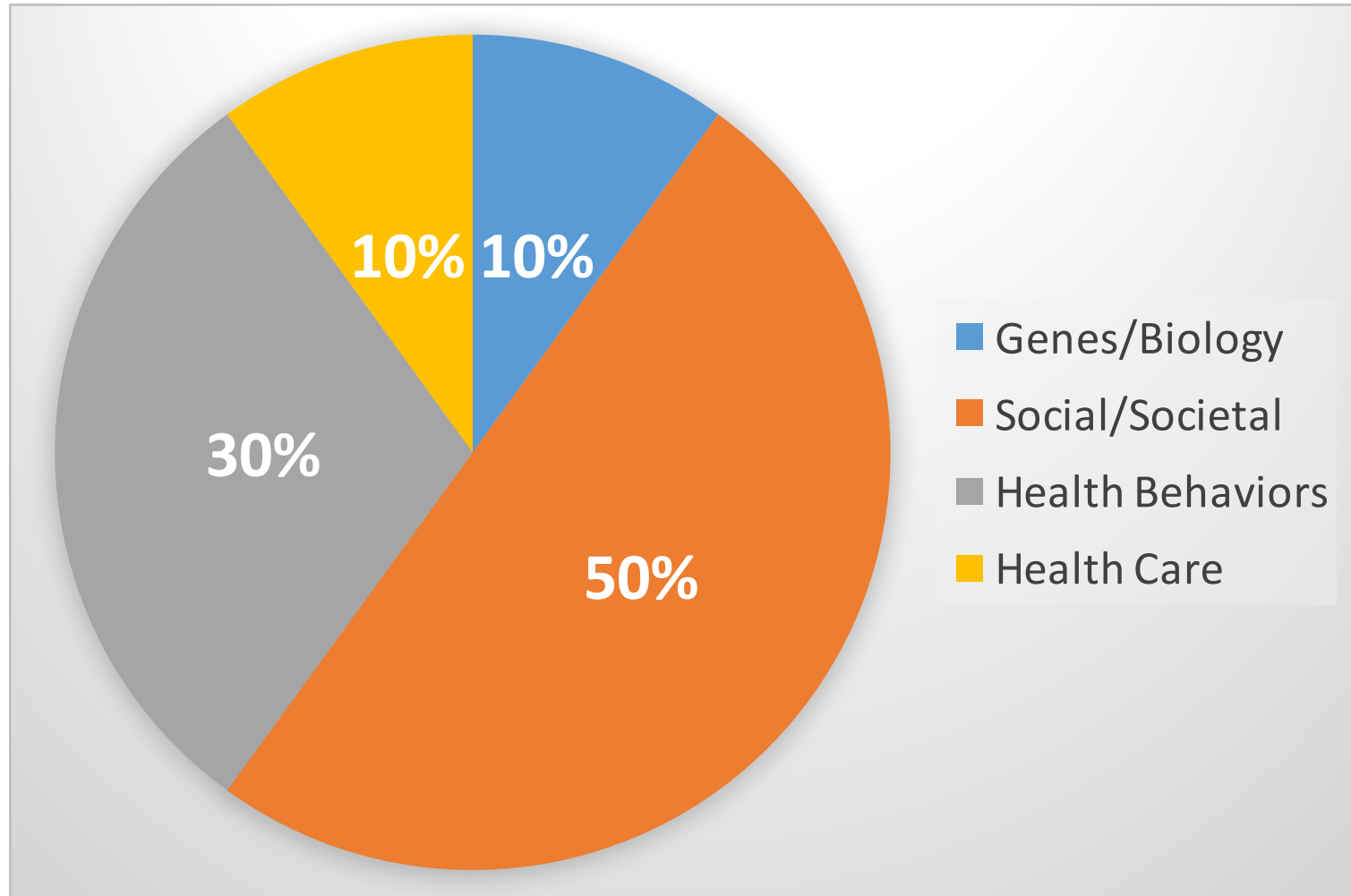
# Social Determinants of Health: Oklahoma as an Epicenter

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University of Oklahoma**

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# Determinants of Health, by %

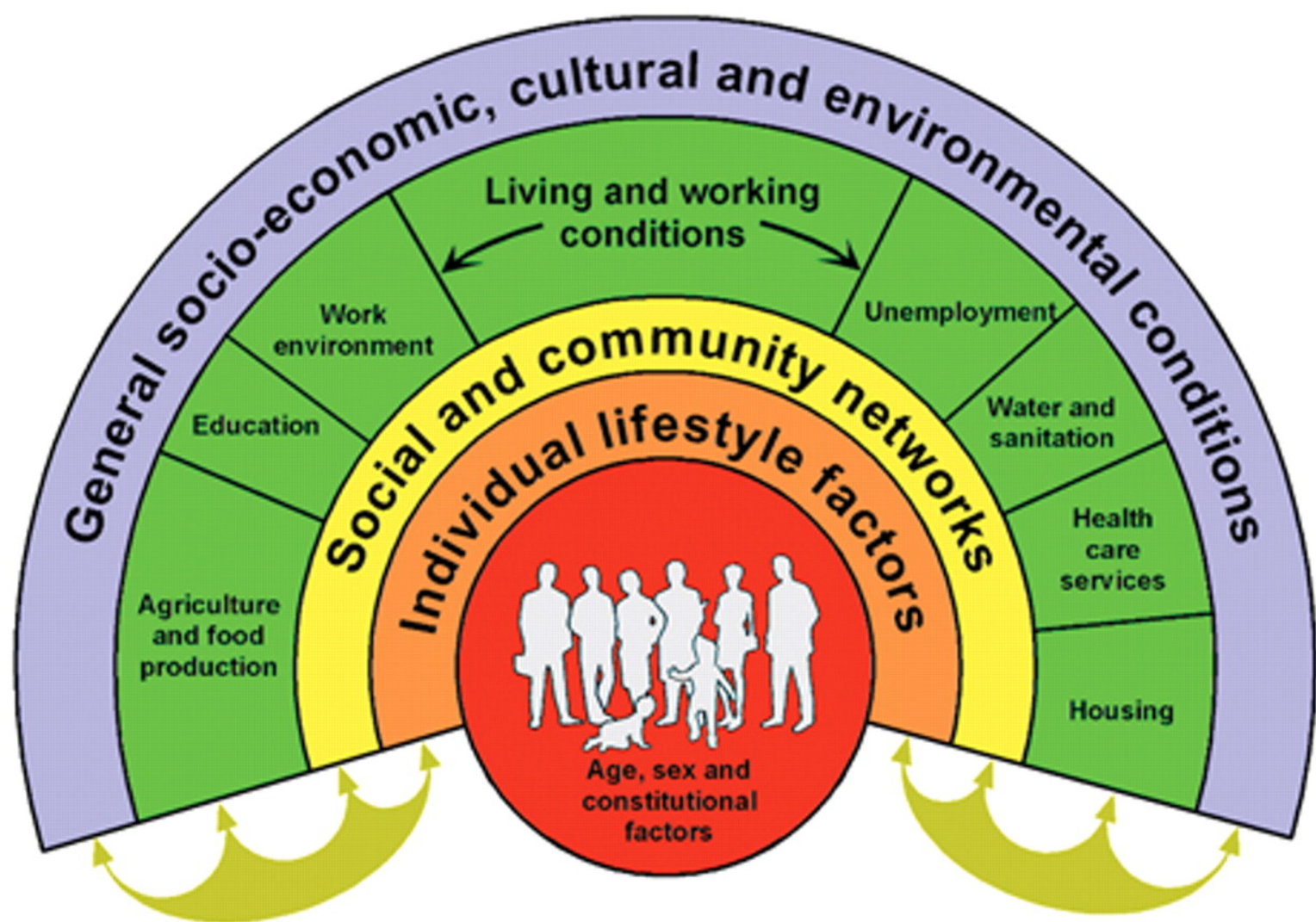


# Social Determinants of Health

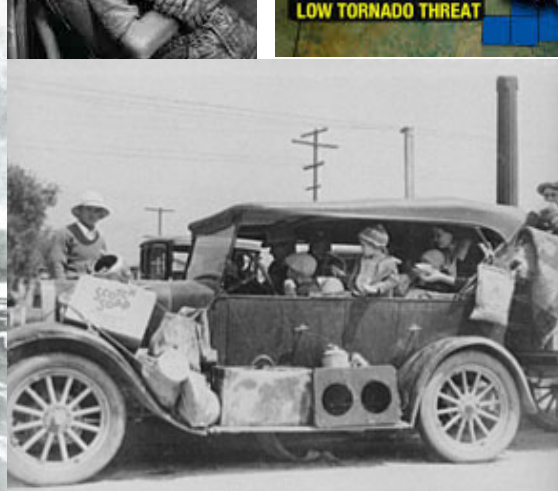
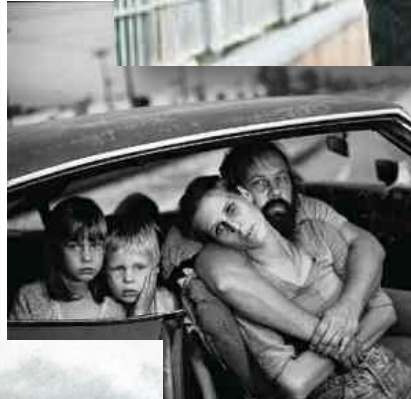


“The World Health Organization Commission defined **social determinants of health** as the conditions in which people are **born, grow, live, work and age**, including the health system.”

“The structural determinants and conditions of daily life constitute the social determinants of health and are responsible for a major part of health inequities between and within countries”



# Oklahoma Context



# Current Oklahoma Reality

# Policy

- Budget crisis
- NO Medicaid expansion
- Safety net: EITC under threat
- Education cuts
- Infrastructure, environment

**SUBJECT AREA RANKINGS AND GRADES:  
WOMEN'S ACCESS TO HEALTH CARE**

STATE	Access to Care		STATE	Access to Care	
	Rank	Grade		Rank	Grade
Alabama	25	C	Montana	41	F
Alaska	35	D	Nebraska	23	C+
Arizona	39	D-	Nevada	49	F
Arkansas	42	F	New Hampshire	6	A
California	15	B	New Jersey	8	A-
Colorado	27	C	New Mexico	40	D-
Connecticut	4	A	New York	7	A
Delaware	2	A	North Carolina	26	C
Florida	36	D	North Dakota	34	D
Georgia	31	D+	Ohio	20	B-
Hawaii	11	B+	Oklahoma	46	F
Idaho	50	F	Oregon	30	C-
Illinois	17	B	Pennsylvania	16	B
Indiana	44	F	Rhode Island	3	A
Iowa	13	B+	South Carolina	37	D
Kansas	29	C-	South Dakota	21	C+
Kentucky	28	C-	Tennessee	22	C+
Louisiana	32	D+	Texas	45	F
Maine	9	A-	Utah	43	F
Maryland	10	A-	Vermont	5	A
Massachusetts	1	A	Virginia	19	B-
Michigan	14	B	Washington	24	C
Minnesota	18	B-	West Virginia	33	D+
Mississippi	47	F	Wisconsin	12	B+
Missouri	38	D-	Wyoming	48	F

WOMEN'S HEALTH REPORT CARD:  
WOMEN'S ACCESS TO HEALTH CARE

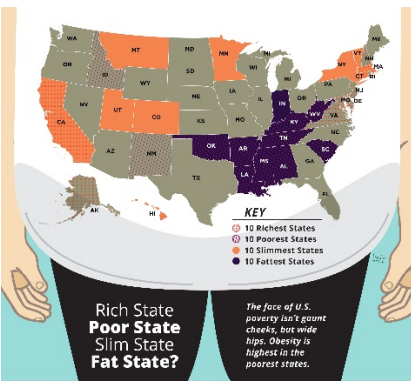
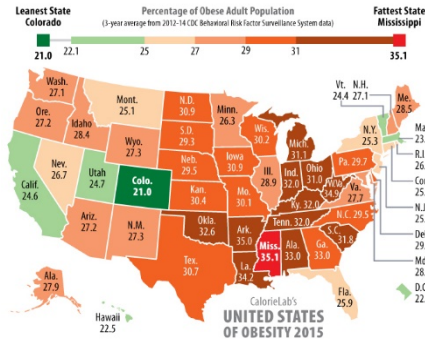
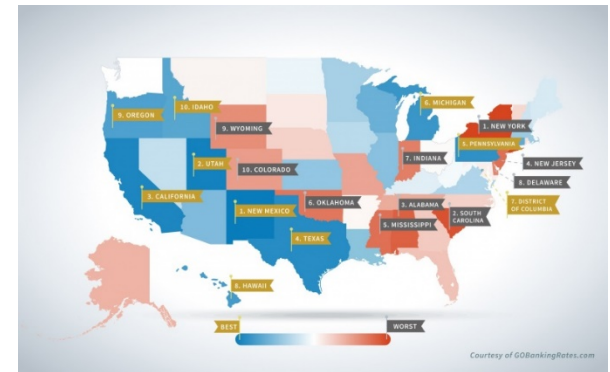
### OKLAHOMA INFRASTRUCTURE GRADES

2013 REPORT CARD GPA: **C-**

AVIATION	C+	BRIDGES	D+	DAMS	D
LEVELS	D-	RAIL	B	ROADS	D
TRANSIT	D+	WATER AND WASTEWATER	D+		

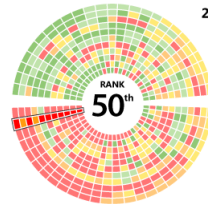
Oklahoma is consistently ranked at or near the bottom of multiple lists as having the worst bridges in the nation. Structurally deficient bridges are a danger to motorists and have a detrimental impact on the economic growth. Approximately 1 in 5 bridges are deteriorating to some degree. Phase 1 of the Bridge Improvement and Turnpike Modernization Plan included the improvement of 126 unimproved bridges by adding them to the Oklahoma Department of Transportation (ODOT) 6-Year Construction Work Plan (CWP). Phase 2 was addressed during the 2012 session that enhanced the Rebuilding Oklahoma Access and Driver Safety (ROADS) funding beginning in 2014. With the passage of this legislation, the remaining 167 structurally-deficient bridges were added to the 2013-2020 ODOT 6-Year CWP which marks a great effort to improve the state's bridges.

**A: EXCEPTIONAL, B: GOOD, C: MEDIOCRE, D: POOR, F: FAILING, I: INCOMPLETE**  
Each category was evaluated on the basis of capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation



## Oklahoma

### 2016 SOLAR REPORT CARD



Overall Grade: **F**

- Policy**
- D RPS Law
  - F Solar Carve-Out
  - D Electricity Cost
  - F Net Metering
  - F Interconnection

- Incentives**
- F Tax Credits
  - F Rebates
  - F Performance Payments
  - F Property Tax Exemption
  - F Sales Tax Exemption

5-kW Solar Payback Time: **15 Years**    Investment Return (IRR): **6.5%**

### OK

# D

**STATE: OKLAHOMA**

**GRADE: D**

**GUN LAW RANK: 44**

**GUN DEATH RANK: 4**

- Enacted a law in 2015 at allowing K-12 school employees with concealed weapons permits to carry their guns at school functions.
- Could improve its score by requiring background checks on or vote sales, enacting a gun violence protective order law, eliminating open carry laws, and imposing a waiting period on firearm purchases.

LEARN MORE ABOUT OKLAHOMA'S GUN LAWS AT [SMARTGUNLAWS.ORG/OK](http://SMARTGUNLAWS.ORG/OK)

## % of children living in POVERTY

Year	U.S.	OK
2008	18%	23%
2009	20%	22%
2010	22%	25%
2011	23%	23%
2012	23%	24%

Over 220,000 children in Oklahoma live in poverty — that translates to nearly one in four kids in the state living in families making less than \$23,283 annually for a family of four. Growing up in poverty can cause children to have poorer health and even impede cognitive development.

2014 KIDS COUNT Data Book

INSTITUTE OF CHILDREN, YOUTH & DEVELOPMENT

State & Congressional District Resource for Well-Being  
A product of the Gallup-Healthways Well-Being Index

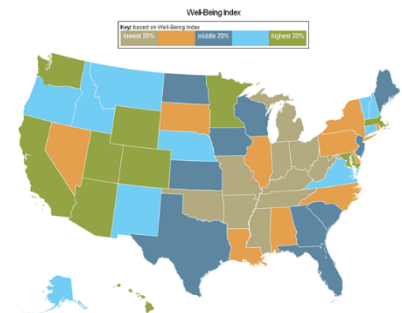
### Highest Women's Life Expectancy at Birth

- Hawaii
- Minnesota
- California
- Connecticut
- New York



### Lowest Women's Life Expectancy at Birth

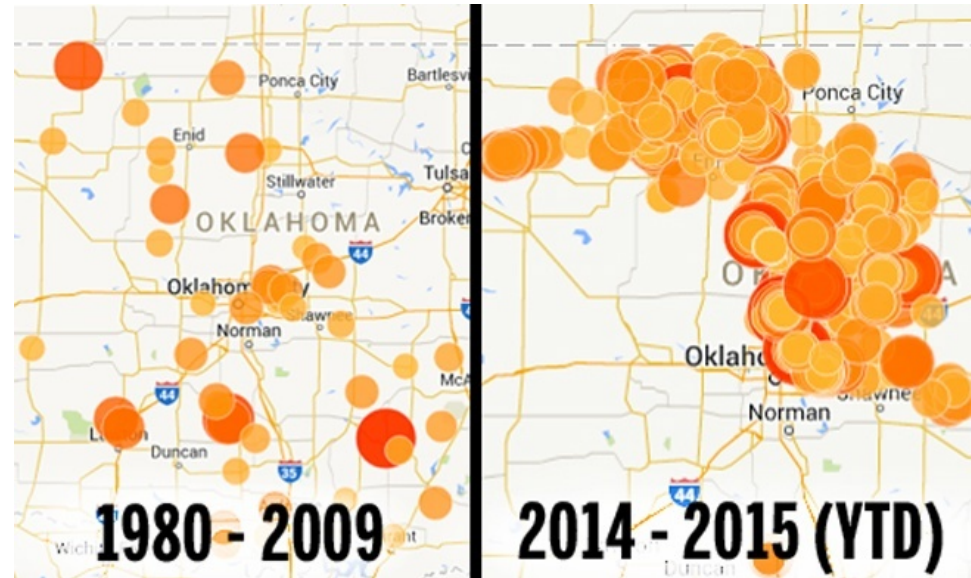
- T-47. Kentucky
- T-47. Oklahoma
49. Alabama
50. West Virginia
51. Mississippi





# Environment

- Drought & Water Quality
  - Rising temperatures, crops – put strain on demand for water
  - Funds for water treatment, pumps, pipes
  - Fracking may impact water quality
- Natural disasters
- Fracking & Earthquakes
  - OK had 238 earthquakes in 2013, versus 20 in 2009
- Pollution
  - OKC and Tulsa are among 25 American cities with highest levels of ozone pollution

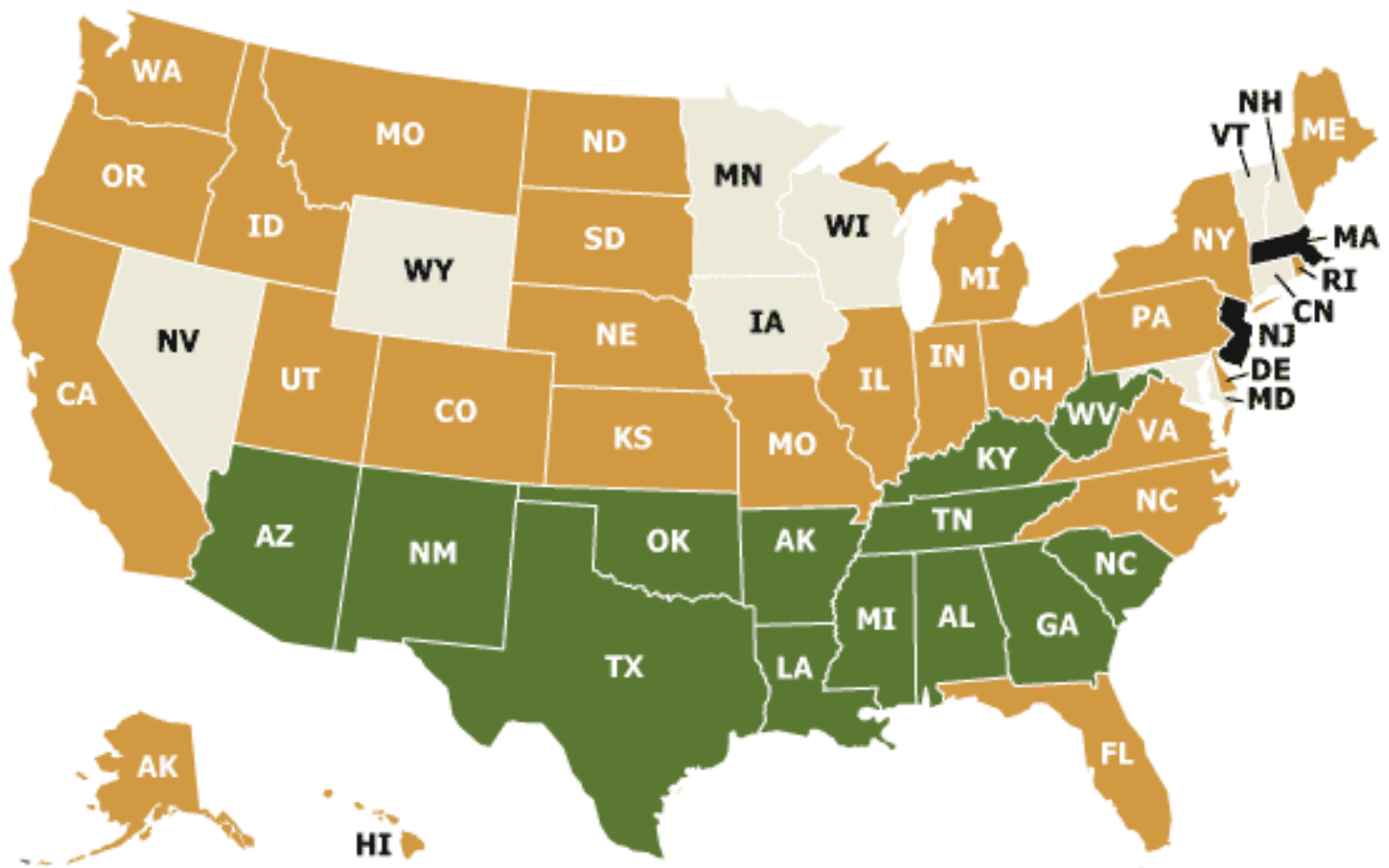


# Poverty

Below the poverty line= income below (\$23,834 for a family of four)

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<b>OKLAHOMA RANK</b>	<b>% of OKLAHOMA POPULATION</b>
34 <sup>th</sup> in percentage of people below the poverty line →	<b>16.8%</b>
36 <sup>th</sup> in percentage of children below the poverty line →	<b>23.5%</b>
37 <sup>th</sup> in percentage of working age women with incomes below poverty line →	<b>18.3%</b>



- Rural child poverty over 25 percent
- Rural child poverty 15 to 25 percent
- Rural child poverty under 15 percent
- States consist entirely of metropolitan areas

# Specific Consequences of Poverty in Oklahoma

- **Teen Pregnancy**

- Oklahoma ranked 50<sup>th</sup> in number of teen births per 1000 women

- **No Health Insurance**

- Ranked 46<sup>th</sup> in health insurance coverage, 31.7% of Oklahomans not covered

- **School Drop-Out**

- Roughly 18% of students in Oklahoma do not graduate from high school

- **Incarceration**

- Oklahoma leads the nation and the world in the rate of female incarcerations



# Teen Pregnancy

## OKLAHOMA TEENS GIVING BIRTH

Asian **1%**

Black **13%**

Hispanic  
May be of any race **16%**

American  
Indian **17%**

White

**69%**

**1%**  
Ages 13-14

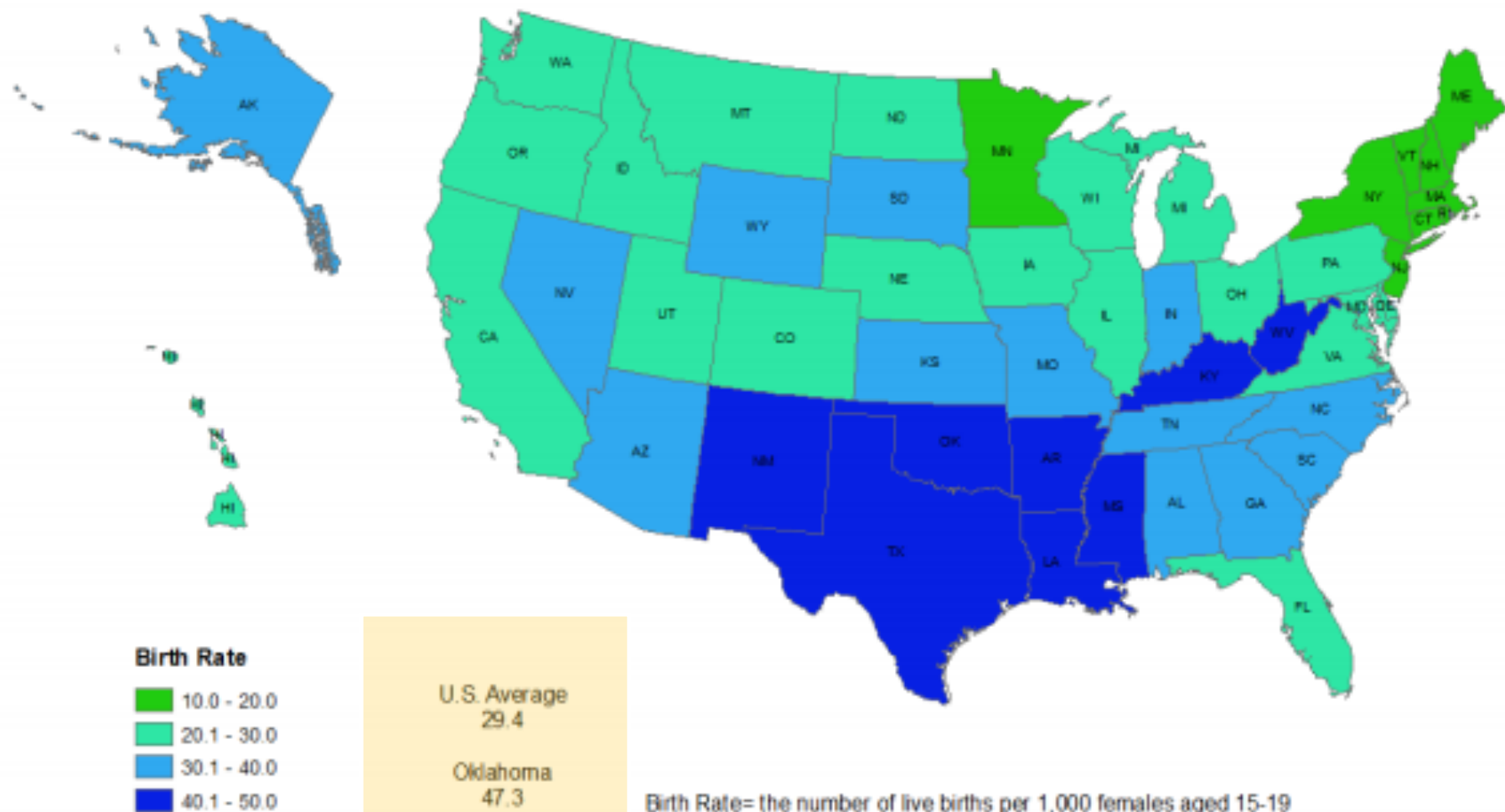
**30%**  
Ages 15-17

**69%**  
Ages 18-19

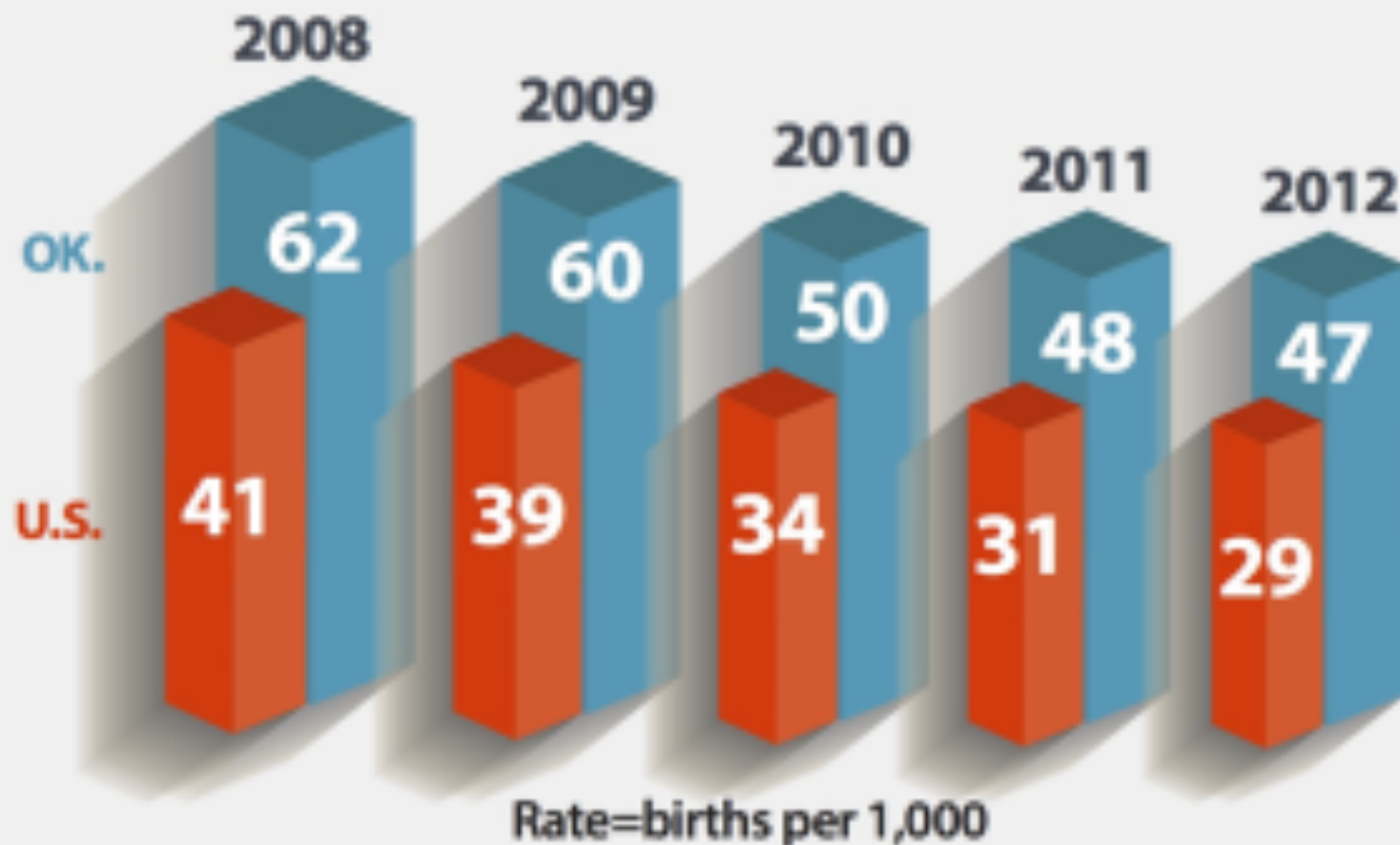


Source: 2008 figures, Oklahoma Institute for Child Advocacy (OICA)

# BIRTH RATE\* FOR FEMALES AGED 15-19 BY STATE: UNITED STATES 2012<sup>1</sup>



## Teen Birth Rates for Ages 15-19



## Oklahoma Youth Risk Behavior Survey 2013<sup>4</sup>

**18%** of high school students have had sex with **four or more** people during their life.



Among high school students who had sex during the 3 months before the survey, **58%** used a condom during last sexual intercourse.

**50%** of high school students have had sex.



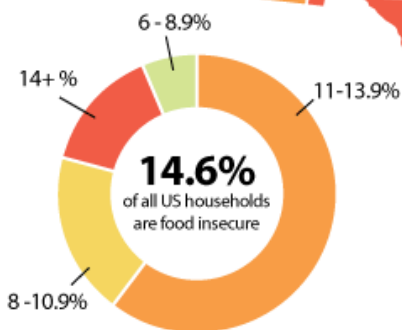
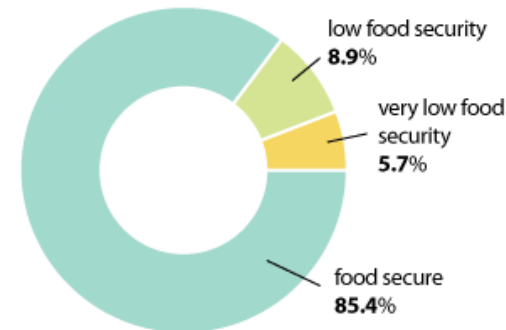
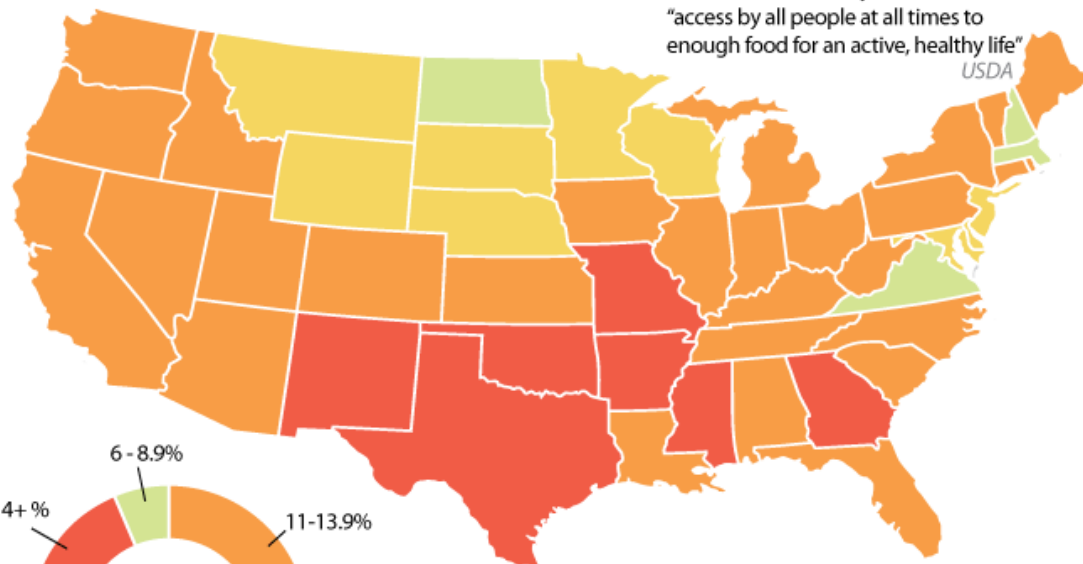


# FOOD & HUNGER

## food insecurity in the US



**what is food security?**  
 "access by all people at all times to  
 enough food for an active, healthy life"  
 USDA



### states with the **highest rates** of food insecurity

Mississippi	<b>17.9%</b>
Texas	<b>16.3%</b>
Arkansas	<b>15.9%</b>

### states with the **lowest rates** of food insecurity

North Dakota	<b>6.9%</b>
Massachusetts	<b>8.3%</b>
Virginia	<b>8.6%</b>

### US households by food security status (%)



**42%**  
of households that live below the poverty line are food insecure



**21%**  
of households with children are not food secure



**17.7%**  
of households within principal cities are not food secure

**49.1 million** people live in food insecure households...

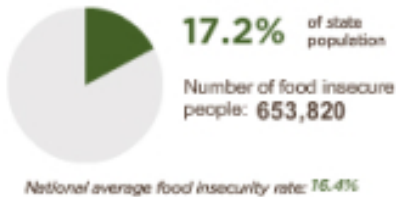
... that's **16.4%** of the population



# Oklahoma



## FOOD INSECURITY RATE



## INCOME BANDS WITHIN FOOD INSECURE POPULATION

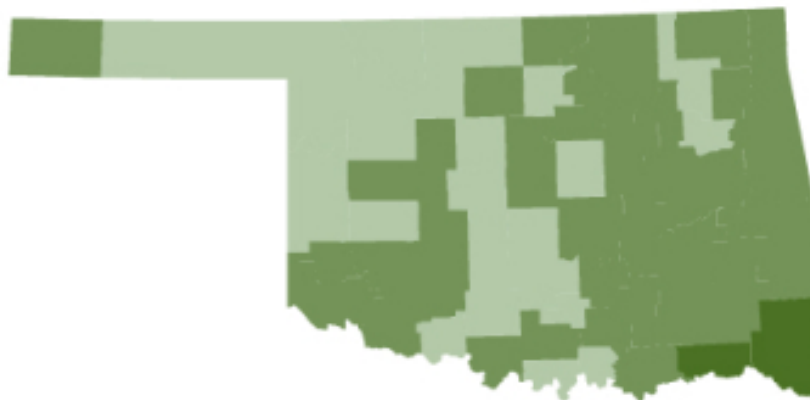


## AVERAGE COST OF A MEAL

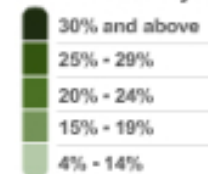


### FIVE counties with the highest food insecurity rates

- Mc Curtain
- Choctaw
- Okfuskee
- Okmulgee
- Comanche



### Food Insecurity Rates

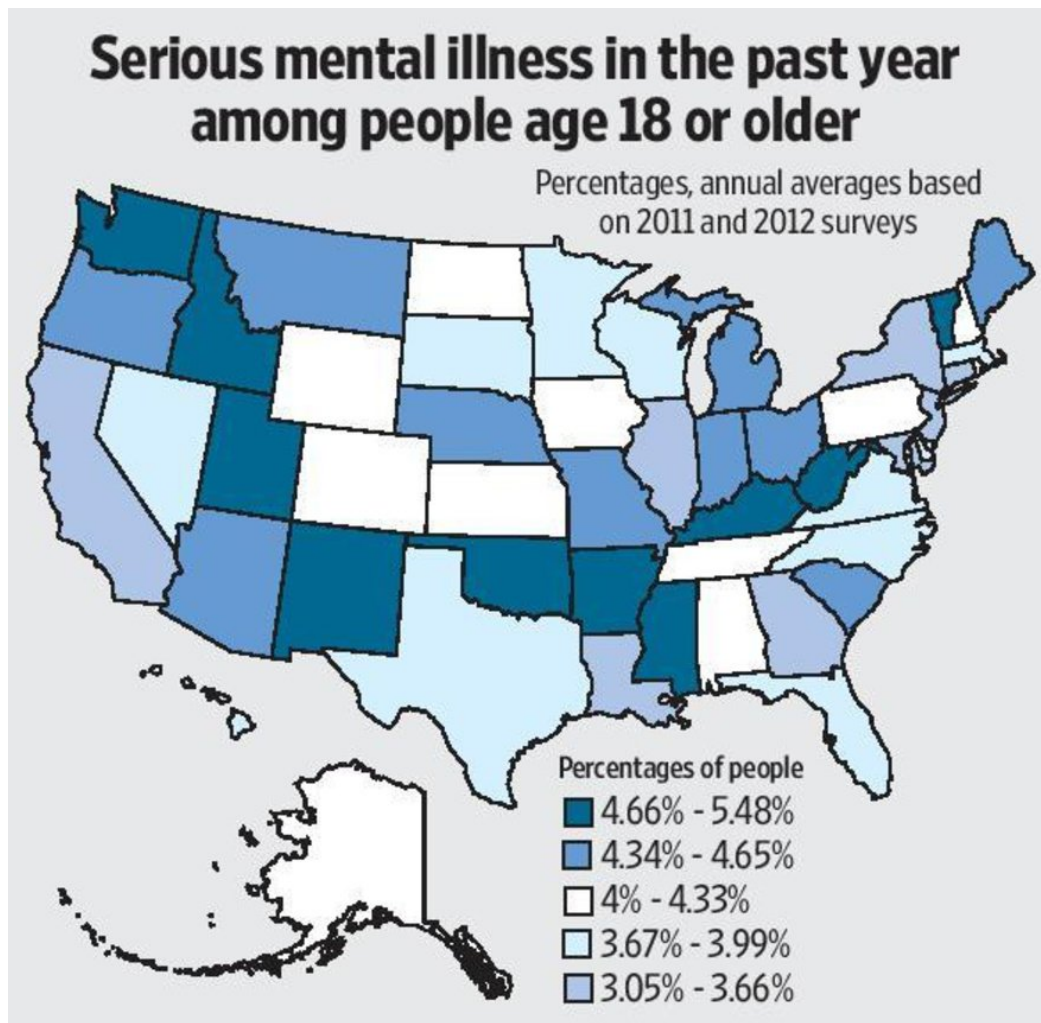


## Average Daily Participation in Summer Food Service Program

■ Five top-performing states reached at least one in four of their low-income children in July 2013, when comparing Summer Nutrition participation to regular school-year free and reduced price lunch numbers: the District of Columbia, New Mexico, New York, Connecticut, and Vermont.

■ Eleven states fed summer meals to fewer than one in ten of their low-income children in July 2013. Oklahoma, Mississippi, and Nevada were the three lowest-performing states, and each had a 2013 ratio even worse than in the previous year.

# Mental Health & Substance Abuse



**SOURCE:** SAMHSA, CENTER FOR BEHAVIORAL HEALTH STATISTICS AND QUALITY, NATIONAL SURVEYS ON DRUG USE AND HEALTH, 2011 (REVISED OCTOBER 2013) AND 2012

# SUICIDE: OKLAHOMA 2015 FACTS & FIGURES

## Suicide Death Rates

	Number of Deaths by Suicide	Rate per 100,000 Population	State Rank
Oklahoma	665	17.28	12
Nationally	41,149	12.57	

Suicide is the **9th leading** cause of death overall in Oklahoma.



On average, one person dies by suicide **every 13 hours** in the state.



Based on most recent 2013 data from CDC

**\$** Suicide cost Oklahoma a total of **\$778,731,000** of combined lifetime medical and work loss cost in 2010, or an average of **\$1,260,082** per suicide death.

IN OKLAHOMA, SUICIDE IS THE...

**2nd leading** cause of death for ages 10-34

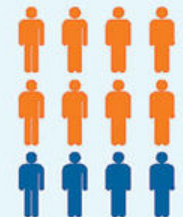
**4th leading** cause of death for ages 35-44

**5th leading** cause of death for ages 45-54

**8th leading** cause of death for ages 55-64

**16th leading** cause of death for ages 65 & older

**Over twice as many** people die by suicide in Oklahoma annually than by homicide; the total deaths to suicide reflect a total of **13,761** years of potential life lost (YPLL) before age 65.

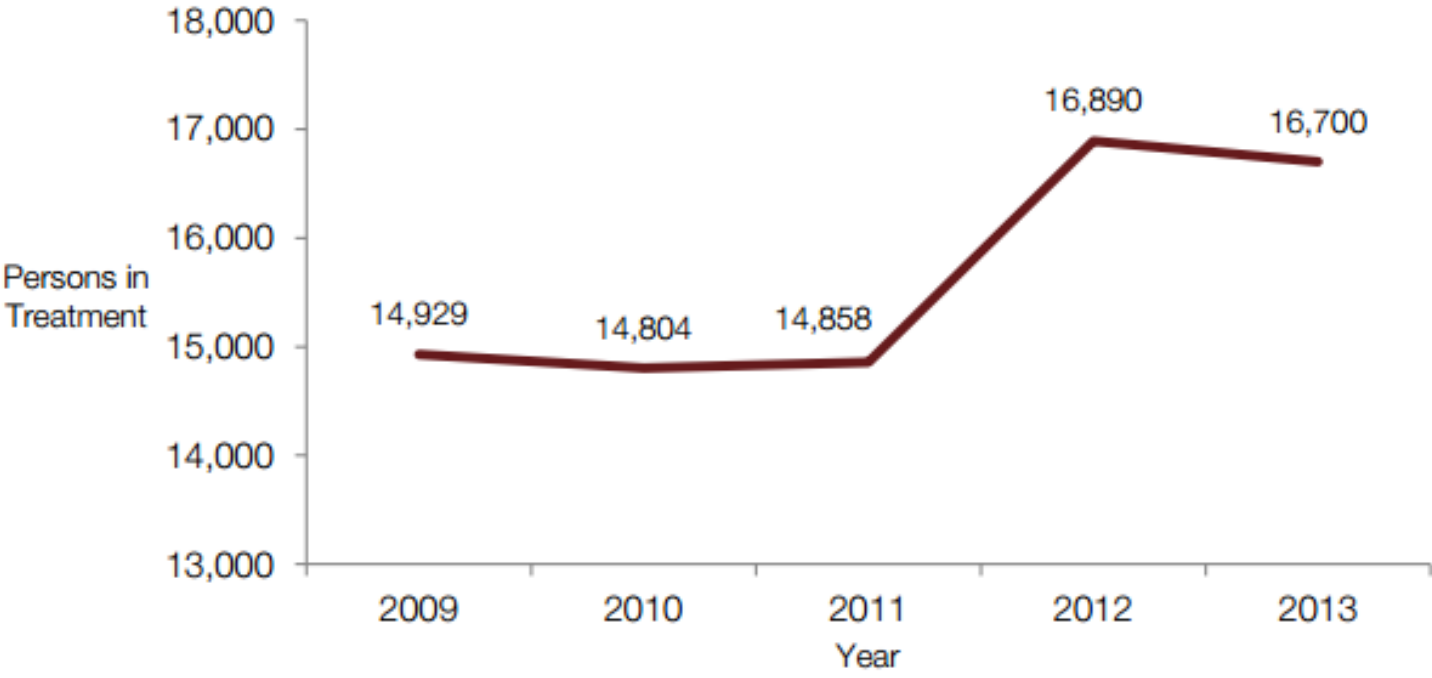


AMERICAN FOUNDATION FOR  
Suicide Prevention

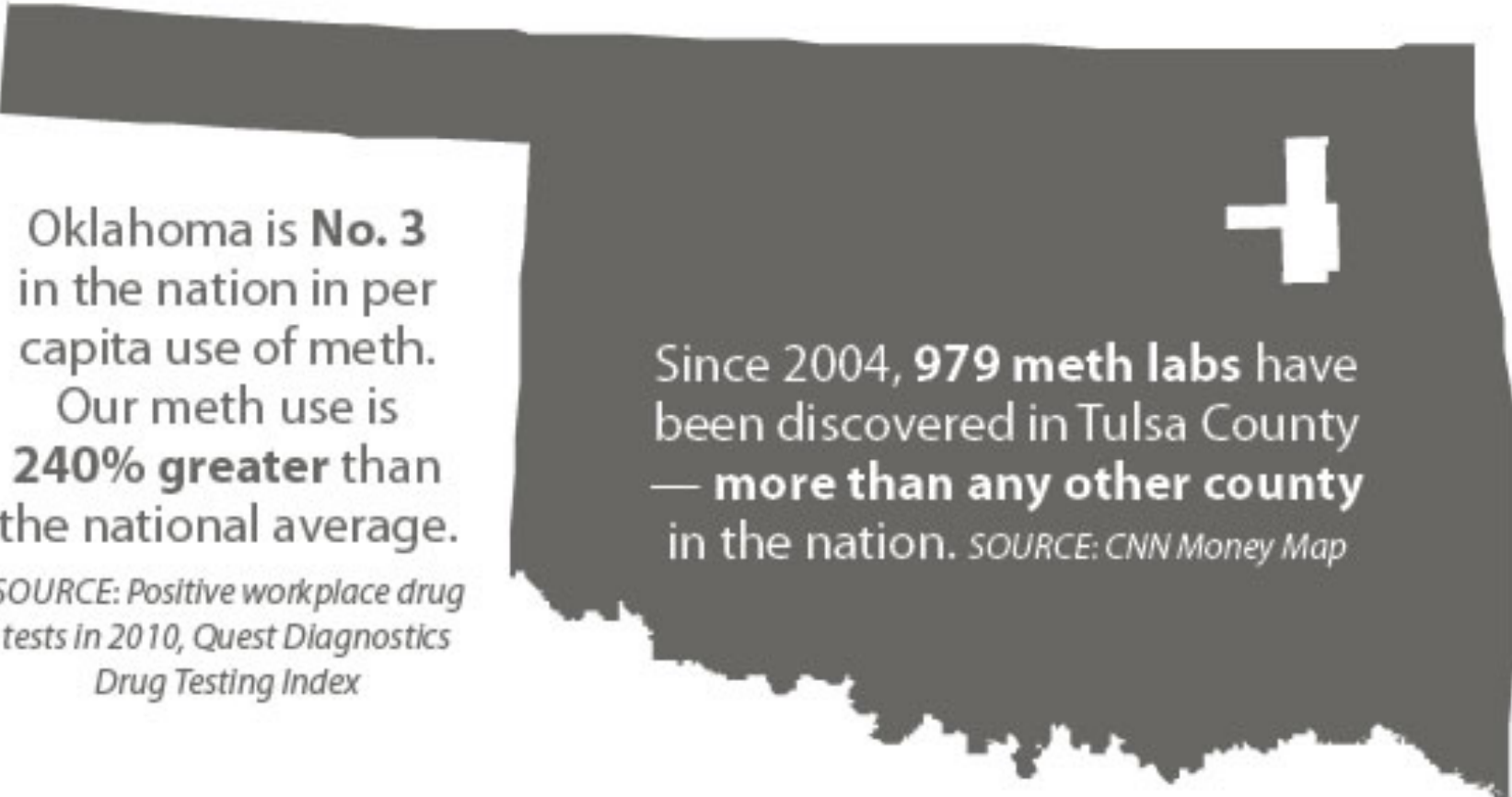
afsp.org

# Enrollment in Substance Use Treatment in Oklahoma: Single-Day Counts (2009–2013)<sup>7</sup>

*In a single-day count in 2013, 16,700 individuals in Oklahoma were enrolled in substance use treatment—an increase from 14,929 individuals in 2009.*



# Methamphetamine Epidemic



Oklahoma is **No. 3**  
in the nation in per  
capita use of meth.  
Our meth use is  
**240% greater** than  
the national average.

*SOURCE: Positive workplace drug  
tests in 2010, Quest Diagnostics  
Drug Testing Index*

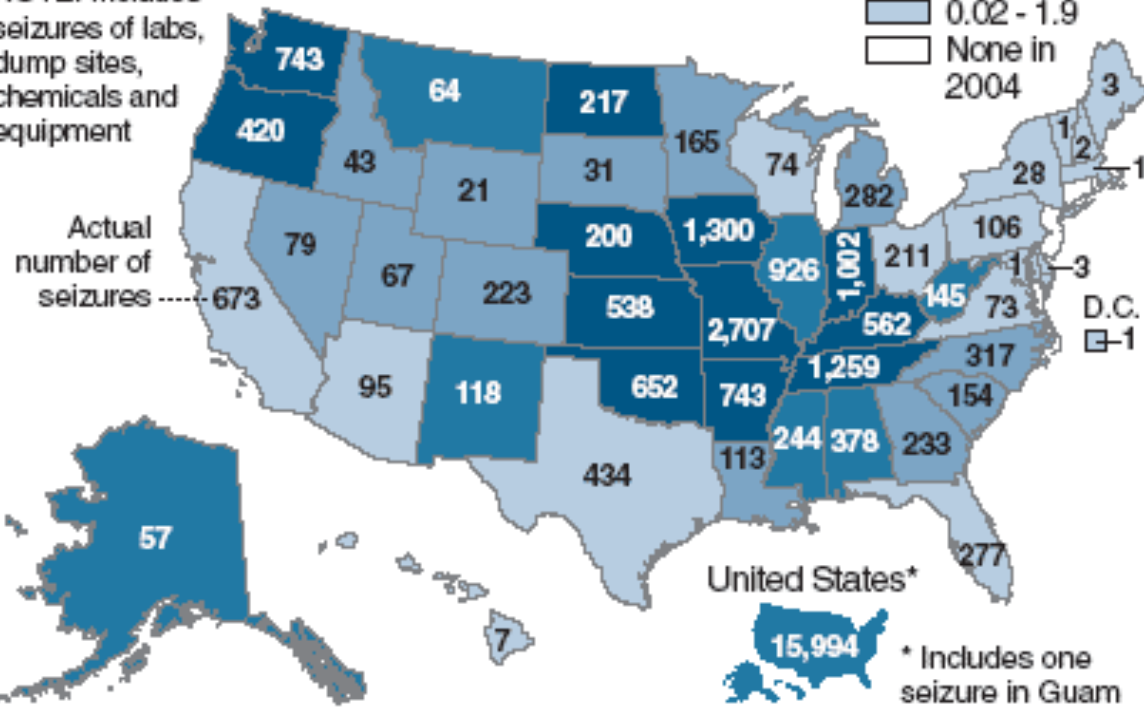
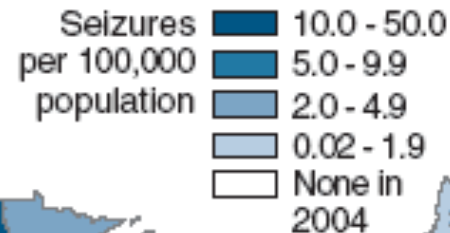
Since 2004, **979 meth labs** have  
been discovered in Tulsa County  
— **more than any other county**  
in the nation. *SOURCE: CNN Money Map*

# Meth's affliction felt in nation's heartland

In 2004, authorities made nearly 16,000 seizures related to clandestine methamphetamine labs, many of which were in the Midwest. The meth epidemic affects both cities and rural areas, where meth "cookers" have more space to operate undetected.

## Law enforcement seizures of methamphetamine labs, by state

NOTE: Includes seizures of labs, dump sites, chemicals and equipment



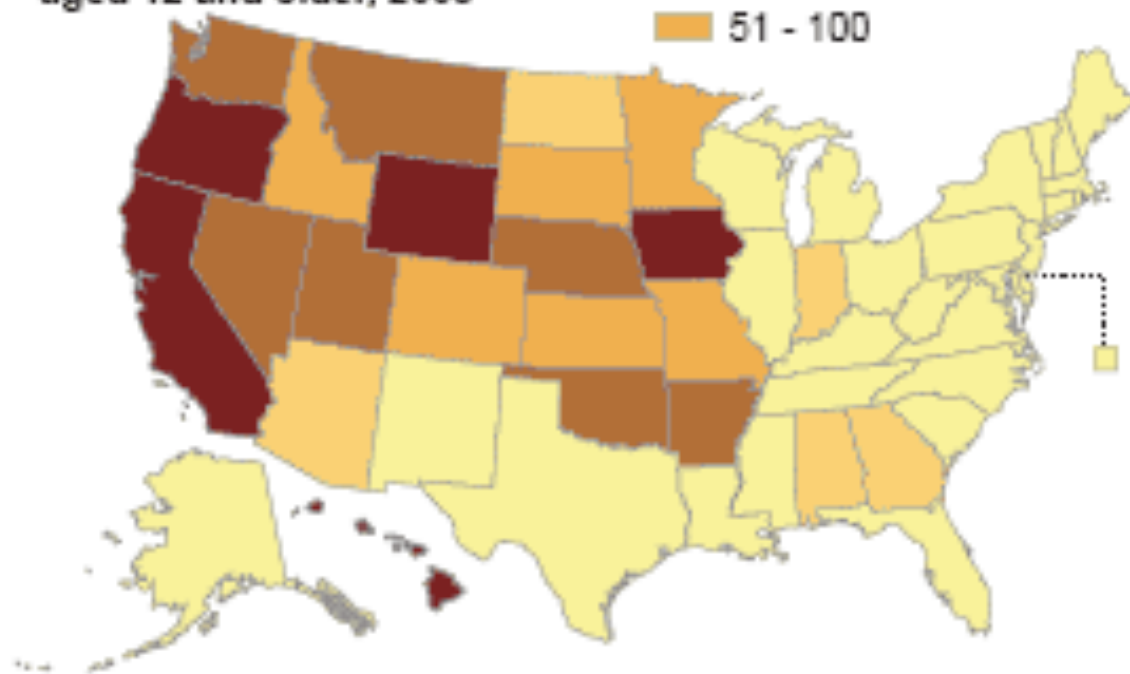
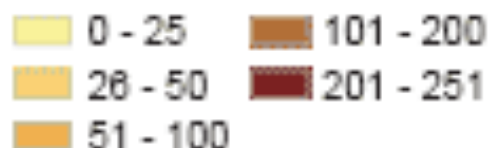


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## Meth abuse rises sharply in a decade

A recent report showed that the number of methamphetamine users who sought treatment in the United States quadrupled from 1993 to 2003.

Methamphetamine/amphetamine  
admission rate per 100,000  
aged 12 and older, 2003



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SOURCE: U.S. Substance Abuse and Mental Health Services


AP

## METHAMPHETAMINE INCIDENTS

These numbers include methamphetamine laboratories, chemical/equipment/glassware seizures and dumpsites.

### National meth incidents

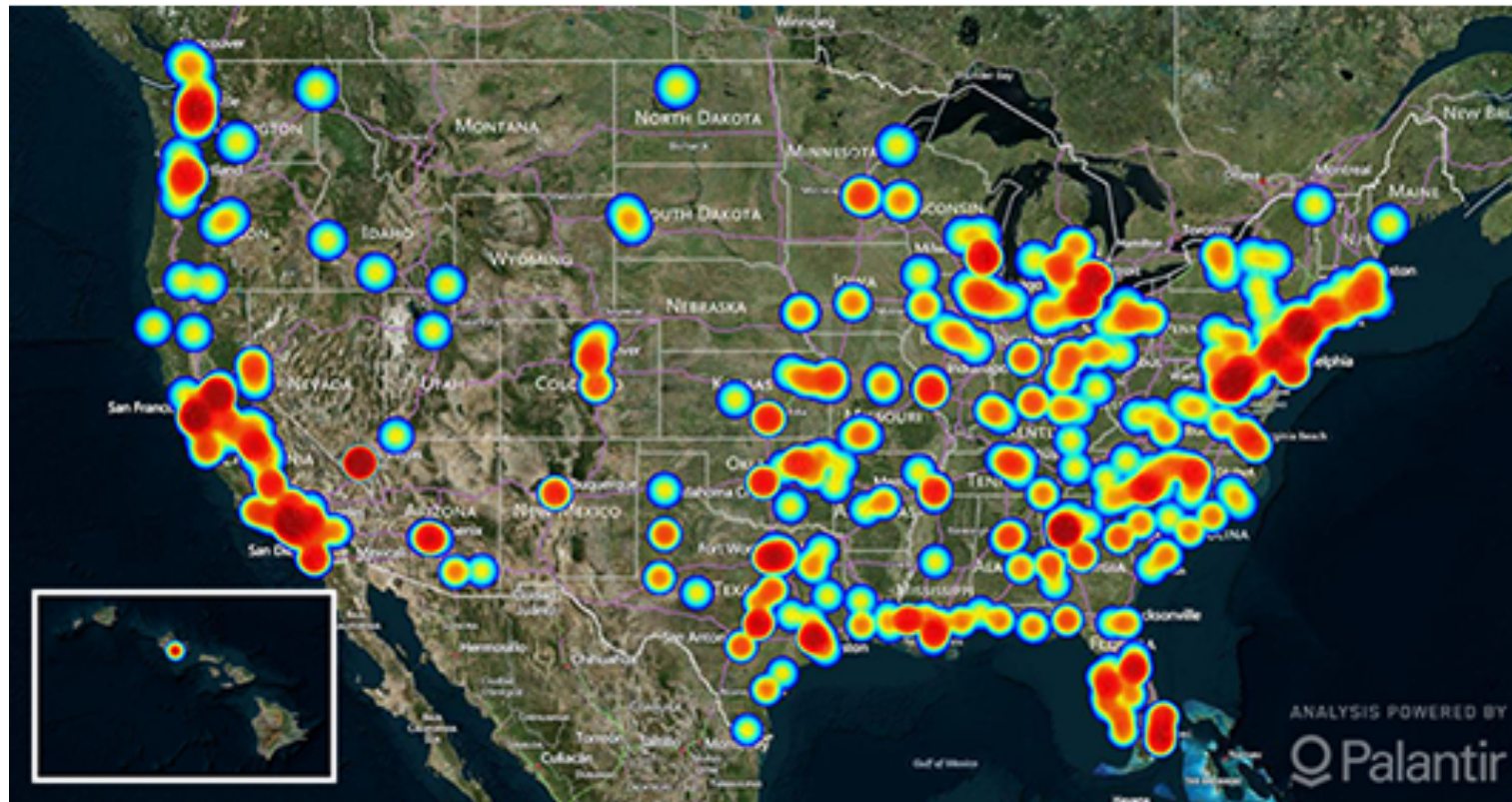
Top 10 states for meth incidents in 2013



Indiana . . . . .	1,797	Michigan . . . . .	607
Tennessee . . . . .	1,616	North Carolina ..	568
<b>Missouri . . . . .</b>	<b>1,495</b>	Kentucky . . . . .	495
Ohio . . . . .	1,010	Oklahoma . . . . .	436
<b>Illinois . . . . .</b>	<b>673</b>	South Carolina ..	397

# Human & Child Trafficking, The Opioid Connection

## Location of Sex Trafficking Cases Involving U.S. Citizens Reported to NHTRC and BeFree (2014)



# Interpersonal Violence

## Domestic violence in Oklahoma

### Oklahoma women rank No. 1 in the U.S.

The ranking is based on prevalence of rape, physical violence, and/or stalking by a partner in their lifetime.

ESTIMATED NUMBER OF VICTIMS

**697,000**

Reports of domestic violence, 2013

**22,801**



Maximum time in jail for first domestic abuse conviction

**1 year**

Number of domestic violence shelters



**29**

**23,181**

Average number of domestic abuse reports from '94 to '13

Top 3 states for homicide rate per 100,000 women for 2012

Alaska 2.57

South Carolina 2.06

Oklahoma 2.03



Most common offense

Assault and battery, between 8 and 9 p.m. on Sunday

IN 2012



Total number of hotline calls

**15,214**

**13,218**

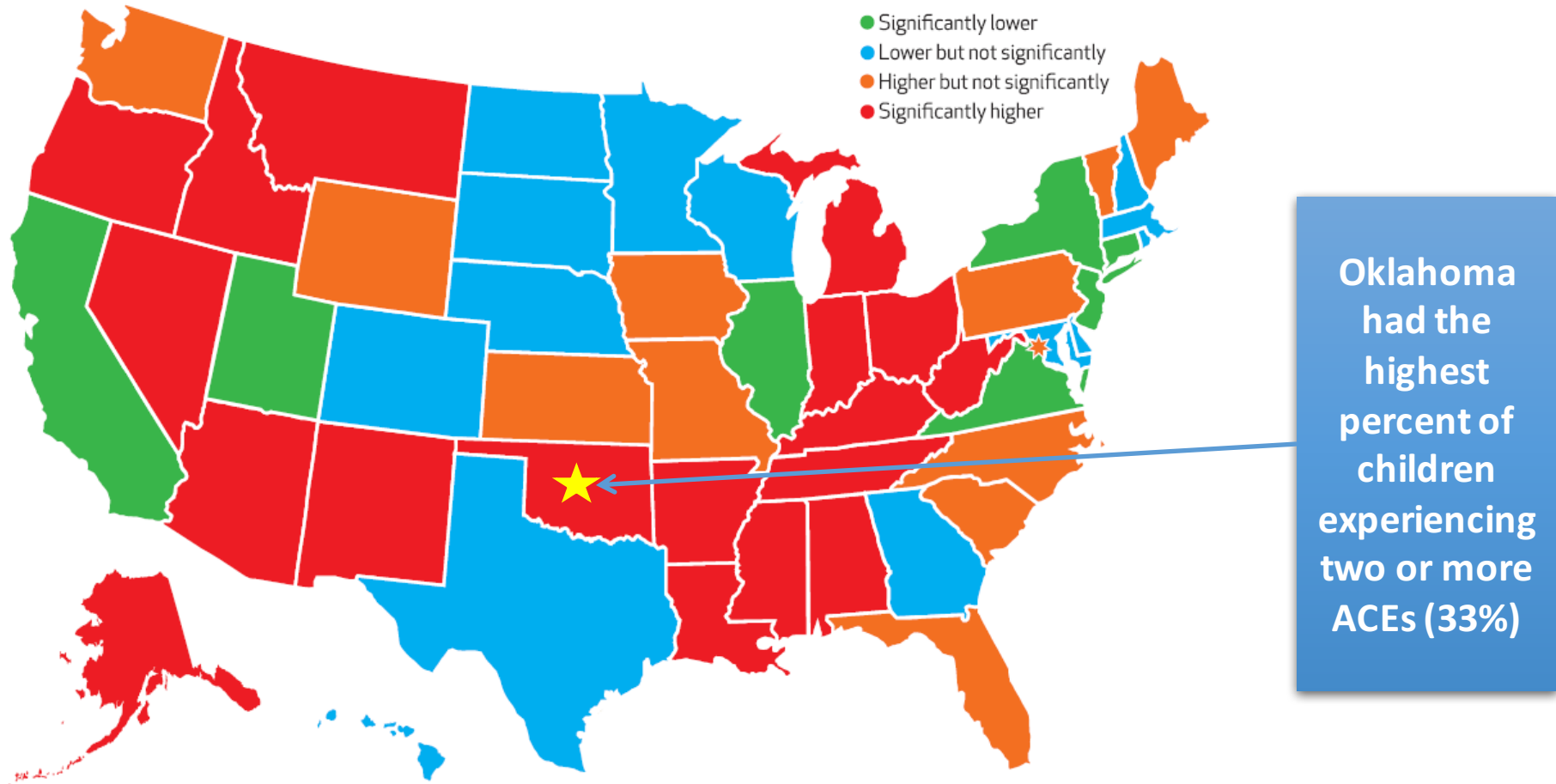
Number of victims served in certified victim service agencies

Total number of women turned away from shelter because of capacity

**2,488**

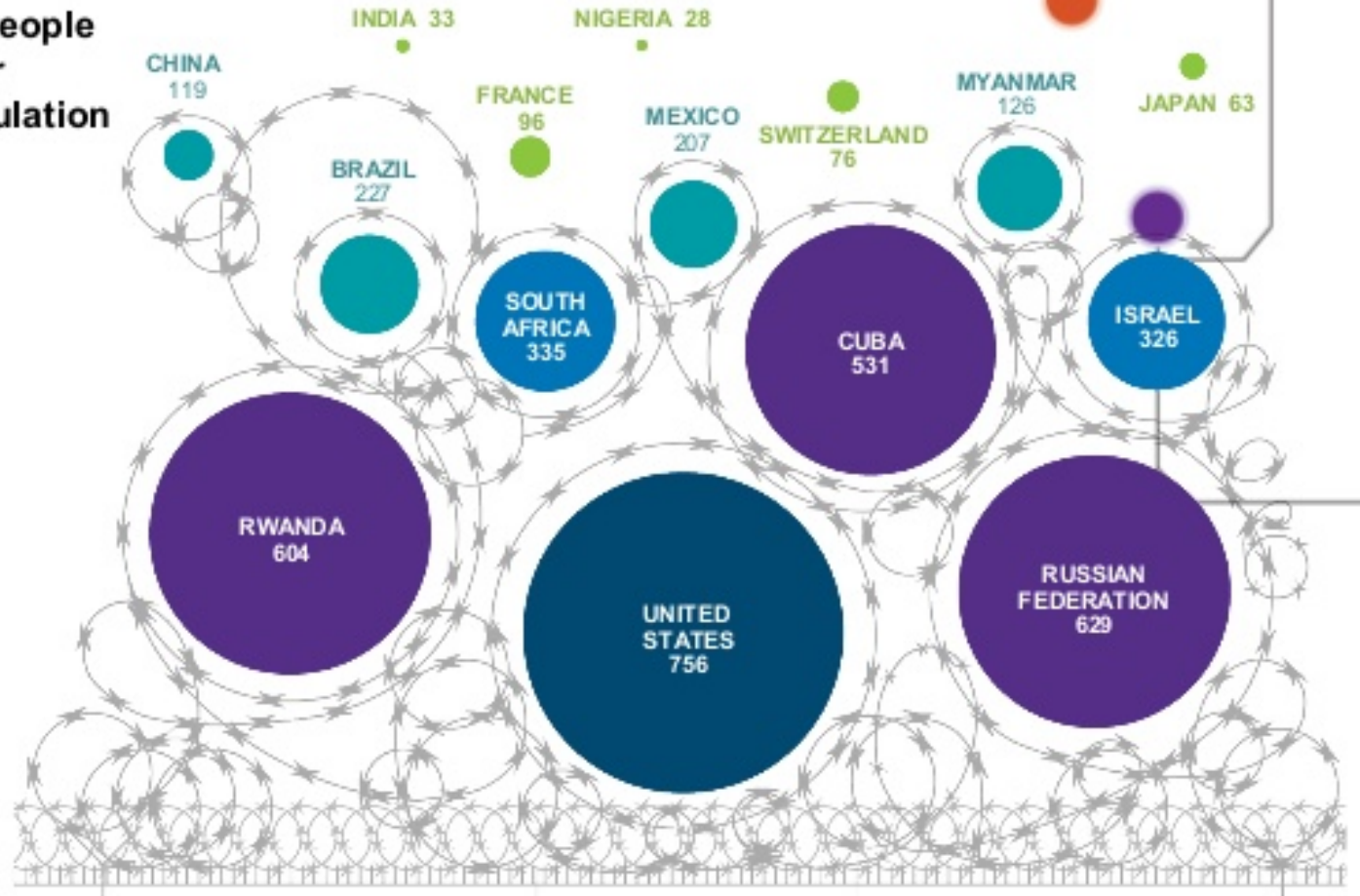
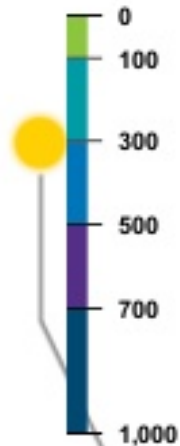
# ACEs in Oklahoma

Prevalence Of Children Ages 0-17, By State, Who Experienced Two Or More Of The Nine Adverse Childhood Experiences Evaluated In The 2011-12 National Survey Of Children's Health



# Incarceration Rates Around the World

Number of People  
in Prison per  
100,000 population

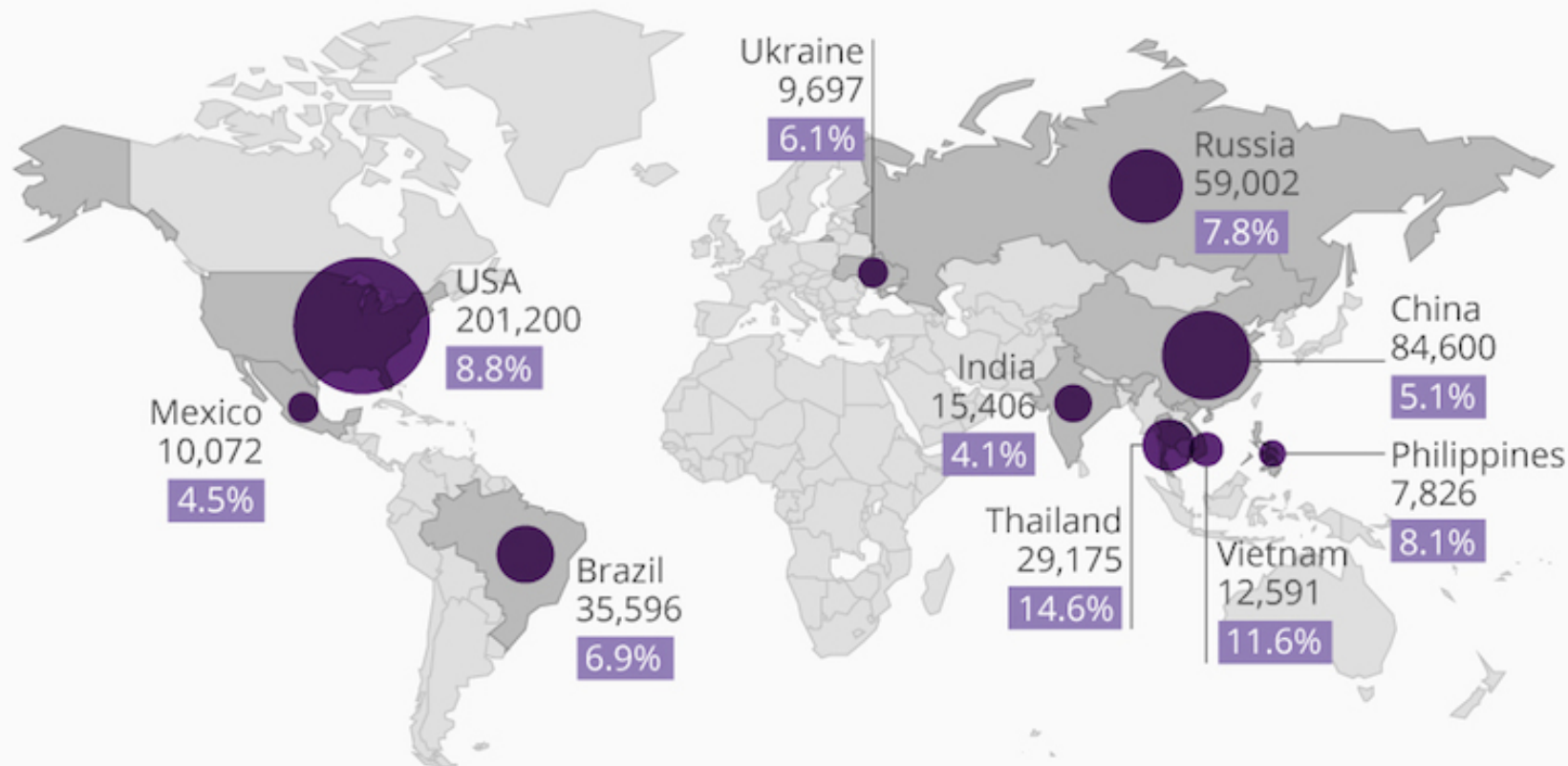


SOURCE: Walmsley 2009, West 2010.

# No Country Incarcerates More Women Than The U.S.

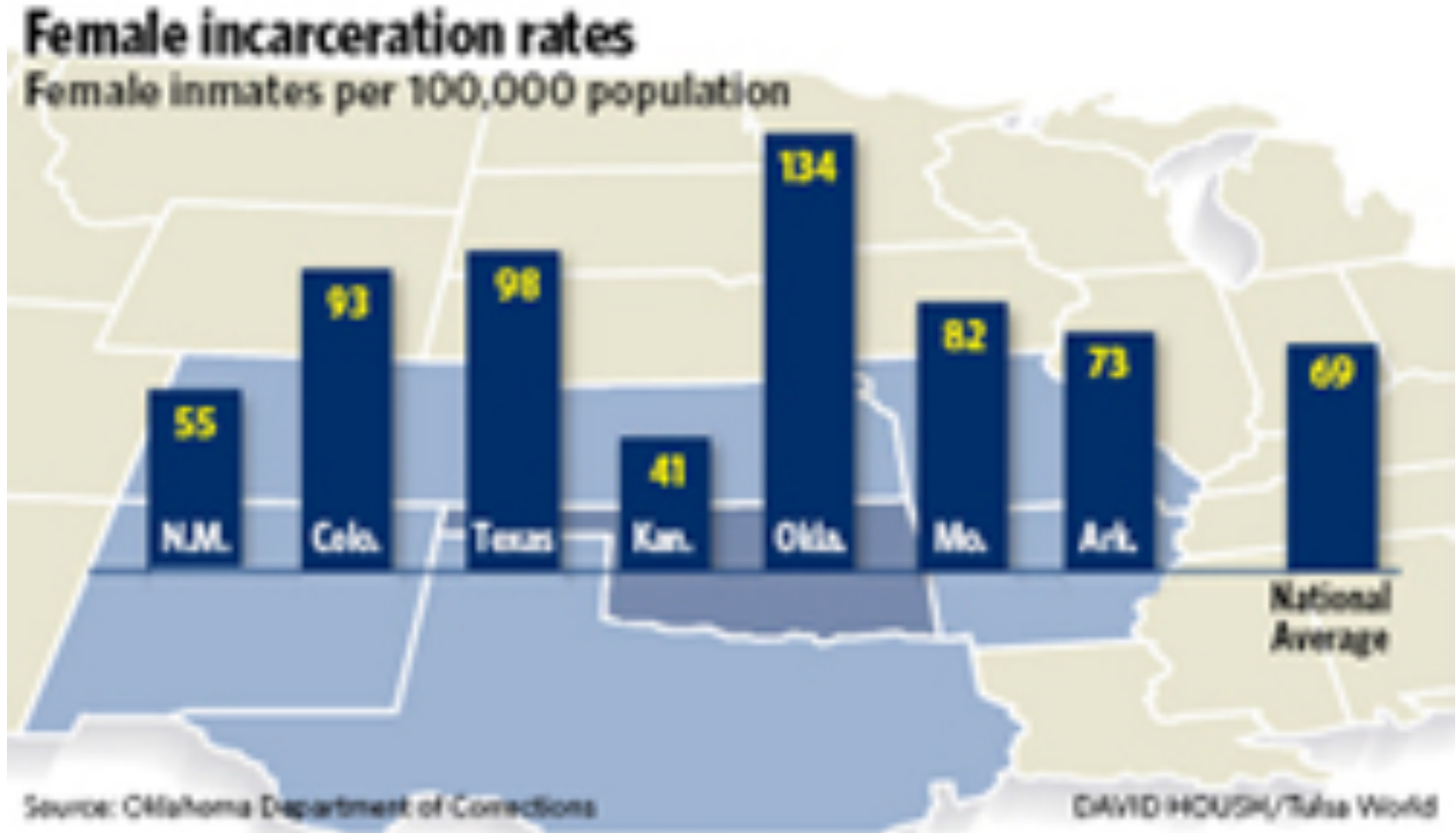
Top 10 countries with the largest number of female prisoners in 2013

● Female Prison Population    ■ % of Total Prison Population



Source: International Centre for Prison Studies

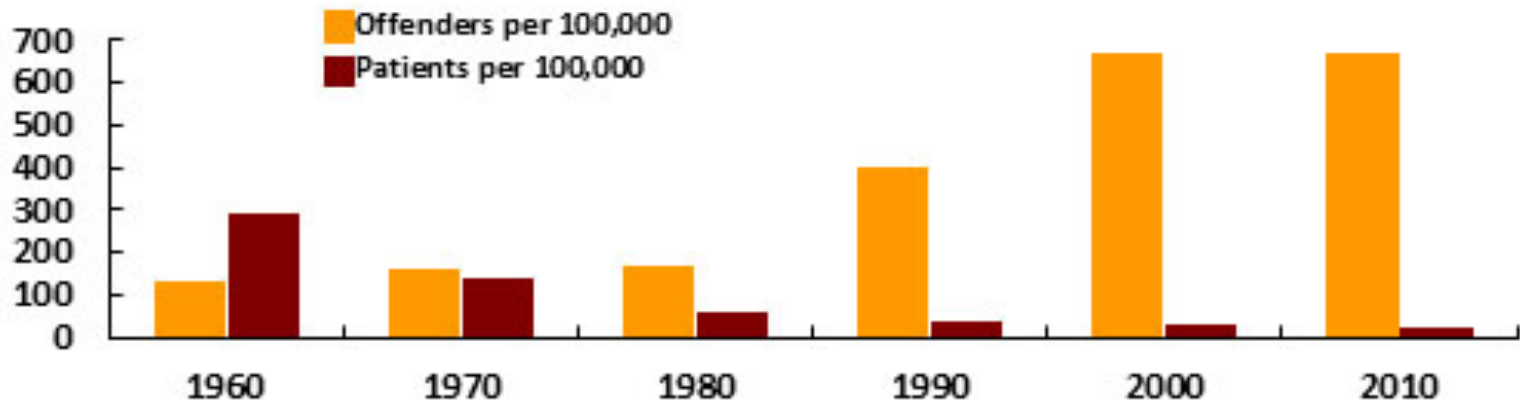
US Rate Per 1000: 69  
OK Rate Per 1000: 134





# Mental Health Services Versus Jail

Oklahoma Per-Capita Imprisonment Versus Mental Hospital Commitment  
1960 to 2010

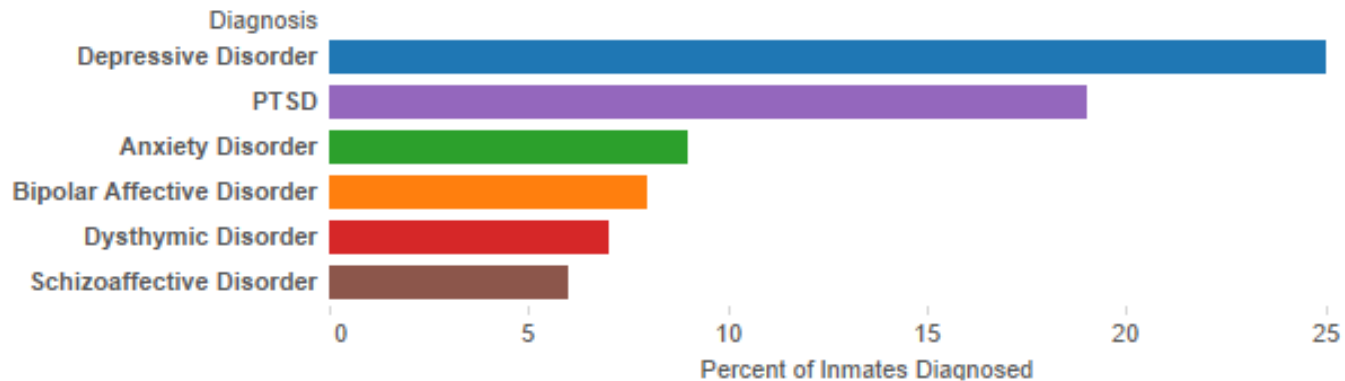


[https://www.ok.gov/doc/Organization/Administrative\\_Operations/Health\\_Services/Mental\\_Health\\_Services/](https://www.ok.gov/doc/Organization/Administrative_Operations/Health_Services/Mental_Health_Services/)

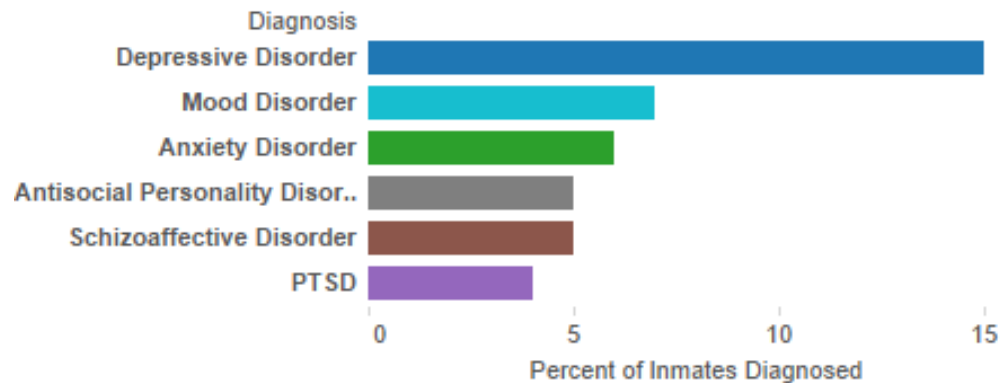
## Mental Illness in Prison: a Gender Divide

Depression-related disorders were the most common mental illnesses diagnosed to male and female inmates in Oklahoma. The second most common diagnosis for women was PTSD, which affected women at about five times the rate of men.

### Female Inmates



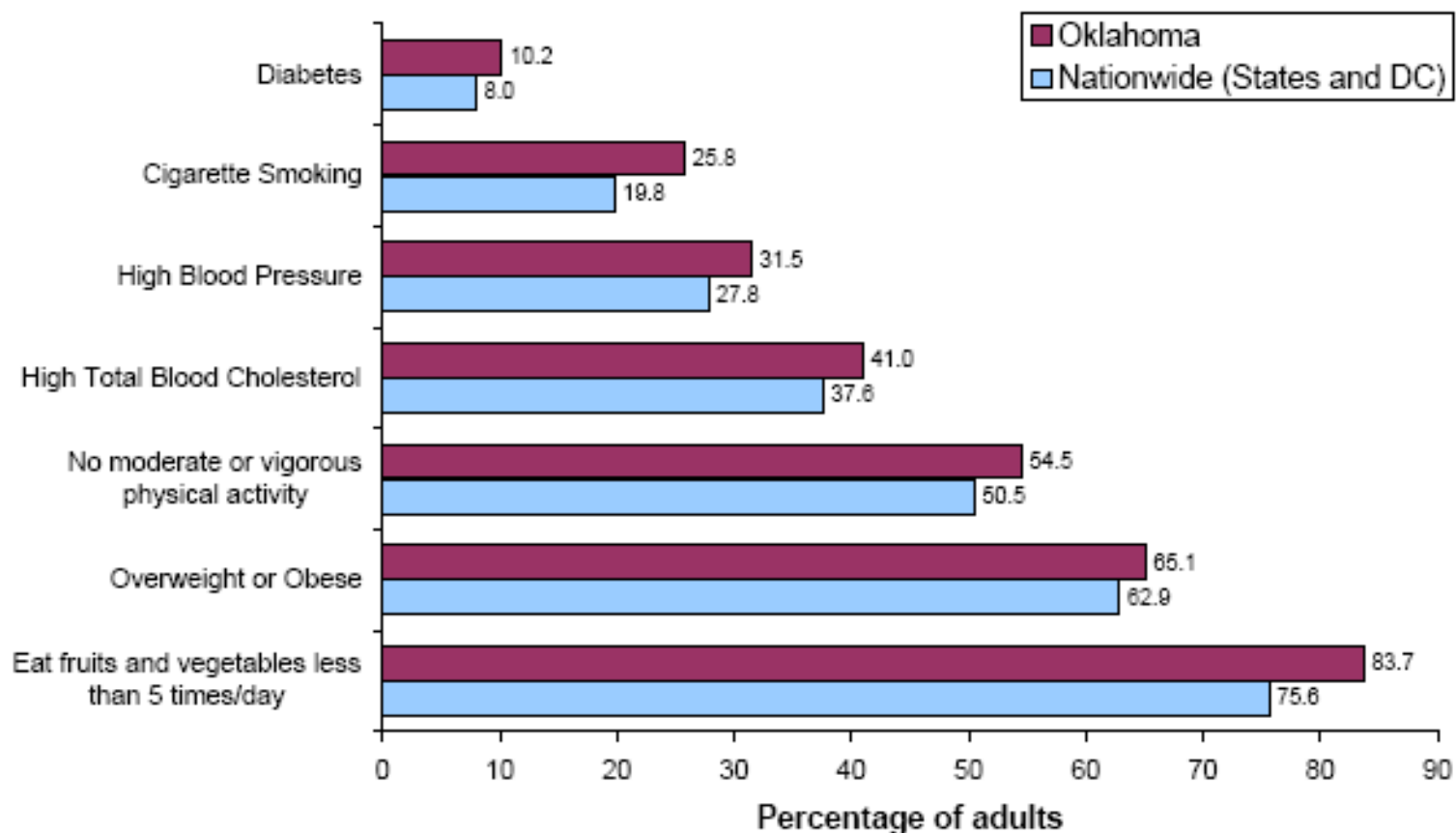
### Male Inmates



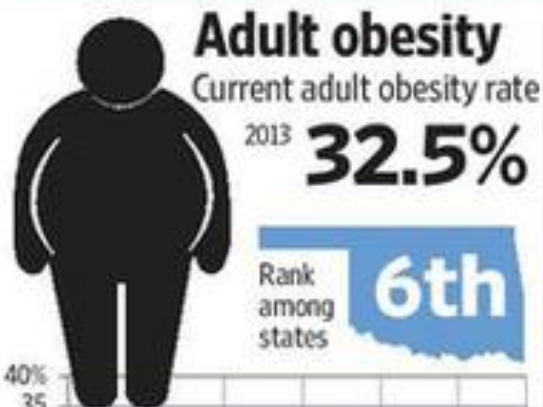
Source: March 2015 data from Oklahoma Department of Corrections.

# Health Outcomes

## Heart Disease and Stroke Risk Factors among Adults - Oklahoma Compared with United States



# Obesity in Oklahoma



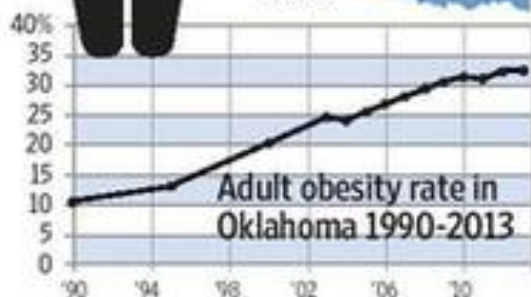
## Obesity rate by gender



## Obesity rate by age



## Obesity rate by race



**SOURCE:** TRUST FOR AMERICA'S HEALTH AND ROBERT WOOD JOHNSON FOUNDATION, THE STATE OF OBESITY 2014. WASHINGTON, D.C.: 2014, 2014 STATE OF THE STATE'S HEALTH REPORT

# Childhood obesity

10- to 17-year-olds  
Current obesity rate 2011

**17.4%**

Rank among states 2011

**14th**

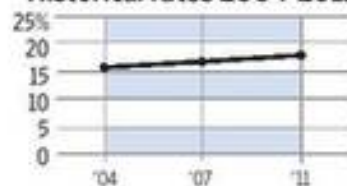
High school students  
Current obesity rate 2013

**11.8%**

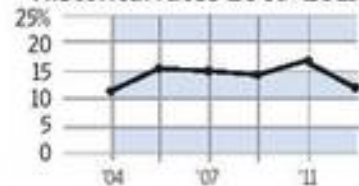
Rank among states 2013

**26th**

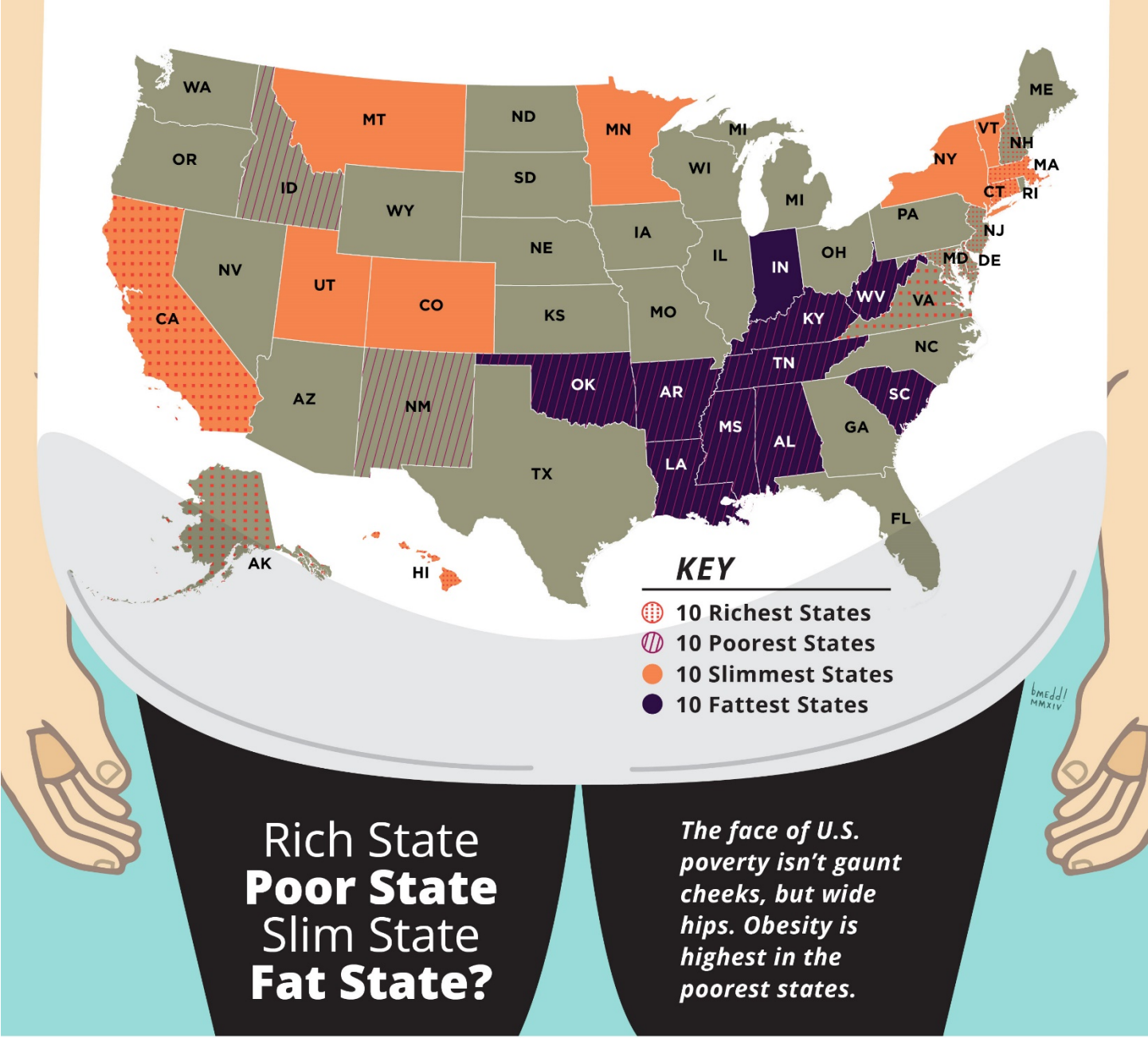
## Historical rates 2004-2011



## Historical rates 2003-2013

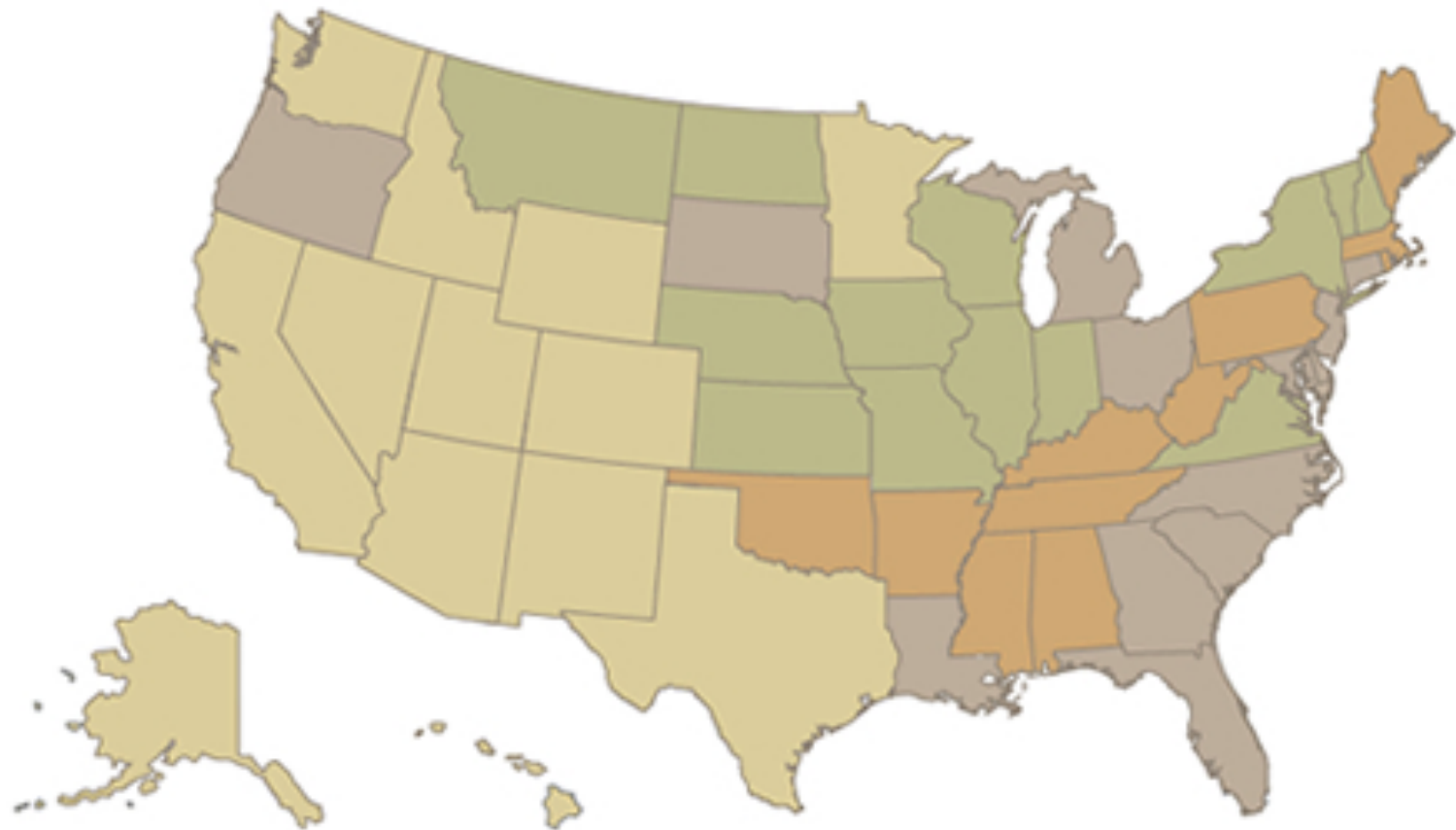


**SOURCE:** SOURCE: STATEOFOBESITY.ORG



SOURCE: U.S. Census Bureau and [stateofobesity.org/adult-obesity](http://stateofobesity.org/adult-obesity)

## Prevalence of Chronic Disease by State



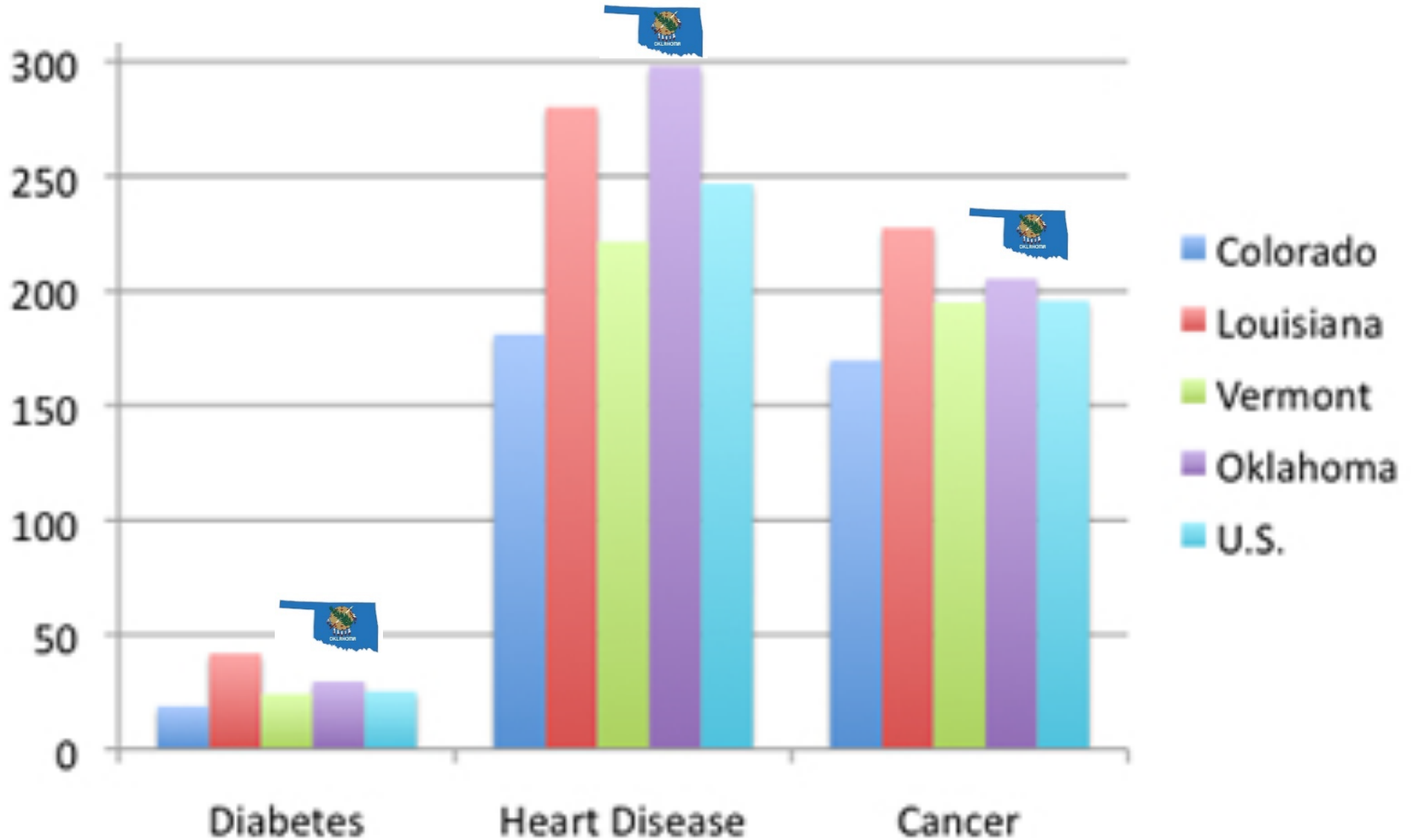
Top 25%  
(lowest disease rate)

Second 25%

Third 25%

Bottom 25%  
(highest disease rate)

# Chronic Disease Death Rates by State



# Life Expectancy





## ZIP code snapshot

Here's how the two ZIP codes compared from 2011-2013.

### 74137

\$81,322 – median household income

8.8 – percent of the population below poverty

80.4 – life expectancy

### 74126

\$25,191 – median household income

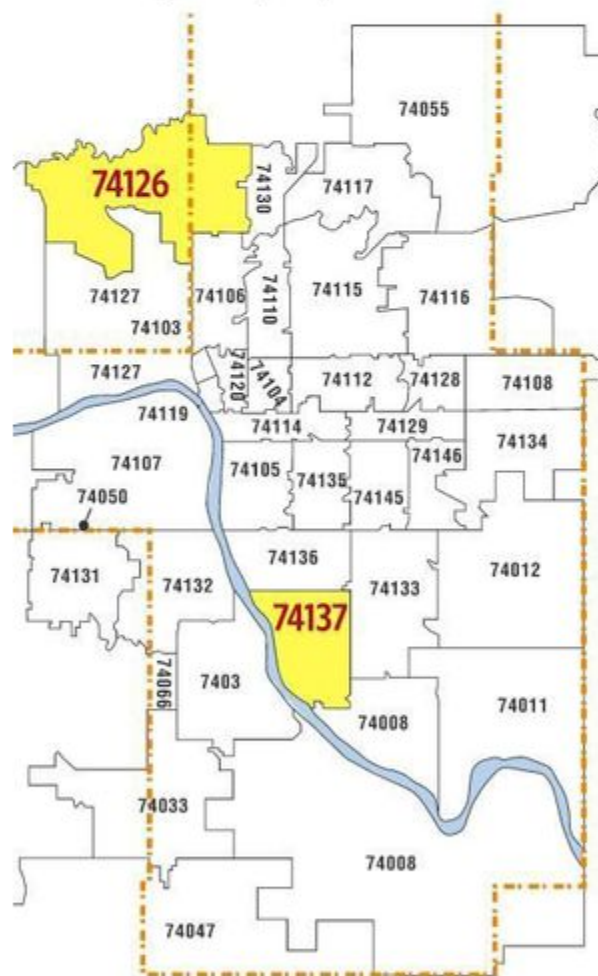
38.2 – percent below poverty

69.7 – life expectancy

Source: Tulsa Health Department

## Life expectancy disparity closes

The disparity between life expectancies in north Tulsa ZIP code 74126 and south Tulsa ZIP code 74137 has narrowed from 13.8 to 10.7 years since 2002, according to the "Narrowing the Gap" report.



STEVEN RECKINGER/Tulsa World

# Recent Headlines

*A premature and unnatural death in rural Oklahoma* Washington Post  
Elin Saslow April 8, 2016

**The Washington Post**

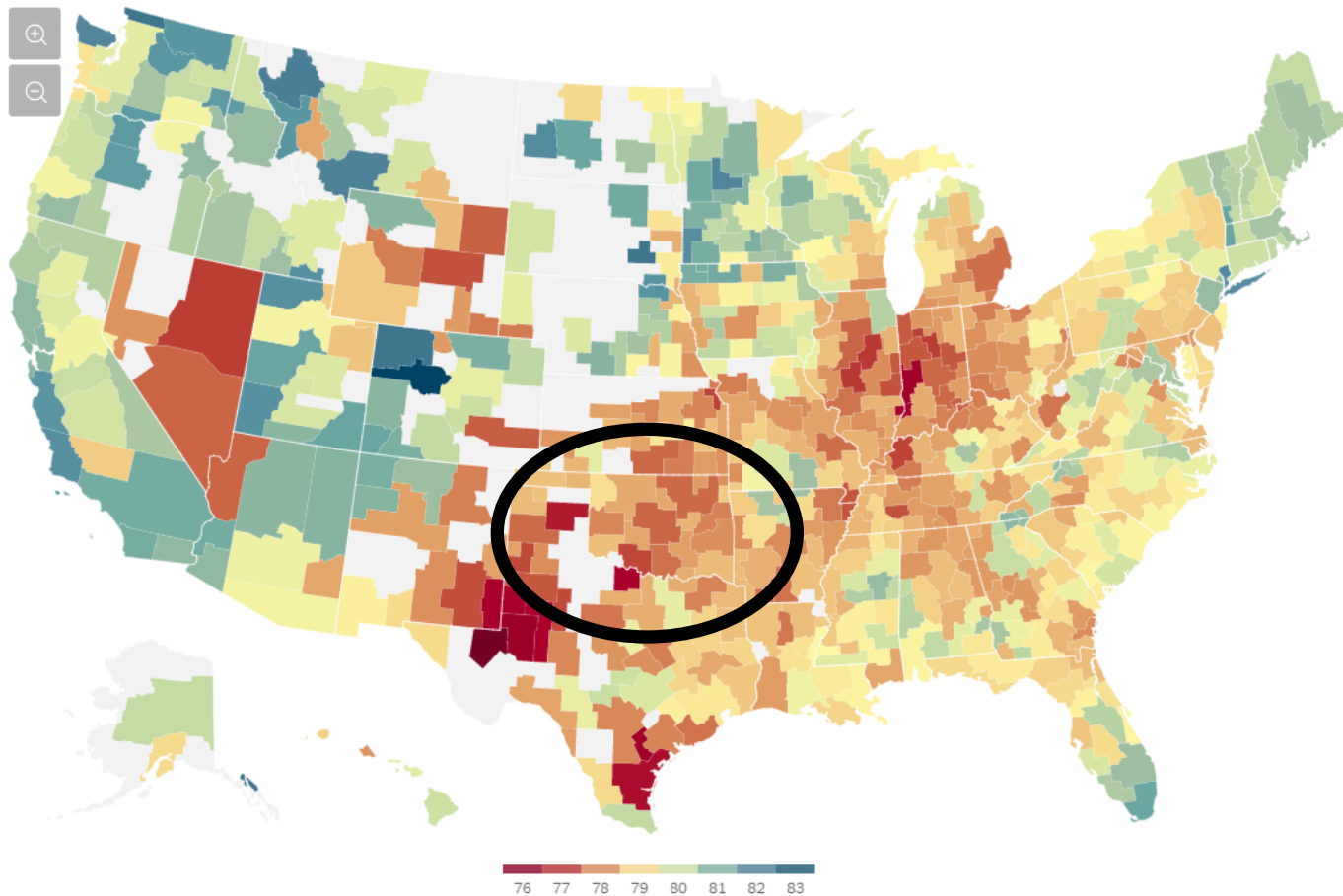
*The rich live longer everywhere. For the poor, geography matters.* Neil  
Irwin and Quoc Trung Bui April 11, 2016

**The New York Times**

# The Rich Live Longer Everywhere. For the Poor, Geography Matters.

By NEIL IRWIN and QUOCTRUNG BUI APRIL 11, 2016

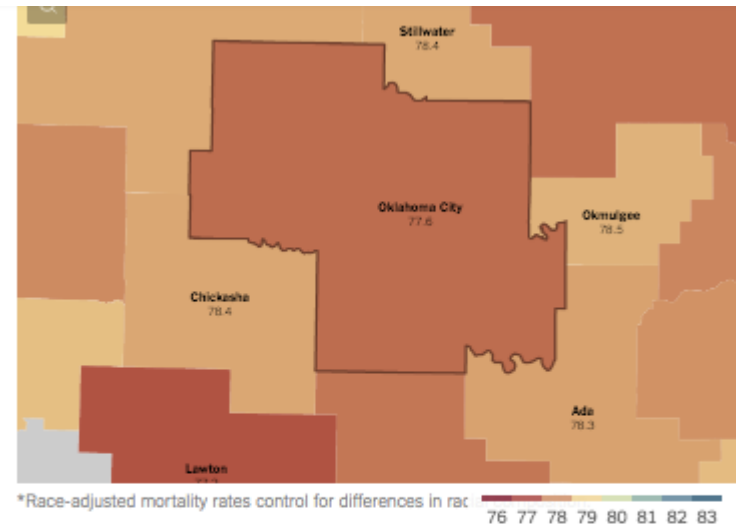
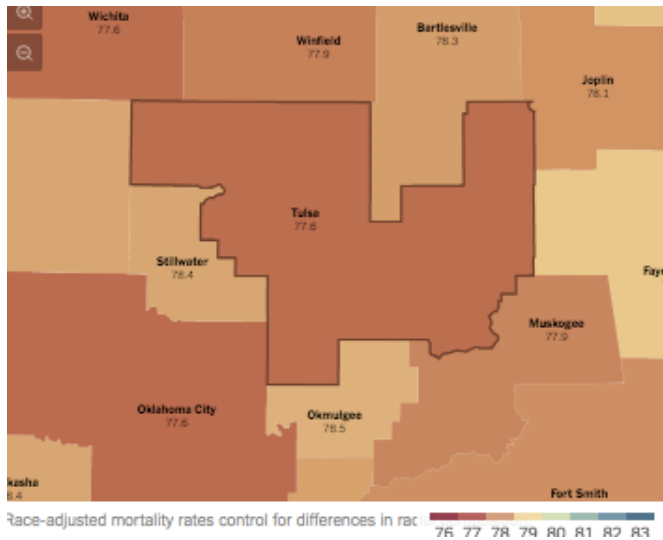
Life expectancy of 40-year-olds with household incomes **below \$28,000**,  
adjusted for race\*



# Life expectancy of 40-year-olds with household incomes **below \$28,000**, adjusted for race: Tulsa & OKC

On average, the life expectancy for a poor 40-year-old in the Oklahoma City area is 77.6 years. It is worse than most places in the U.S. for life expectancy for the poor.

On average, the life expectancy for a poor 40-year-old in the Tulsa area is 77.6 years. It is worse than most places in the U.S. for life expectancy for the poor.

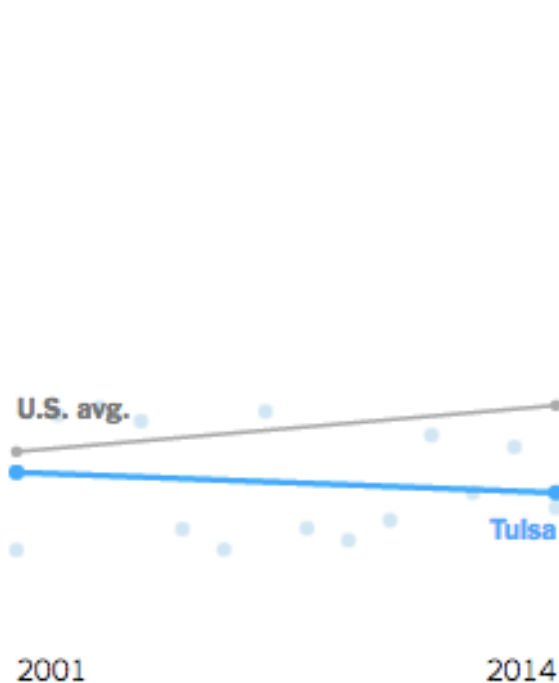


# There is a gap between the rich and poor...

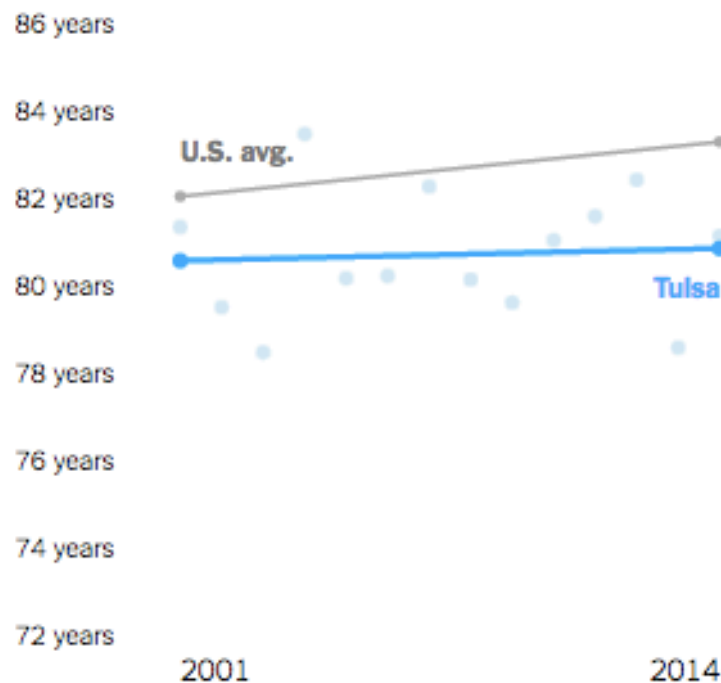
- Those in households making more than \$100,000 per year — and poor:
- In the Oklahoma City area, the poor will die about **8** years before the rich. **That's roughly equivalent to the difference in life expectancy between an average man in the United States and one in Liberia.** It is about 1.5 years more than the gap for the United States as a whole.
- In the Tulsa area, the poor will die about **8** years before the rich. **That's roughly equivalent to the difference in life expectancy between an average man in the United States and one in Afghanistan.** It is about 1 years more than the gap for the United States as a whole.

Life expectancies for the poor in the Tulsa area have worsened since 2001 by about 0.1 years. Life expectancies increased in most other places.

**Life expectancy of poor men**

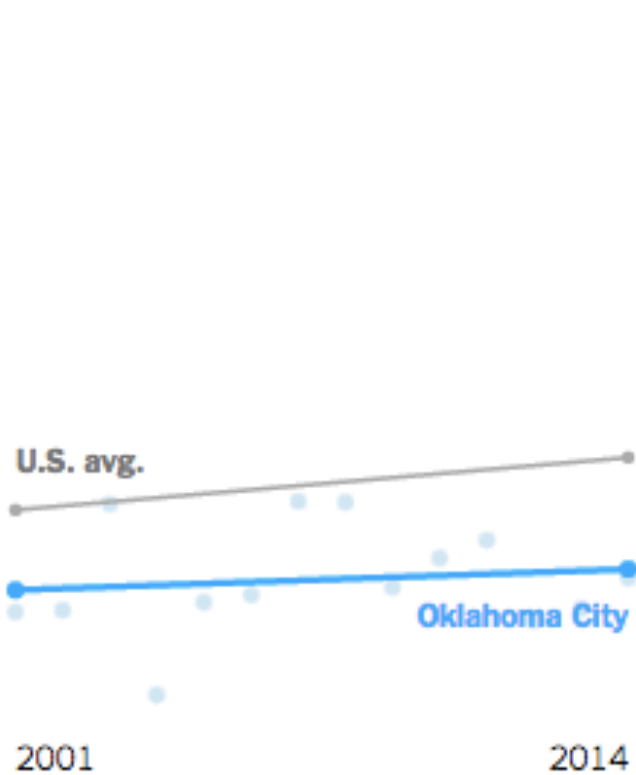


**Life expectancy of poor women**

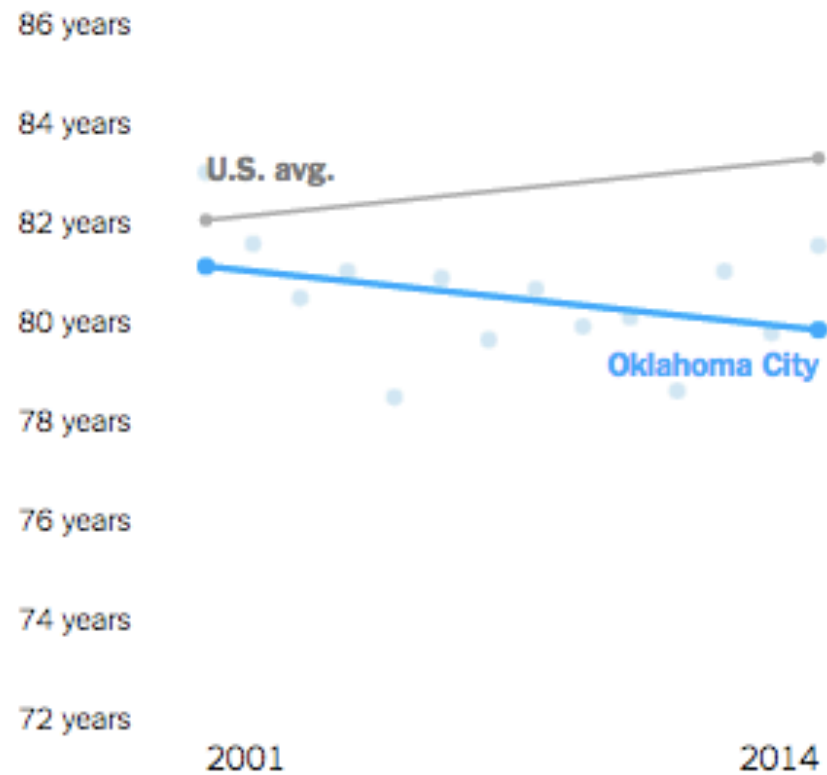


# Oklahoma City

Life expectancy  
of poor men



Life expectancy  
of poor women



# Unnatural causes sick and dying in small town America





# A new divide in American death

Among white women ages 40 to 44, **rural women** are dying at drastically higher rates while the rate for **urban women** stayed steady.



*What killed Jones was cirrhosis of the liver brought on by heavy drinking. The exact culprit was vodka, whatever brand was on sale, poured into a pint glass eight ounces at a time. But, as Anna's family gathered at the gravesite for a final memorial, they wondered instead about the root causes, which were harder to diagnose and more difficult to solve.*



**“White women between 25 and 55 have been dying at accelerating rates over the past decade, a spike in mortality not seen since the AIDS epidemic in the early 1980s. According to recent studies of death certificates, the trend is worse for women in the center of the United States, worse still in rural areas, and worst of all for those in the lower middle class. Drug and alcohol overdose rates for working-age white women have quadrupled. Suicides are up by as much as 50 percent.”**

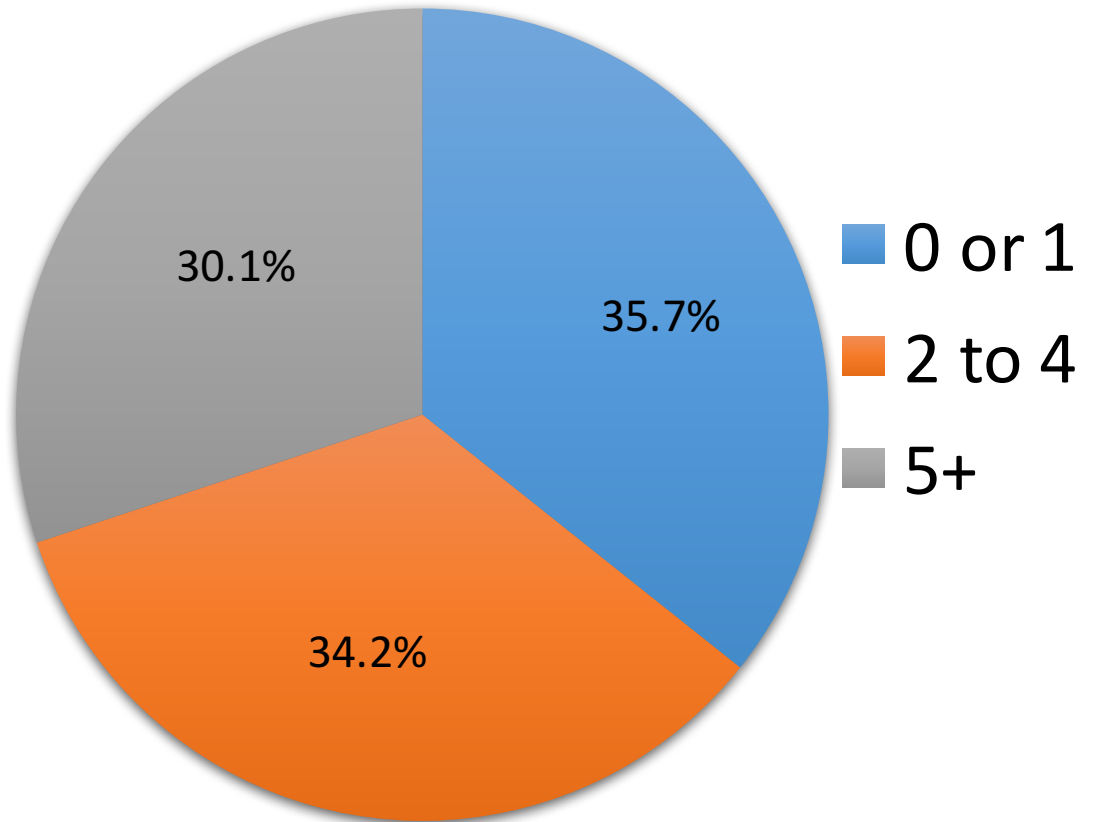
Source: Eli Saslow. "A Premature and Unnatural Death' In Rural Oklahoma." Washington Post. April 8, 2016. [https://www.washingtonpost.com/classic-apps/a-premature-and-unnatural-death-in-rural-oklahoma/2016/04/08/7888a74c-f079-11e5-89c3-a647fccc95e0\\_story.html](https://www.washingtonpost.com/classic-apps/a-premature-and-unnatural-death-in-rural-oklahoma/2016/04/08/7888a74c-f079-11e5-89c3-a647fccc95e0_story.html).

# Two Studies: Data Collection

Study	N	Sample	Linked to
<b>OU-Tulsa, School of Community Medicine Clinic Survey</b>	<b>354</b>	<b>Clinic patients, adults</b>	<b>Electronic Medical Record data: health conditions, medications, history</b>
<b>EducareSurvey: Family Life and Stress</b>	<b>338</b>	<b>Parents of children enrolled in Tulsa Educare</b>	<b>Educare data: Parent interviews Teacher observations AND Cortisol sample from children</b>
<b>TOTAL</b>	<b>692</b>		

# OU Clinic Patients: ACEs

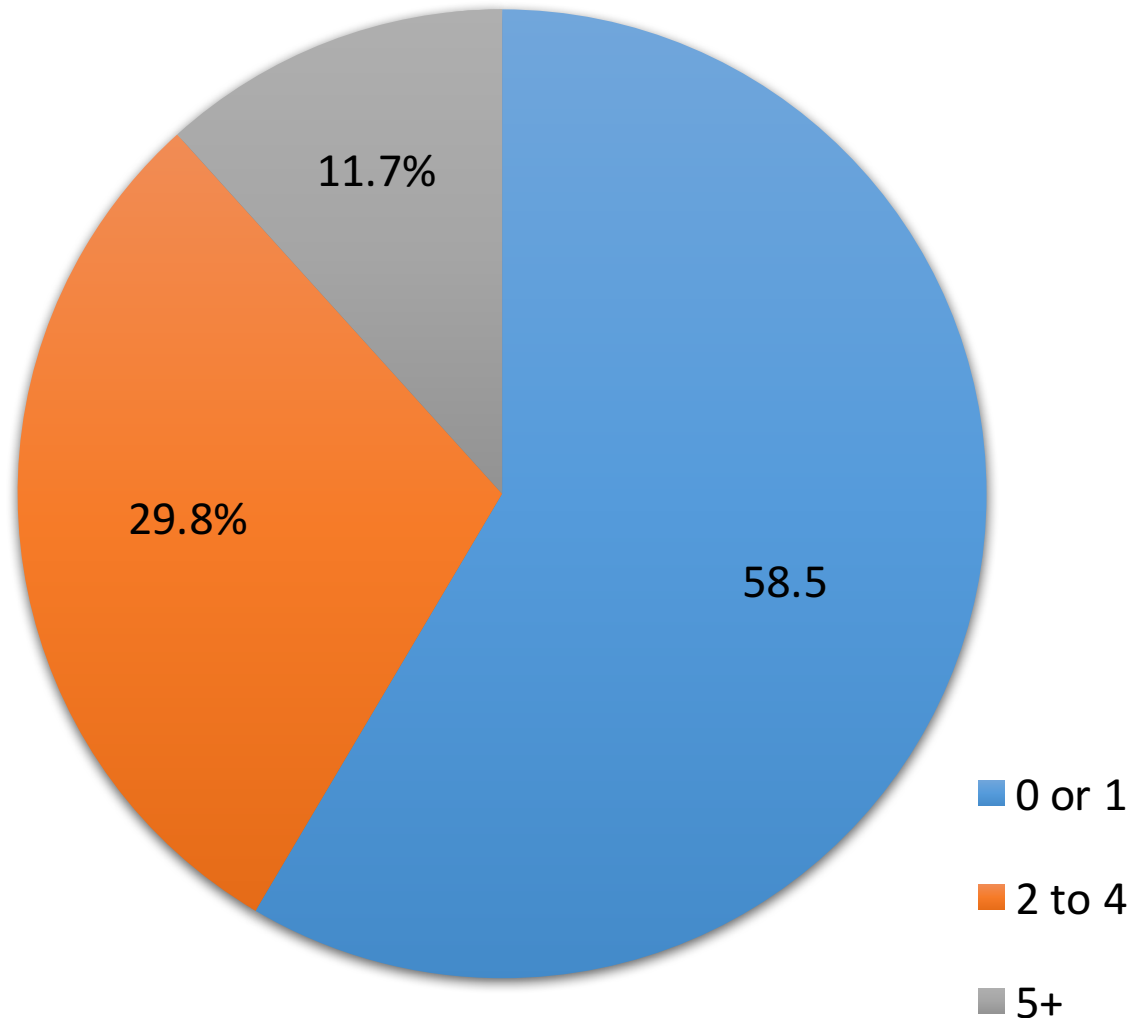
Verbal abuse	42%
Physical abuse	32%
Sexual abuse	27%
Familial ties	34%
Basic needs unmet	20%
Witness IPV	25%
Sep/Divorce	41%
Alcohol/drugs	37%
Mental illness	27%
Prison	18%



# Educare Parents: ACEs

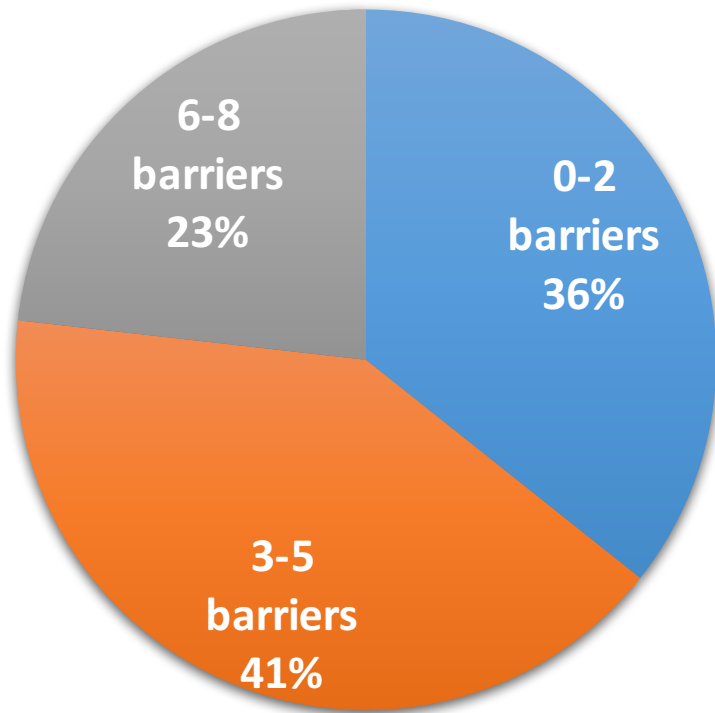
**% Parents Experiencing 0-1 ace, 2-4 aces, 5 or more aces**

Verbal abuse	20%
Physical abuse	14%
Sexual abuse	11%
Familial ties	22%
Basic Needs Unmet	9%
Witness IPV	11%
Sep/Divorce	47%
Alcohol/drugs	21%
Mental illness	10%
Prison	17%



# Clinic Sample: Health Care Barriers

## Health Care Barriers



- **23%** currently uninsured
- **50%** needed HC, no insurance
- **36%** experienced time without insurance, last 12 months
- **37%** reported someone in the HH went without needed HC
- **54%** needed care, no money
- **54%** needed care, no insurance
- **52%** used ER, no regular doctor
- **58%** report medical debt
- **7%** used payday lender for medical debt

# Combined Data: Access to Health Care

# of ACEs	N	Health Care Barriers, Mean (SD)
0-1	319	2.29 (1.59)*
2-4	217	3.22 (1.57)*
4 or above	140	3.84 (1.65)*

Doctor Regularly as a Child?*	N	ACE Mean (SD)
No	234	2.95
Yes	419	2.25
Dentist Regularly as a child?*	N	ACE Mean (SD)
No	289	3.07
Yes	363	2.02

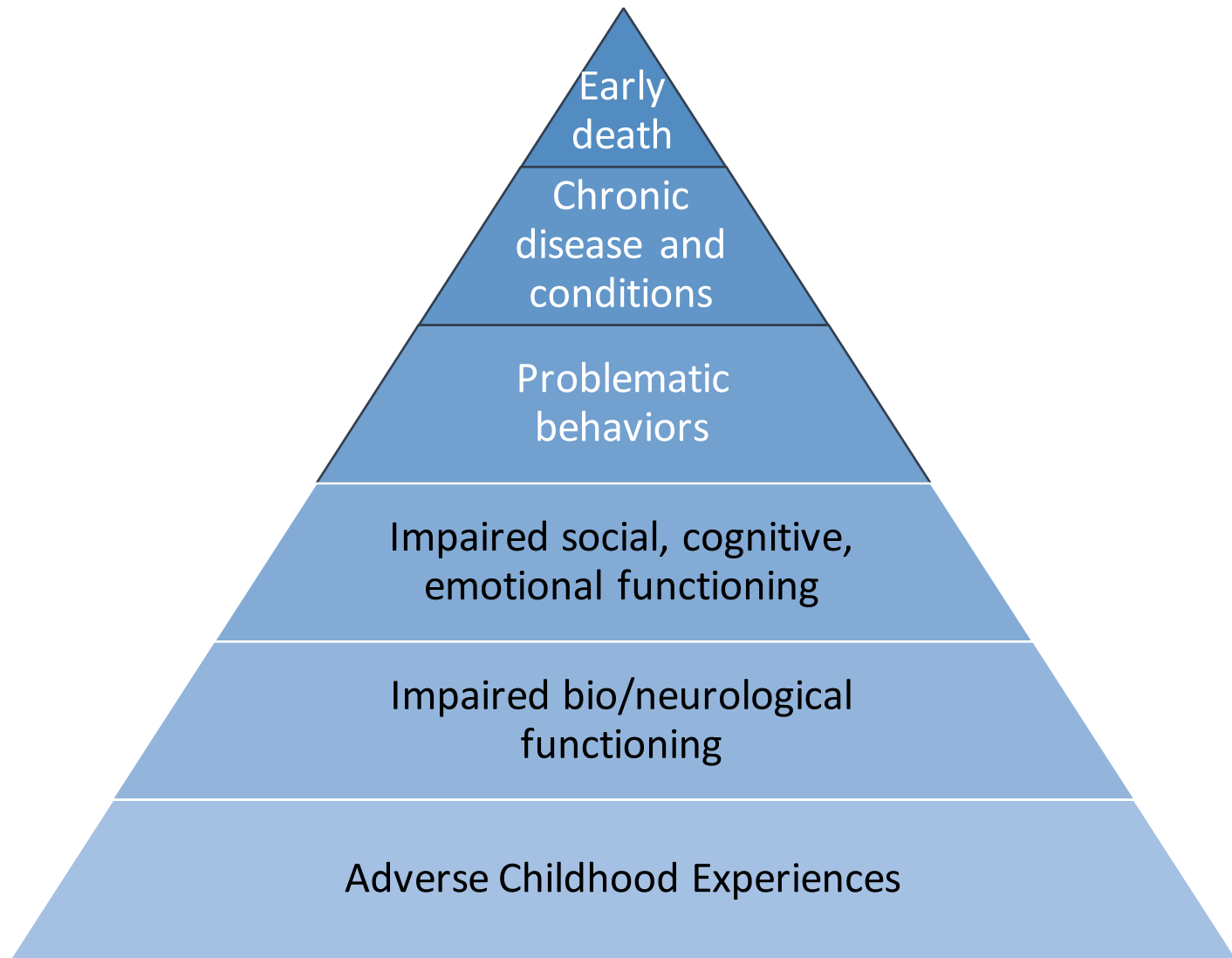
\* Statistically significant difference



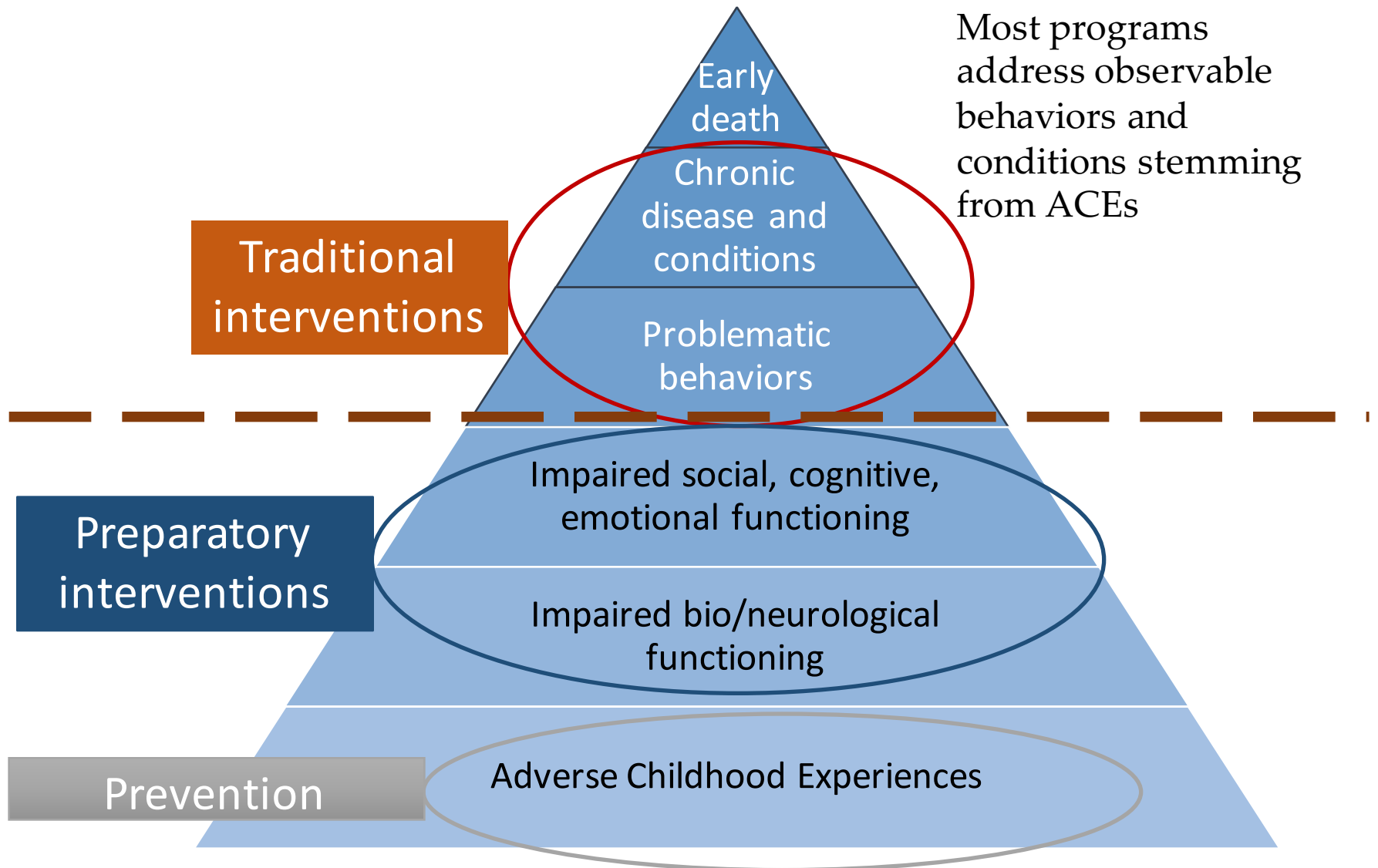
# Combined Data: Health Care Barrier Items

Health Care Barriers	N	Mean Ace Score
<b>Did you need health care but not get it because you did not have money?*</b>		
No	360	1.84
Yes	304	3.21
<b>Did you use the ER because you did not have a regular doctor?*</b>		
No	366	1.96
Yes	300	3.10
<b>Do you have medical debt?*</b>		
No	312	1.84
Yes	359	3.00
<b>Did you use a payday lender to help cover medical costs?*</b>		
No	615	2.36
Yes	54	3.69
<b>Needed health care but no health insurance?*</b>		
No	404	1.92
Yes	262	3.33

# Classic ACE Triangle



# Expand the Focus of Interventions



# Expand the Focus of Intervention

**Stressed adults, who have experienced trauma in past and current life, may not respond well to educational or behavioral interventions**

Traditional interventions

**These interventions are needed, but they come late (not primary prevention) and stressed adults may not be ready to participate & also have little impact on generational change**

Preparatory interventions

# Expand the Focus of Interventions

**Interventions target what we know re: stress research, ACE studies, animal models: Biological imbedding of toxic stress, elevated cortisol levels, changes in brain structure & function**

Traditional interventions

Preparatory interventions

Early death, chronic disease and disability

Problematic behaviors

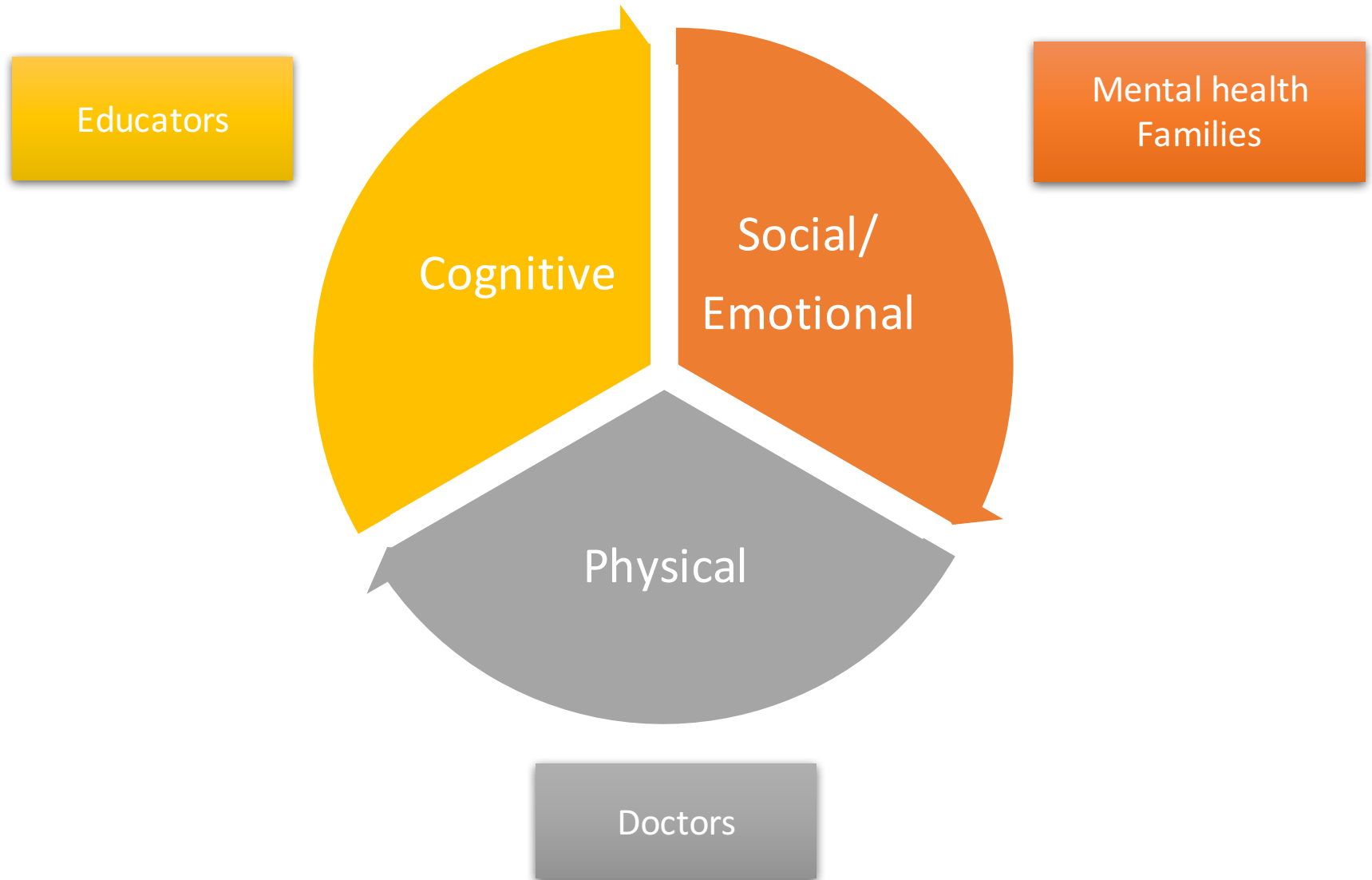
Impaired social, cognitive and emotional functioning

Impaired biological structure & functioning

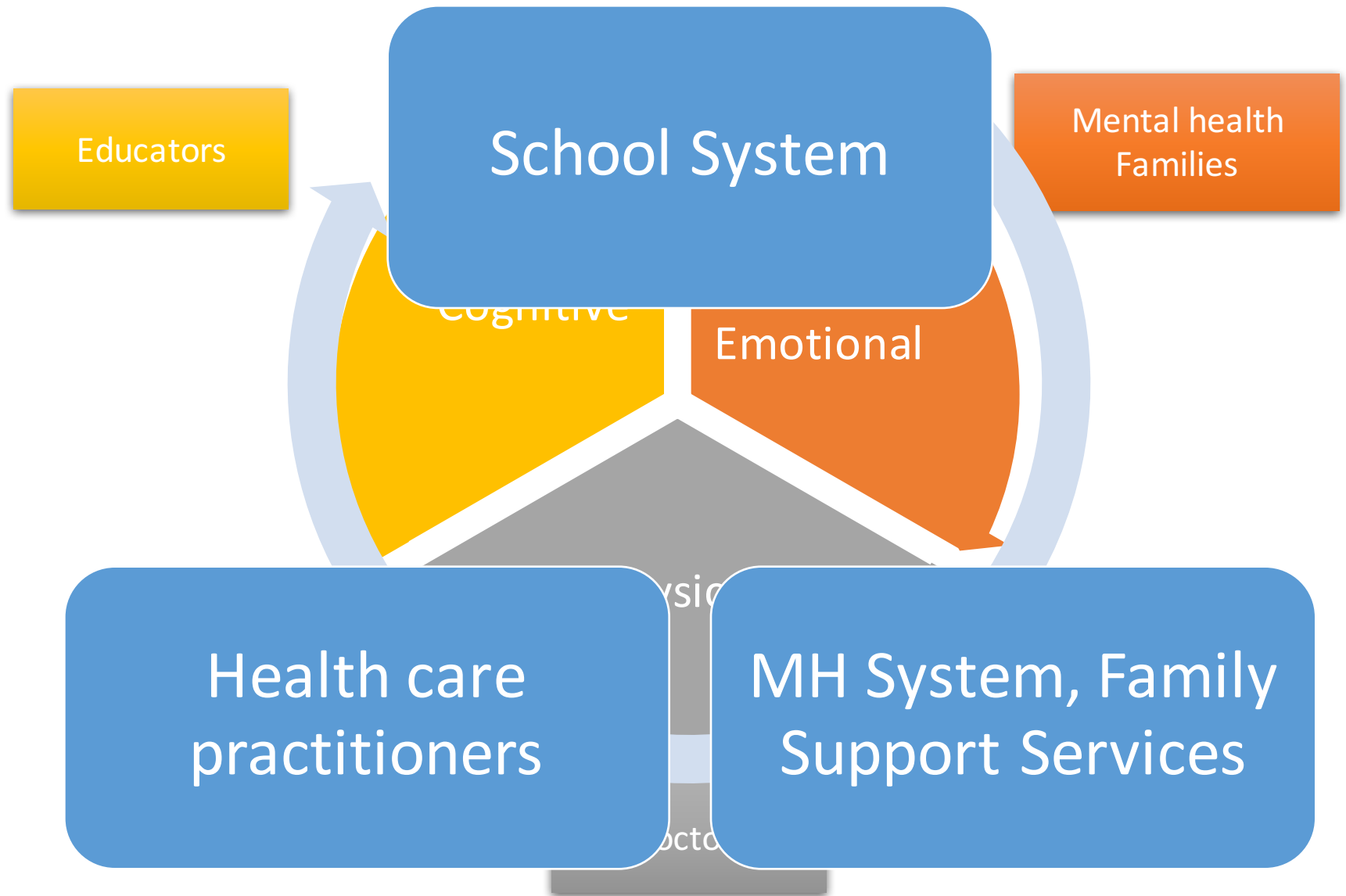
Adverse Childhood Experiences

Most programs address observable behaviors and conditions stemming from ACEs

# Siloed Approaches to Connected Problems



# Breaking Silos, Location of Care



# Acknowledgements & Collaborators

**Kim A. Coon, Ed.D.**

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Family Medicine

University of Oklahoma School of Community Medicine



# Study Investigators

Study	
<b>OU-Tulsa, School of Community Medicine Clinic Survey</b>	<b>Marty Jelley, MD; Frances Wen, PhD; Kim Coon, Ed, Julie Miller-Cribbs, PhD; Jennifer Hays-Grudo, PhD</b>
<b>Educare Survey: Family Life and Stress</b>	<b>Jennifer Hays-Grudo, PhD; Diane Horn, PhD; Kent Teague, PhD; Julie Miller-Cribbs, PhD</b>
<b>Homeless Youth &amp; trust of medical providers</b>	<b>Munoz, R.T., Brahm, N.C. &amp; Fox, M.D.</b>
<b>Residents in public housing, community health</b>	<b>Ric Munoz, MSW &amp; Mark Fox, MD</b>