# The Good, Bad, and Ugly of Occupational Health Surveillance

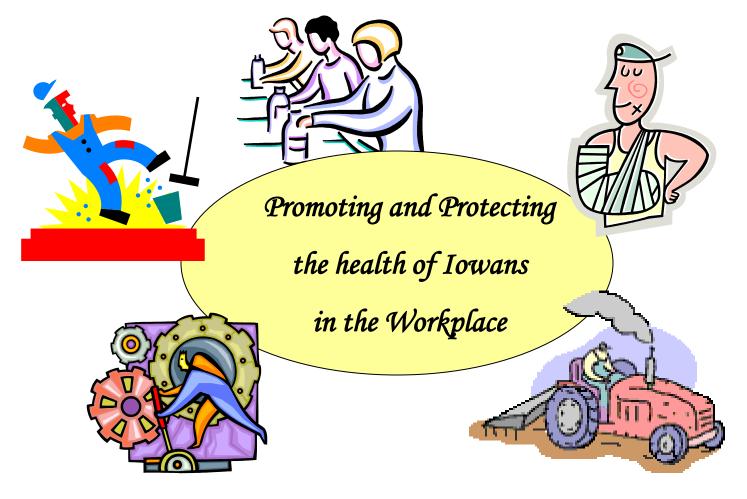
Part 2: Region 7 OHI Data, Lead, Fatalities

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Iowa Department of Public Health
Occupational Health & Safety Surveillance Program



#### **IDPH OHSSP**



Iowa Department of Public Health
Occupational Health & Safety Surveillance Program

#### A Role for Both Programs

#### **Labor Services Division**

Michael A. Mauro, Labor Commissioner



2011 Workers' Memorial Ceremony

2012 Worker Memorial Day press release: "During the calendar year 2011, 43 lowans died from injuries sustained while working...."

IA FACE program data for 2011 (preliminary numbers): 92 work-related traumatic fatalities, 79 lowans, 13 non-residents

US Bureau of Labor Census of Fatal Occupational Injuries final 2011 fatality report: 93 work-related traumatic fatalities in Iowa

# Example: Indicator #3 – Fatal Work-related Injuries

| Indicator #3 – Iowa Data  |      |      |      |      |      |      |   |
|---|------|------|------|------|------|------|---|
| IA: Annual number of work-related traumatic fatalities                          | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | lowa Census of<br>Fatal<br>Occupational<br>Injuries (CFOI)  |
|   | 89   | 93   | 80   | 77   | 93   | 97   |   |
| IA: Annual Crude<br>fatality rate per<br>100,000 FTEs age<br>16 years and older | 5.8  | 6.0  | 5.5  | 5.3  | 6.4  | 6.6  | Iowa CFOI and<br>Bureau of Labor<br>population<br>estimates |

This is the basic indicator information calculated according to the guidelines established and used by each funded state.

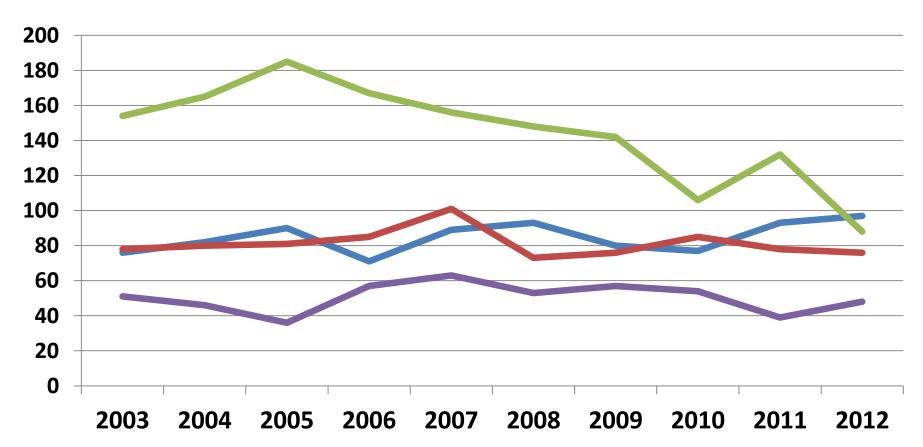
# Example: Indicator #3 – Fatal Work-related Injuries

| Indicator #3 – Iowa Data compared to US Data                                    |      |      |      |      |      |      |  |
|---|------|------|------|------|------|------|--|
| IA: Annual number   | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Iowa Census of<br>Fatal                            |
| of work-related traumatic fatalities  | 89   | 93   | 80   | 77   | 93   | 97   | Occupational Injuries (CFOI)                       |
| IA: Annual Crude<br>fatality rate per<br>100,000 FTEs age<br>16 years and older | 5.8  | 6.0  | 5.5  | 5.3  | 6.4  | 6.6  | Iowa CFOI and Bureau of Labor population estimates |
| US Rates Fatal work injury rate per 100,000 FTEs                                | 4.0  | 3.7  | 3.5  | 3.6  | 3.5  | 3.4  | BLS/CFOI   |

Taking it one step further – IA compared to US Rates

## Region 7: Work-related Fatalities Comparison, 2003-2012 CFOI Data





## Example: Indicator #3 – Fatal Work-related Injuries Rates

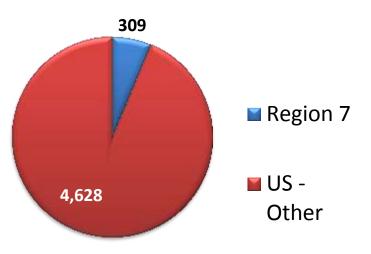
#### Indicator #3 – State, Region, US Data

| Fatal work injury rate per 100,000 FTEs | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|------|------|------|------|------|
| NE                                      | 5.7  | 6.2  | 6.3  | 3.9  | 5.2  |
| MO                                      | 5.4  | 5.6  | 4.2  | 4.9  | 3.3  |
| KS                                      | 5.3  | 5.8  | 6.5  | 5.9  | 5.7  |
| IA                                      | 6.0  | 5.5  | 5.3  | 6.4  | 6.6  |
| Region 7                                | 5.6  | 5.8  | 5.6  | 5.3  | 5.2  |
| US                                      | 3.7  | 3.5  | 3.6  | 3.5  | 3.4  |

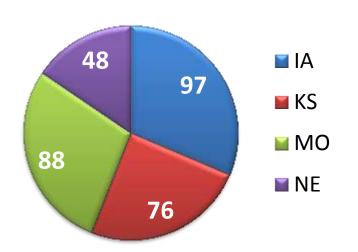
Taking it one step further – Region 7 compared to US Rates

## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data

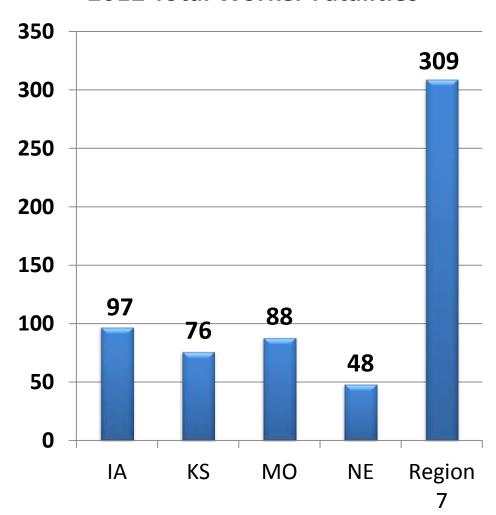
#### 2012 Fatalities:



2012 Fatalities: Region 7

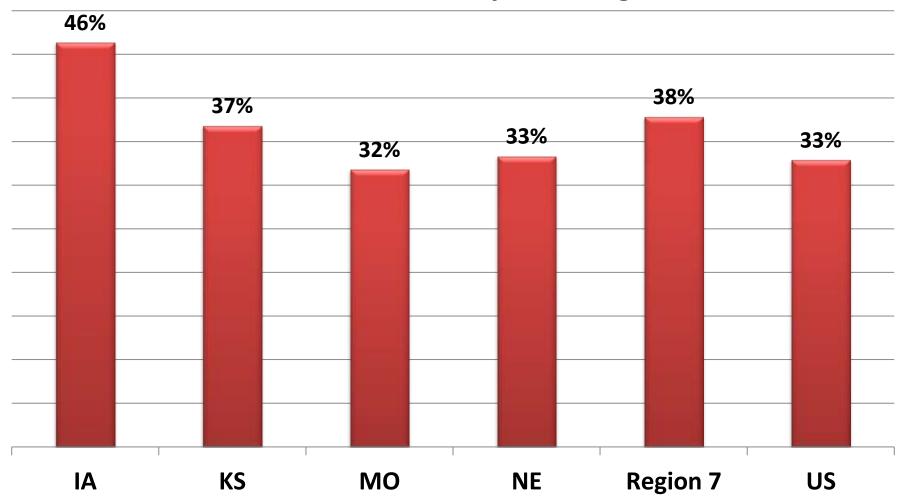


#### **2012 Total Worker Fatalities**



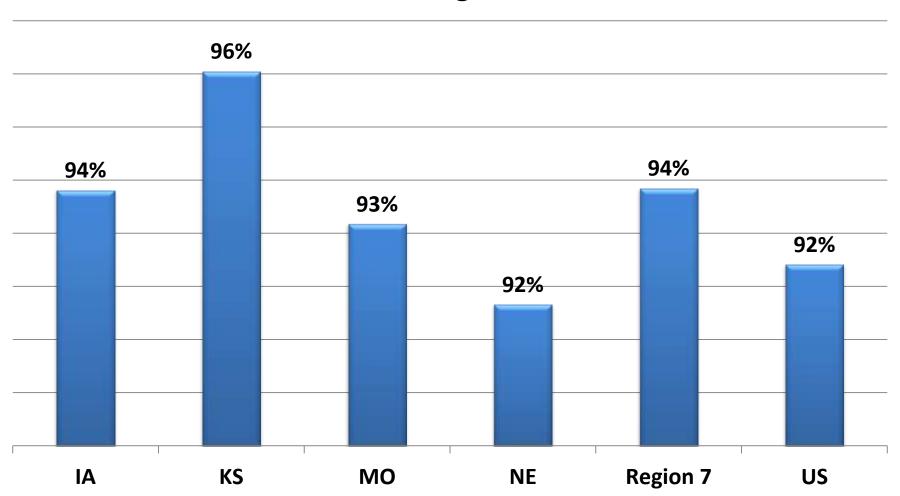
### Region 7: Work-related Fatalities Comparison, 2012 CFOI Data – Older Workers

2012 Fatalities: 55+ years of age

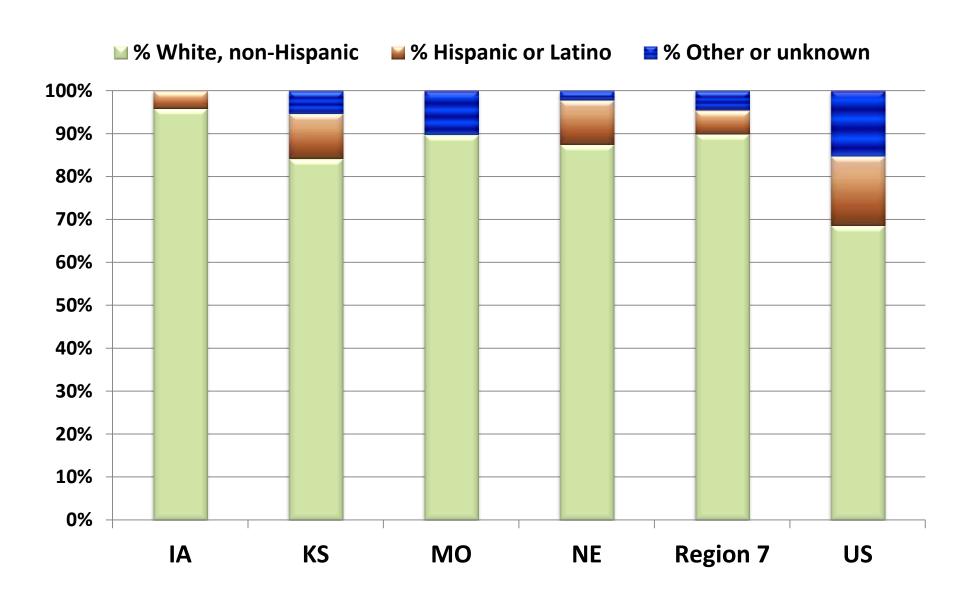


## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data by Gender

#### **Percentage Male**

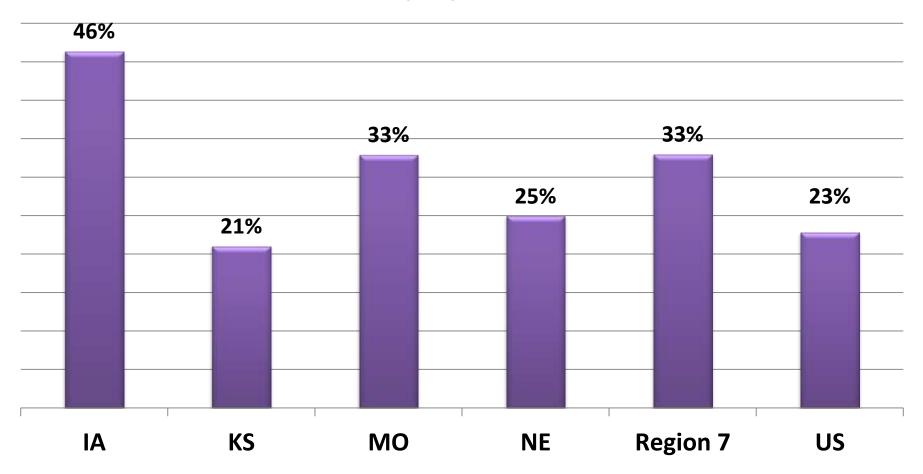


## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data by Race & Ethnicity

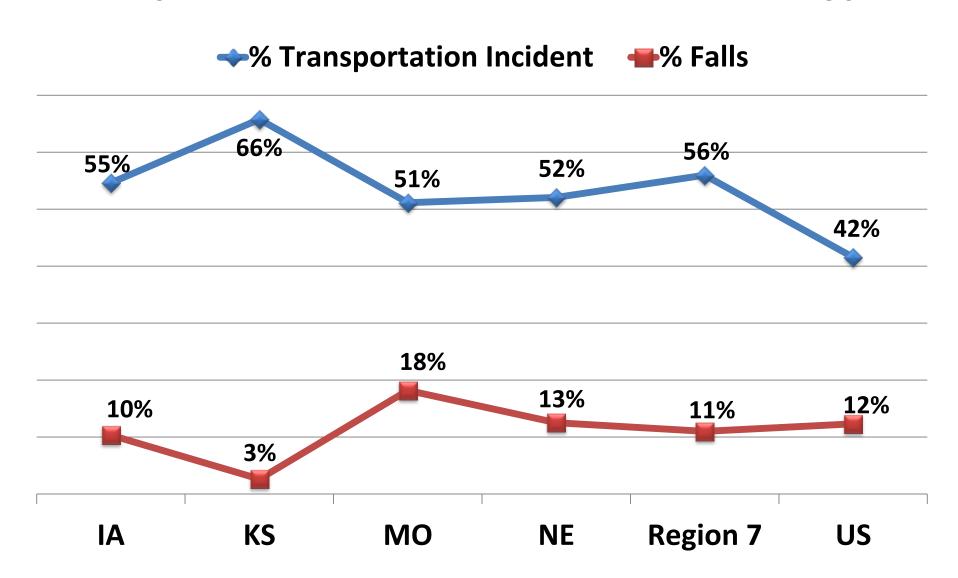


## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data – Self Employed

**■** Self Employed Fatalities %



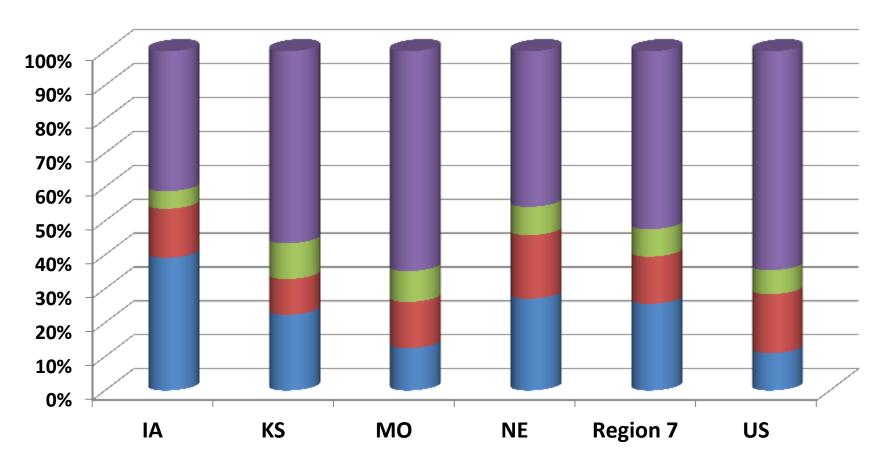
## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data – Event Type



## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data by Industry

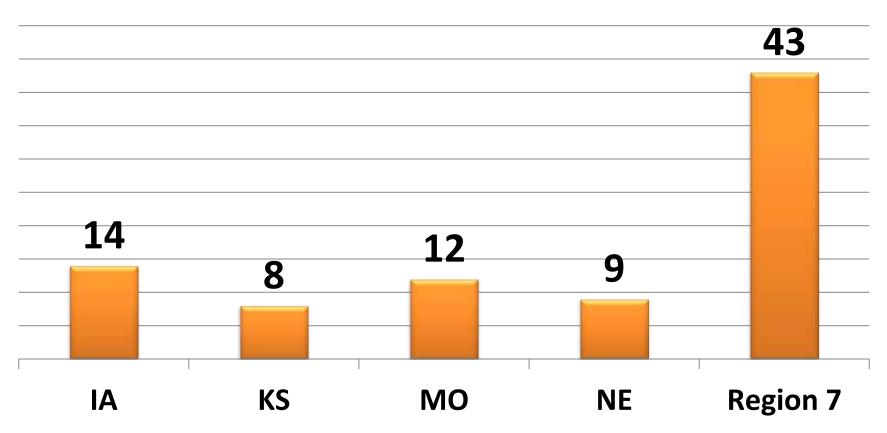
■ Ag, Forestry, Fishing, Hunting ■ Construction

■ Manufacturing
■ Other Industry



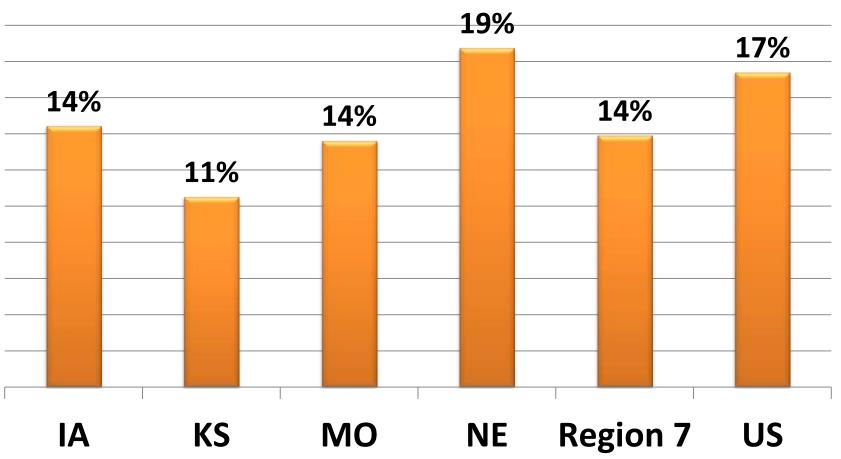
## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data by Industry

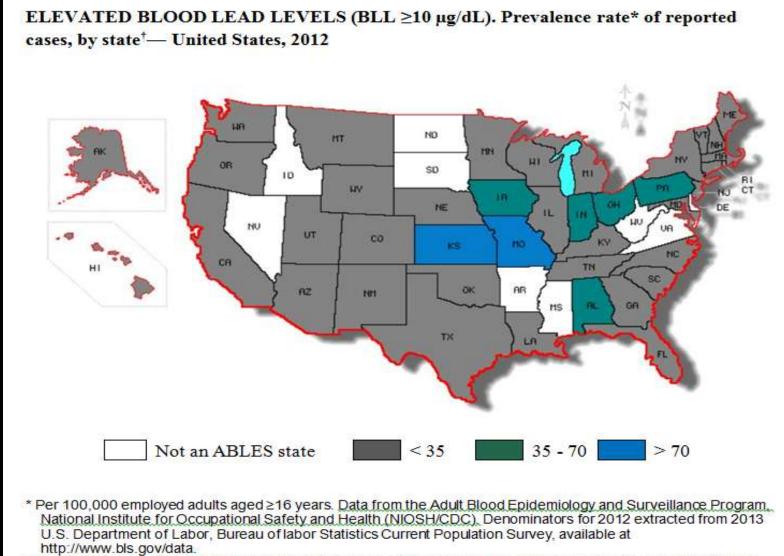
#### **Construction Fatalities**



## Region 7: Work-related Fatalities Comparison, 2012 CFOI Data by Industry

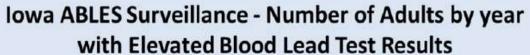
#### % Construction

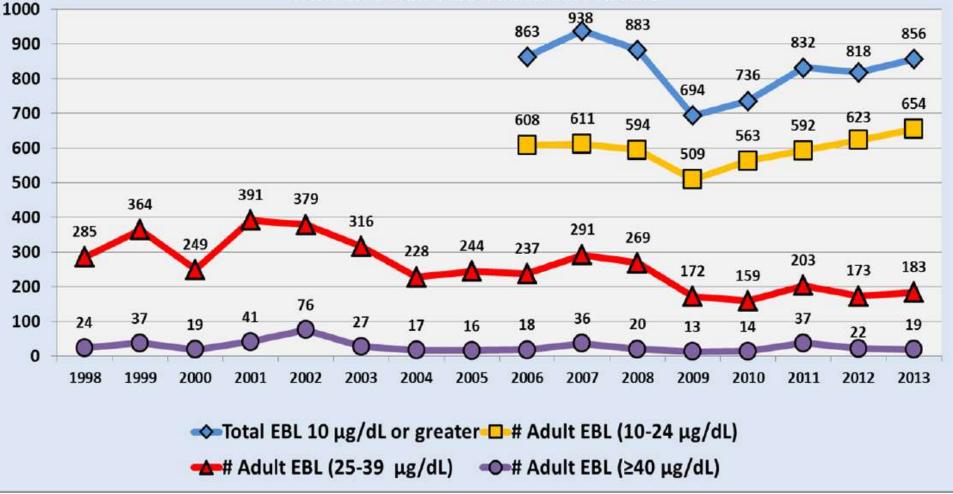




Source: NIOSH unpublished, MMWR Summary of Notifiable Diseases Elevated Blood Lead Levels among Adults, United States, 1995-2012

In 2012, the states with the highest reported prevalence of elevated blood lead levels were Missouri (106.66) and Kansas (77.32). Prevalence rate range for Illinois and Massachusetts were estimated from prevalence rate of BLL ≥25 µg/dL and BLL reports ≥15 µg/dL





Report based on highest blood lead level in the calendar year of an lowa resident 16 years of age or older at the time of test. lowa Adult Blood Lead Epidemiology & Surveillance Program

Data as of February 28, 2014 – subject to revision www.idph.state.ia.us/LPP/ABLES.aspx

#### Healthy People National Public Health Objectives

Reduce to zero the prevalence of BLLs  $\geq$ 25 µg/dL among adults

#### \*National Rates:

1994: 14.0

2005: 7.2

2006: 7.4

2007: 7.4

2008: 7.4

2009: 6.3

2010: 7.0

2011: 6.6

2012: 5.5

#### \*lowa Rates:

1995: 34.9

2005: 16.7

2006: 15.9

2007: 20.2

2008: 14.1

2009: 11.8

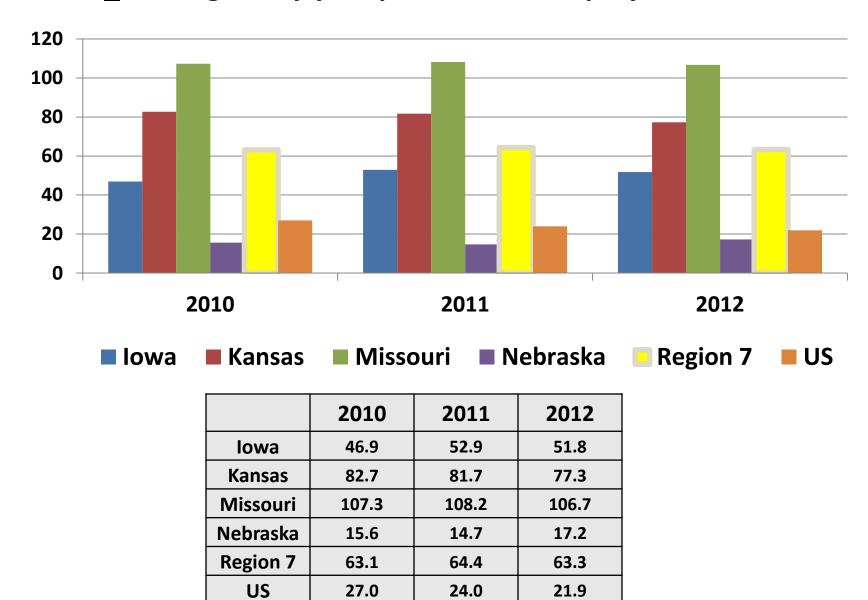
2010: 11.1

2011: 15.3

2012: 12.4

NIOSH/IDPH Data: Prevalence Rates Per 100,000 Employed Adults

OHI #13: Prevalence Rates of Adults with blood lead levels > 10 mcg/dL by year per 100,000 employed adults



#### Blood lead concentration Reference Blood Lead Levels $(\mu g/dL)$ 60 for Adults in the U.S. OSHA's Medical Removal BLL\* 50 OSHA's Return to Work **ACGIH Biological Exposure Index** OSHA's NEP – lead (2008) 40 Level for BLL testing every 6 months (AOEC, 2007) ABLES Case Definition (NIOSH, 2009) 30 California DPH Medical Guidelines (2009) CSTE Position Statement on Lead (CSTE, 2009) 25 CDC Nationally Notifiable Condition (2010) 20 Healthy people 2020 OSH Objective 7 (2010) Level not to exceed during pregnancy: AOEC (2007), California DPH Medical Guidelines (2009), CDC (ACCLPP, 2010) 10 Geometric mean BLL among adults (NHANES 4th report) \*The OSHA Lead Standards state that the examining physician has broad flexibility to tailor protections to the worker's needs



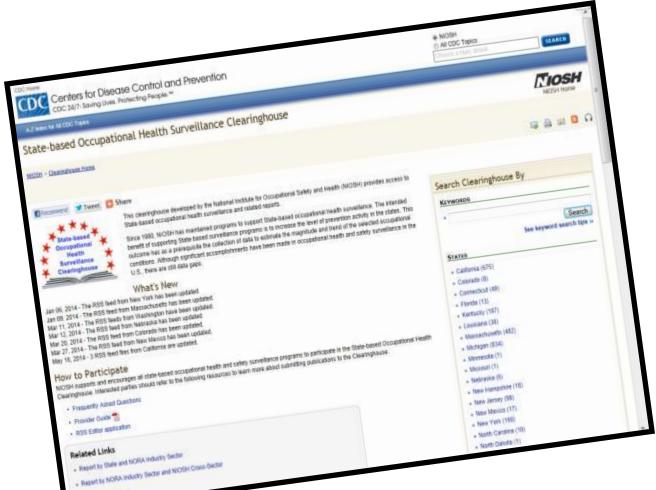


ABLES case definition

Elevated Blood Lead (EBL) is a venous BLL ≥10 µg/dL

among adults 16 and older

### NIOSH Clearinghouse



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http://wwwn.cdc.gov/niosh-survapps/statedocs/ or google "NIOSH Clearinghouse"