2008 Occupational Health and Safety Indicators Report

A Descriptive Assessment of Occupational Safety and Health Surveillance Findings for the 12 State Southeastern Region of the U.S.

Southeastern States Occupational Health Network (SouthON)

July 6, 2012

Southeastern States Occupational Health Network

Building capacity for the surveillance of work-related injuries and Illnesses

at the state and regional level….

2008 Occupational Health and Safety Indicators Report

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List of Acronyms

BLS	**Bureau of Labor Statistics**
CFOI	**Census of Fatal Occupation Injuries**
CSTE	**Council of State Territorial Epidemiologists**
FTE	**Full-time equivalent worker**
NIOSH	**National Institute for Occupational Safety and Health**
OSHA	**Occupational Safety and Health Administration**
OSH	**Occupational Safety and Health**
SOII	**Survey of Occupational Injuries and Illness**

Glossary of Terms

Census of Fatal Occupational Injuries: The Census of Fatal Occupational Injuries (CFOI), conducted by the Bureau of Labor Statistics (BLS) in the U.S. Department of Labor, is a federal-state cooperative program that compiles an annual census of fatal occupational injuries at both the state and national levels. For a death to be counted, the decedent must have been working for pay, compensation or profit at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job. The census includes unintentional injuries (e.g., falls, electrocutions, motor vehicle crashes) and intentional injuries (homicide and suicide). Deaths due to occupational illnesses are excluded.

CFOI uses multiple data sources to identify and document work-related injury deaths. These sources include, among others, death certificates, workers' compensation records, reports to regulatory agencies, and medical examiner and police reports, as well as reports in the news media. Multiple sources are used because studies have found that no single source captures all deaths. In addition, two or more sources are required to ensure an accurate count by independently substantiating that incidents were work-related. Due to this methodology, CFOI counts are considered a complete or nearly complete ascertainment of work-related injury deaths.

Incidence rate: A measure of the frequency with which a new case of illness occurs in a population over a period of time. The denominator is the population at risk; the numerator is the number of new cases occurring during a given time period.

Indicator: A construct of public health surveillance that defines a measure of health (i.e., the occurrence of a disease or other health-related event) or a factor associated with health (i.e., health status or other risk factor) among a specified population.

Lost-time claim: A workers' compensation term referring to a claim for benefits to partially reimburse an employee for lost wages due to a work-related injury or illness.

Medical-only claim: A workers' compensation term referring to a claim for benefits to reimburse an employee for medical expenses but not lost wages due to a work-related injury or illness.

Prevalence rate: The proportion of persons in a population who have a particular disease or attribute at a specified point in time or over a specified period of time.

Standardization: An analytic procedure to reduce the biasing effect of confounding variables (e.g., age) when comparing two or more populations, sometimes called adjustment.

State Workers' Compensation Systems: Workers' compensation is a no-fault insurance system designed to provide compensation to workers who sustain work-related injuries or illnesses while limiting the legal liability of employers. All states and the District of Columbia have workers' compensation systems, and all employers are required to have this form of insurance for their employees. Several federal workers' compensation systems exist for the protection of select groups of workers, such as federal workers, and longshore and harbor workers, and are outside of state governance.

State workers' compensation systems are the result of individual state legislation and regulation. States may allow employers to self-insure, group self-insure, insure through private carriers, or insure through a state fund. Coverage exemptions differ between states; common exemptions include employment in the public and private sector, specified occupations, and the size of the employer. Marked state-to-state differences exist in the statute of limitations for filing a work-related injury or illness claim, the procedures for filing a claim, and the requirements governing claim adjudication. State laws governing benefits for disability, waiting periods for wage replacement, wage replacement amounts, medical payments, and vocational rehabilitation make comparisons of benefits across states difficult. In addition, there may be considerable variability in the types of data collected, the data

coding systems used, and the availability of data for research purposes. The variability in workers' compensation laws across states represents a significant limitation of using these data to make state-to-state comparisons.

Survey of Occupational Injuries and Illnesses (SOII): The Survey of Occupational Injuries and Illnesses (SOII) is conducted by the Bureau of Labor Statistics in the US Department of Labor. The survey provides case circumstances and worker characteristics for nonfatal injury and illness cases requiring at least one day away from work to recuperate. It is designed to provide an estimate of the number of work-related injuries and illnesses and a measure of the frequency (rate) at which they occur. For more serious cases, those that involve one or more days away from work, it also provides a description of the injury or illness circumstances as well as the characteristics of the affected workers. The number of injuries and illnesses are reported nationwide and by industry for three basic types of cases: 1) Lost-workday cases, 2) Cases involving days away from work, and 3) Nonfatal cases without lost workdays.

Surveillance: The ongoing, systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know.

Work-related illness: An illness arising out of employment due to exposure to a health hazard. Because of the latency of some illnesses (i.e., a lengthy period between first exposure and development of disease), some work-related illnesses occur when the individual is no longer employed in the job where exposure occurred.

Work-related injury: An injury arising out of or during the course of employment.

Acknowledgements

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Finally, we express special appreciation to Krystal Lin, NIOSH, for her assistance in finalizing this document.

INTRODUCTION

SouthON

The Southeastern States Occupational Health Network (SouthON) is comprised of occupational health and safety professionals throughout the southern United States. SouthON includes 12 diverse member states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Of these states, five receive funding from NIOSH to conduct occupational safety and health surveillance: Florida, Georgia, Kentucky, Louisiana, and North Carolina.

Through fostering outreach and collaboration with state, regional, and national occupational safety and health partners, the group's goal is to build and strengthen capacity for surveillance of work-related injury and illness at the state and regional level. SouthON plans to accomplish its goal through:

- developing and supporting relationships with key stakeholders (NIOSH and NIOSH-funded grantees including Education and Research Centers, academic institutions, state and federal OSHA, state epidemiologists, state health and labor agencies, and CSTE),
- providing epidemiological and program planning tools and 'best practices' to states,
- providing dissemination, implementation, and evaluation resources for programs or policies for effecting state system-level beneficial change
- providing and supporting surveillance methodology and communication science
- promoting mutually-beneficial collaboration among member states and federal partners that lead to adoption of science-based strategies, sound public policies, effective communication, and prevention intervention recommendations.

Through participation in SouthON, member states are empowered with relevant information and group inertia that leads to a meaningful strategic partnership, access occupational surveillance tools and needed resources, and mentoring to assist with program and professional development.

As a demonstration of its productivity and resolve, SouthON members have initiated several activities to support its mission in the region. They include: a SouthON fact sheet, a routinely maintained member contact list, a member listserv, dissemination of the CSTE Occupational Indicator Guide, planning of the December 5, 2011 annual meeting of member states and agencies hosted by the University of South Florida Sunshine Education and Research Center, as well as this Indicators report. Through these activities and inertia, members of SouthON intend to sustain regional collaboration and perspective for the prevention of work-related injuries and deaths.

Occupational Health Indicators

The occupational health indicators used in this report reflect those developed by NIOSH and the Council of State and Territorial Epidemiologists (CSTE) which help to provide more detailed surveillance data on injury and illness occurring in the workplace and the effects they have on health. According to CSTE, the indicators represent a core set of data that if collected at the state level, would assist in the development of programs to prevent workplace injuries and illnesses (CSTE 2008). There are currently 19 indicators that states are asked to report. Included in the 19 total indicators, 12 are considered health effect indicators that measure injuries and illnesses that result from exposure to known or suspected occupational hazards, 3 are hazard indicators that measure potential hazardous exposures in the workplace, 2 are intervention indicators which measure the capacity of workplace interventions to reduce hazards, 1 is an exposure indicator that measures the presence of hazardous substances from workplace exposure using human blood and tissue samples, and the last indicator is a socioeconomic impact indicator that measures the economic burden of work-related injury and illness (CSTE 2008).

The 19 CSTE occupational health indicators are as follows:

- Indicator #1- Non-fatal Work-related Injuries and Illnesses Reported by Employers (Health Effect)
- Indicator #2- Work-related Hospitalizations (Health Effect)
- Indicator #3- Fatal Work-related Injuries (Health Effect)
- Indicator #4- Work-related Amputations with Days Away from Work Reported by Employers (Health Effect)
- Indicator #5- State Workers' Compensation Claims for Amputations with Lost Work-Time (Health Effect)
- Indicator #6- Hospitalizations for Work-related Burns (Health Effect)
- Indicator #7- Work-related Musculoskeletal Disorders with Days Away from Work Reported by Employers (Health Effect)
- Indicator #8- State Workers' Compensation Claims for Carpal Tunnel Syndrome with Lost Work-Time (Health Effect)
- Indicator #9- Hospitalizations from or with Pneumoconiosis (Health Effect)
- Indicator #10- Mortality from or with Pneumoconiosis (Health Effect)
- Indicator #11- Acute Work-related Pesticide-associated Illness and Injury Reported to Poison Control Centers (Health Effect)
- Indicator #12- Incidence of Malignant Mesothelioma (Health Effect)
- Indicator #13- Elevated Blood Lead Levels Among Adults (Exposure)
- Indicator #14- Percentage of Workers Employed in Industries at High Risk for Occupational Morbidity (Hazard)
- Indicator #15- Percentage of Workers Employed in Occupations at High Risk for Occupational Morbidity (Hazard)
- Indicator #16- Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality (Hazard)
- Indicator #17- Occupational Safety and Health Professionals (Intervention)
- Indicator #18- OSHA Enforcement Activities (Intervention)
- Indicator #19 Workers' Compensation Awards (Socioeconomic Impact)

State Demographic Profiles

In addition to occupational health indicator data, states also report demographic data to CSTE using BLS Geographic Profiles of Employment and Unemployment and Current Population Survey (CPS) as data resources. Demographic data is reported for all employed persons aged 16 and older in a calendar year. According to CSTE, state health departments can better assess potential occupational health risks when they understand the composition of their workforce. Demographic tables have been prepared for each state in SouthON and can be found in Appendix B.

Methods

This report is intended to be used descriptively and not a comprehensive account of occupational safety and health in the southern United States.

The data contained in this report were collected in accordance with the Council of State and Territorial Epidemiologist (CSTE) 2008 guidelines. The regional data presented is a compilation of the state specific data collected by occupational safety and health surveillance officials in NIOSH-funded states as well as BLS data for the eight other states.

Per SouthON's request, each state sent all occupational health indicator data collected and reported to CSTE. These data were analyzed to determine which states reported each year, which indicators were reported, and how data abstracted from national BLS data sets could be used to provide a more complete descriptive assessment for the entire southeastern region.

Occupational Health Indicators Relevant for the 2008 SouthON Indicators Report

Data for year 2008 for the 12 state southeastern region are included in this report. This report includes regional data on the following seven occupational health indicators:

- Indicator #1- Non-fatal Work-related Injuries and Illnesses Reported by Employers
- Indicator #3- Fatal Work-related Injuries
- Indicator #4- Work-related Amputations with Days Away from Work Reported by Employers
- Indicator #7- Work-related Musculoskeletal Disorders with Days Away from Work Reported by Employers
- Indicator #14- Percentage of Workers Employed in Industries at High Risk for Occupational Morbidity
- Indicator #16- Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality
- Indicator #19 Workers' Compensation Awards

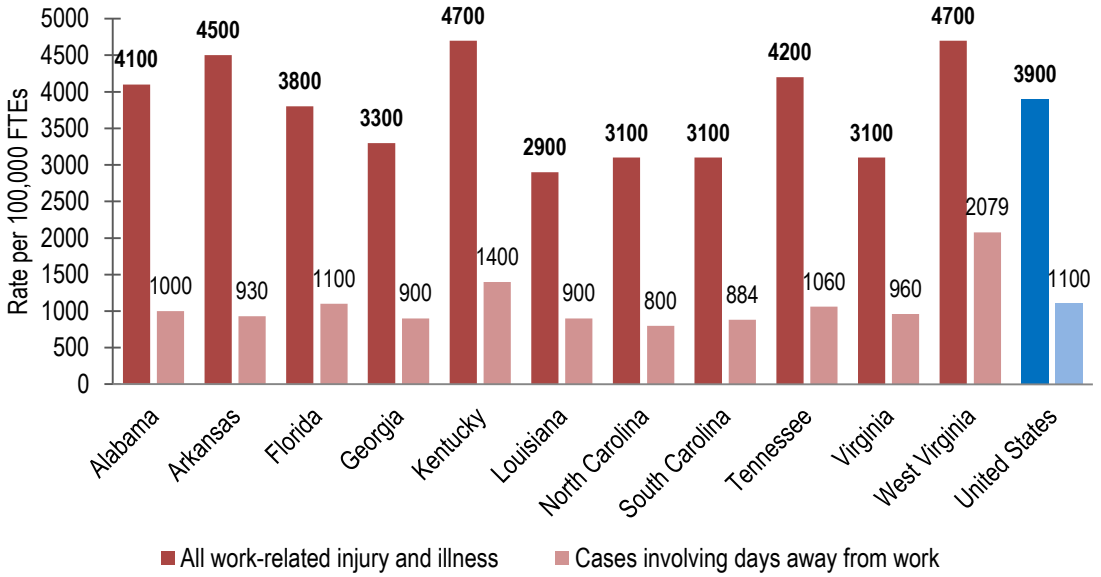
Table 1. Indicator # 1 Non-fatal Work-related Injuries and Illnesses Reported by Employers[1]													
	AL	**AR**	**FL**	**GA**	**KY**	**LA**	**MS[2]**	**NC**	**SC**	**TN**	**VA**	**WV**	**US**
1.1 Estimated annual total number of work-related injuries and illnesses	56,100	39,100	210,400	98,300	59,800	38,300	-	94,600	39,100	82,900	77,500	23,200	3,696,100
1.3 Estimated annual total number of cases involving days away from work	13,730	8,140	58,800	26,800	17,300	12,900	-	23,300	11,260	20,020	24,300	10,360	1,078,140
1.5 Estimated annual total number of cases involving more than 10 days away from work	5,630	3,100	26,690	11,260	7,350	5,620	-	9,060	5,300	9,910	-	4,360	479,260

[1] Source: Bureau of Labor Statistics 2008 Survey of Occupational Injuries and Illness (SOII)

[2] State SOII data are not available for Mississippi

The estimated annual total number of work-related injury and illness (indicator 1.1), cases involving days away from work (indicator 1.3), and cases involving more than 10 days away from work (indicator 1.5) for each state in the region are displayed in Table 1. The 2008 incidence rates of all work-related injury and illness (indicator 1.2) and cases involving days away from work (indicator 1.4) as shown in Figure 1 are 3,458 among the region and 3,900 as the estimated US rate.

Figure 1. 2008 Estimated Incidence Rate of Work-Related Injury and Illness Reported by Employers[1]



LIMITATIONS[3]

• The number of claims filed for workers' compensation may underestimate the number of non-fatal injuries and illnesses because not all individuals with work-related injuries and illnesses file for workers' compensation benefits. One reason for underestimation is due to exclusion of public sector workers, the self-employed, household workers, and workers on farms with fewer than 11 employees from the national estimates. Together these sectors comprise approximately 21% of the US workforce. In addition, occupational diseases are not well documented in the Survey of Occupational Injuries and Illnesses and there is evidence that injuries are underreported.

• The calculations reported in this Indicator refer to claims filed, without regard to whether the claims were admitted or denied. It is estimated approximately 25% of all filed claims will be denied due to a variety of reasons.

• Differences in eligibility criteria and availability of data from workers' compensation programs limit these data from being compared across states or with overall US data.

• The Survey of Occupational Injuries and Illnesses is subject to sampling error.

[3] Adopted from WestON Indicators reports

RECOMMENDATIONS[4]

• Describe non-fatal work-related injuries and illnesses in each state by industry, age, gender, and injury/illness characteristics, including type of injury/illness, part of the body affected, and source of injury/illness, for the purpose of intervention, education, and prevention.

• All states should participate in the Survey of Occupational Injuries and Illnesses (SOII). The SOII collects data on work-related injuries and illnesses reported by employers. These data are helpful in describing the burden of injuries and illnesses that occur in the workplace and are an addition to workers' compensation data.

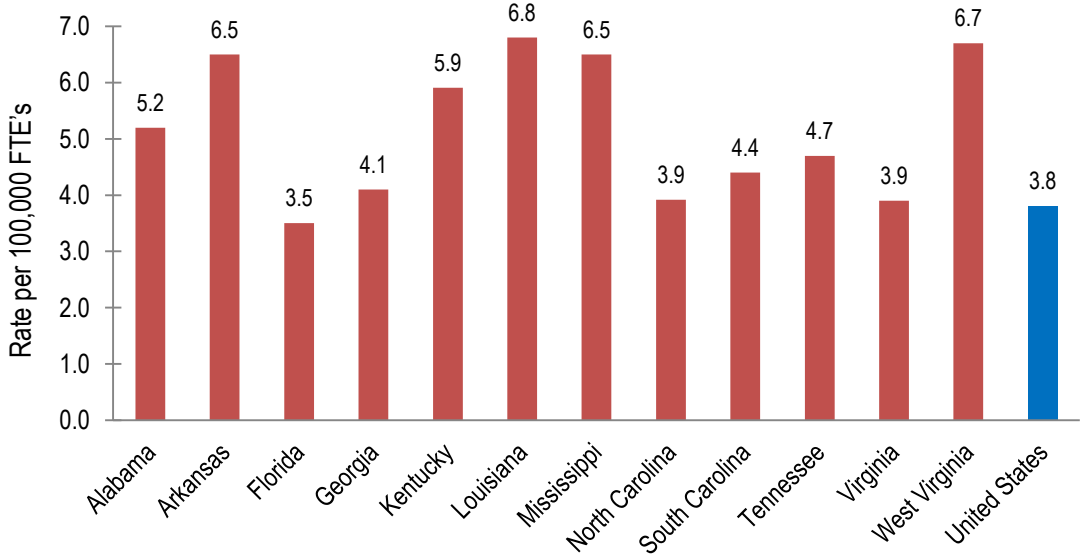
• Additional data sources used in generating other occupational health indicators in this report provide important supplementary information that, together with the Survey of Occupational Injuries and Illnesses, provides a more complete picture of occupational health in the states.

[4] Adopted from WestON Indicators reports

Table 2. Indicator #3 Fatal Work-related Injuries[5]													
	AL	**AR**	**FL**	**GA**	**KY**	**LA**	**MS**	**NC**	**SC**	**TN**	**VA**	**WV**	**US**
3.1 Annual number of work-related traumatic fatalities	107	85	291	182	106	135	80	161	87	135	156	53	5,214

The annual number of work-related traumatic fatalities (indicator 3.1), for each state in the region are displayed in Table 2. The 2008 crude work-related injury fatality rates (indicator 3.2) shown in Figure 2 are 5.2 among the region and 3.8 as the estimated US rate.

Figure 2. 2008 Crude Work-related Injury Fatality Rate[4]



[5] Source: Bureau of Labor Statistics 2008 Census of Fatal Occupational Injuries

[6] Annual average FTE estimates were obtained from the Bureau of Labor Statistics 2008 Current Population Survey

LIMITATIONS[7]

• Fatalities of workers younger than the age of 16 and the resident military are included in the numerators of the state and national rates, whereas the employment statistics used to calculate the rates exclude workers under age 16 and the military. This may result in a slight over-estimation of rates.

• Since work-related fatalities are reported by state in which the fatality occurred and not the state of the worker's residence, rates may overestimate risk if the work-related fatalities involved workers who were out of state residents. Likewise, rates may be underestimated if fatalities occurred in other states.

• The numerator data includes the number of fatalities among military personnel. Military personnel are not included in the denominator because they are not part of the Bureau of Labor Statistics Current Population Survey

RECOMMENDATIONS[8]

• Report fatal work-related injuries and illnesses by industry, occupation, and injury/illness characteristics.

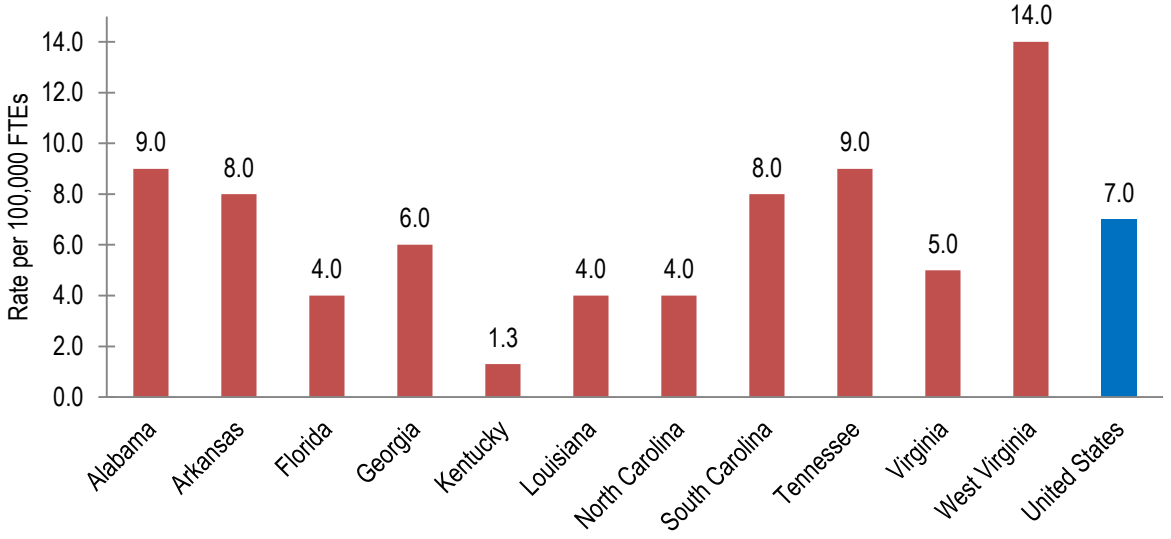
• Make further, more detailed comparisons with overall United States data.

[7] Adopted from WestON Indicators reports
[8] Adopted from WestON Indicators reports

Table 3. Indicator #4 Work-related Amputations with Days Away from Work Reported by Employers[9]													
	AL	**AR**	**FL**	**GA**	**KY**	**LA**	**MS**	**NC**	**SC**	**TN**	**VA**	**WV**	**US**
4.1 Estimated annual number of amputations involving days away from work	120	70	200	190	170	50	-	130	100	170	120	70	6,230

The estimated annual number of amputations involving days away from work (indicator 4.1), for each state in the region are displayed in Table 3. The 2008 estimated incidence rate of amputations involving days away from work reported by employers (indicator 4.2) shown in Figure 3 are 6.0 among the region and 0.7 as the estimated US rate.

Figure 3. 2008 Estimated Incidence Rate of Amputations Involving Days Away from Work Reported by Employers



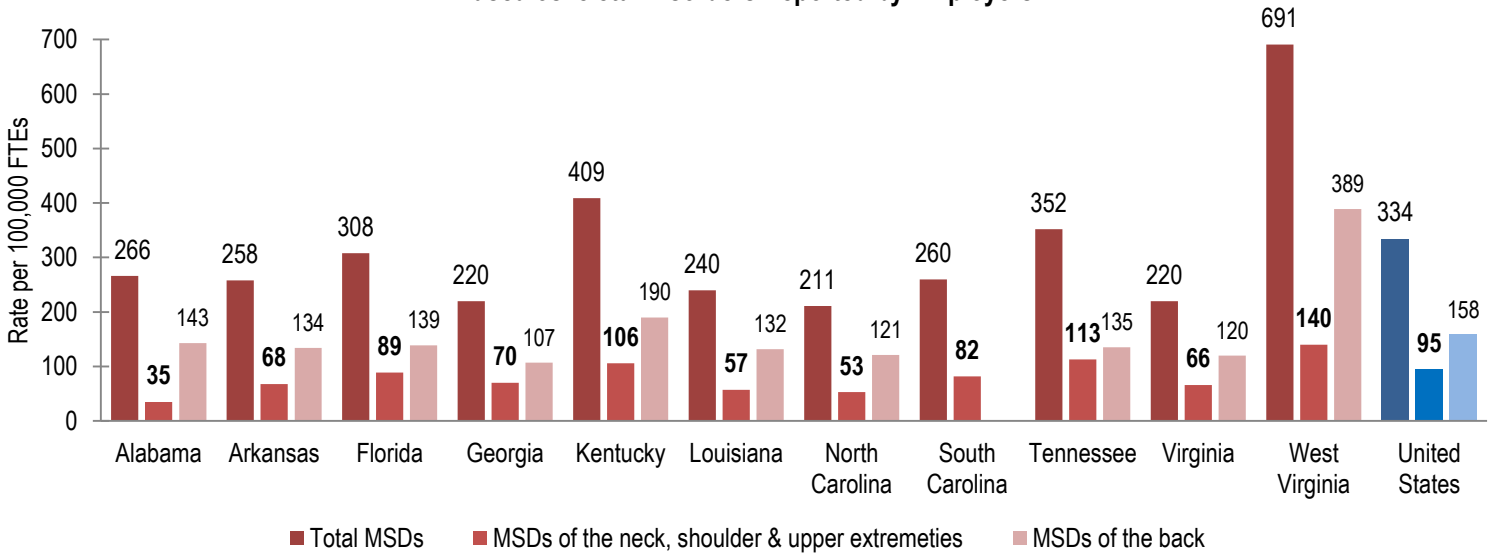
[9] Source: Bureau of Labor Statistics 2008 Survey of Occupational Injuries and Illness (SOII)

Table 4. Indicator #7 Work-related Musculoskeletal Disorders with Days Away from Work Reported by Employers[10]													
	AL	**AR**	**FL**	**GA**	**KY**	**LA**	**MS**	**NC**	**SC**	**TN**	**VA**	**WV**	**US**
7.1 Estimated annual number of all musculoskeletal disorders (MSDs)	3,670	2,260	16,920	6,550	5150	3320	-	5,940	3,310	7,020	5,770	3,440	317,440
7.3 Estimated annual number of MSDs of the neck, shoulder & upper extremities	760	600	4,900	2,100	1340	7800	-	1,480	1,050	2,250	1,670	690	90,600
7.5 Estimated annual number of carpal tunnel syndrome cases	40	140	580	200	80	60	-	140	90	250	20	40	10,060
7.7 Estimated annual number of musculoskeletal disorders of the back	1,970	1,170	7,630	3,200	2390	1820	-	3,390	-	2,680	3,050	1,940	150,310

The estimated annual number of all musculoskeletal disorders (indicator 7.1), musculoskeletal disorders of the neck, shoulder, and upper extremities (indicator7.3), carpal tunnel syndrome cases (indicator 7.5), and musculoskeletal disorders of the back (indicator 7.7) for each state in the region are displayed in Table 4. The 2008 estimated incidence rate of musculoskeletal disorders reported by employers (indicator 7.2), musculoskeletal disorders of the neck, shoulder, and upper extremities (indicator7.4), and musculoskeletal disorders of the back (indicator 7.8) shown in Figure 4 are 304, 77, 156, respectively, among the region and 334, 95, 158, respectively, as the estimated US rate.

[10] Source: Bureau of Labor Statistics 2008 Survey of Occupational Injuries and Illness (SOII)

Figure 4. 2008 Estimated Incidence Rate of Musculoskeletal Disorders Reported by Employers



LIMITATIONS[11]

• The Survey of Occupational Injuries and Illnesses is based on data collected from a nationwide sample of employers. While it is a valuable source of information about work-related injuries, it has a number of limitations. Excluded from these estimates based on the SOII are public sector workers, the self-employed, household workers, and workers on farms with fewer than 11 employees. Together these sectors comprise approximately 21% of the US workforce.

• There is evidence that MSDs are under-recorded on the Occupational Safety and Health Administration (OSHA) logs that serve as the basis for the SOII.

• The Survey of Occupational Injuries and Illnesses is subject to sampling error.

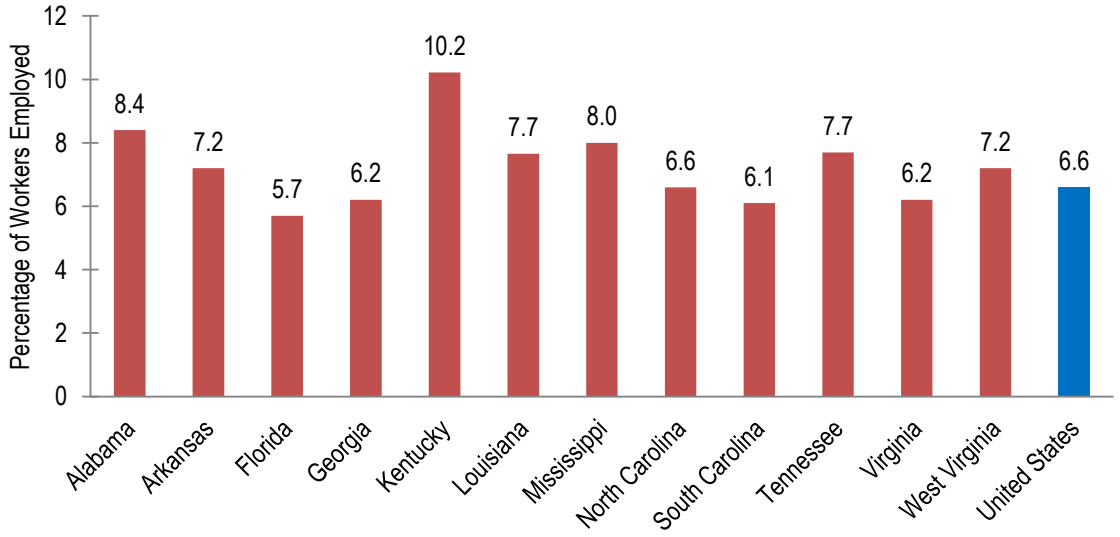
RECOMMENDATIONS[12]

• All SouthON states should participate in the Survey of Occupational Injuries and Illnesses (SOII).

[11] Adopted from WestON Indicators reports
[12] Adopted from WestON Indicators reports

Table 5. Indicator #14 Percentage of Workers Employed in Industries at High Risk for Occupational Morbidity[13]													
	AL	AR	FL	GA	KY	LA	MS	NC	SC	TN	VA	WV	US
14.1 Annual number of work-related traumatic fatalities	144,420	74,026	418,802	244,152	160,576	126,775	75,587	236,682	100,119	190,956	197,228	42,414	7,998,334

Figure 5. 2008 Percentage of Employed Persons in High Morbidity Risk NAICS Industries



The percentage of work-related traumatic fatalities (indicator 14.1), for each state in the region are displayed in Table 5. The 2008 percentage of employed persons in high morbidity risk NAICS industries (indicator 14.2) shown in Figure 5 are 7.3% among the region and 6.6% as the estimated US percentage.

[13] High risk industries were obtained from the Bureau of Labor Statistics 2008 Survey of Occupational Injuries and Illnesses. Employment numbers are from the Bureau of the Census 2008 County Business Patterns.

LIMITATIONS[14]

- Since the County Business Patterns estimates are calculated in March of each year, new employees for that year may not be included in the calculation.
- The ranking of high-risk industries may differ by region.
- Estimates are based on a probability sample of private sector employers and do not include all employers.
- Estimates are based on injury and illness data maintained by employers and are subject to sampling error.
- Estimates do not include the military, small farms and federal agencies.

RECOMMENDATIONS[15]

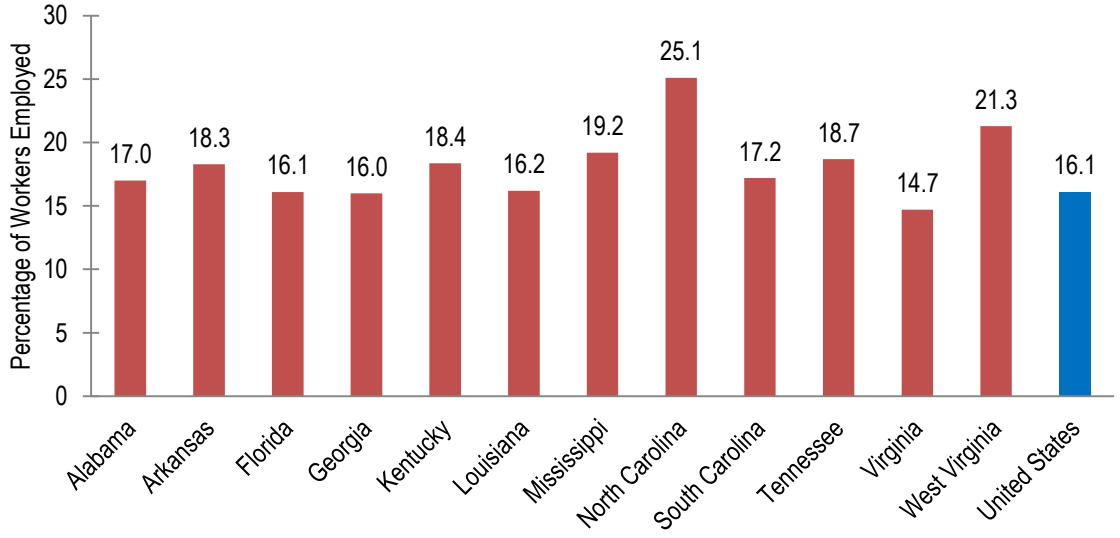
- Identify regionally important high-risk industries for prevention activities.

[14] Adopted from WestON Indicators reports
[15] Adopted from WestON Indicators reports

Table 6. Indicator #15 Percentage of Workers Employed in Occupations at High Risk for Occupational Morbidity[16]													
	AL	**AR**	**FL**	**GA**	**KY**	**LA**	**MS**	**NC**	**SC**	**TN**	**VA**	**WV**	**US**
15.1 Average number of employed persons in high morbidity risk occupations (according to the 2000 bureau of census)	272,824	181,048	1,023,335	541,561	255,379	26,8063	173,051	1,068,966	265,197	405,366	437,481	125,685	18,373,120

The average number of employed persons in high morbidity risk occupations (indicator 15.1), for each state in the region are displayed in Table 6. The 2008 percentage of employed persons in high morbidity risk occupations (indicator 15.2) shown in Figure 6 are 18.2% among the region and 16.1% as the estimated US rate.

Figure 6. 2008 Percentage of Employed Persons in High Morbidity Risk Occupations



[16] High risk occupations were obtained from the Bureau of Labor Statistics 2008 Survey of Occupational Injuries and Illnesses. Average annual employment numbers are from the Bureau of Labor Statistics 2008 Current Population Survey.

LIMITATIONS[17]

• The ranking of high-risk occupations may differ by state and/or industry.

• Estimates do not include the military, small farms and Federal agencies.

RECOMMENDATIONS[18]

• Identify high risk occupations that are specific to each state that may help target occupational morbidity prevention efforts.

TECHNICAL NOTES[19]

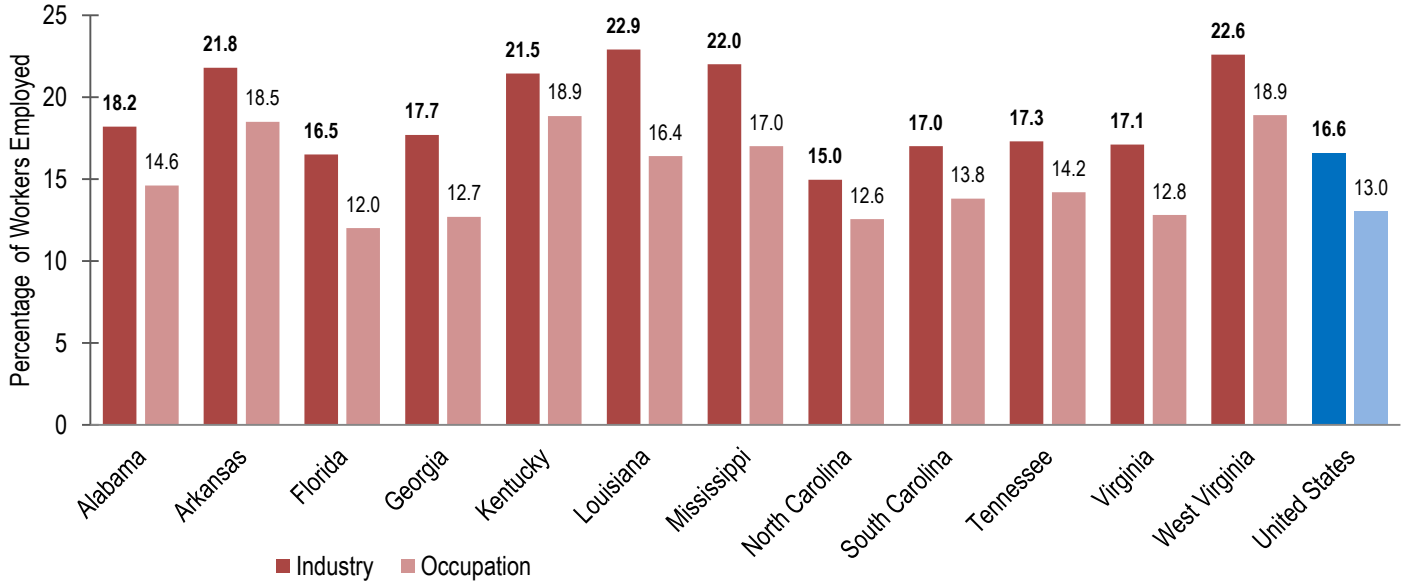
• This list of high-risk occupations will be updated every five years since over time there will be some changes to the list as occupational morbidity rates for individual occupations fluctuate. It is not anticipated that year-to-year changes will have significant effect on comparative or trend analysis.

[17] Adopted from WestON Indicators reports
[18] Adopted from WestON Indicators reports
[19] Adopted from WestON Indicators reports

Table 7. Indicator #16 Percentage of Workers Employed in Industries and Occupations at High Risk for Occupational Mortality[20]													
	AL	AR	FL	GA	KY	LA	MS	NC	SC	TN	VA	WV	US
16.1 Average number of employed persons in high mortality risk 2000 Bureau of Census industries	311,010	239,317	1,232,427	686,871	298,216	380,020	216,141	636,783	285,022	421,587	552,693	142,762	20,643,751
16.3 Number of employed persons in high mortality risk 2000 Bureau of Census occupations	250,087	203,116	896,968	494,467	262,066	270,647	166,912	534,635	230,252	346,070	412,285	119,422	16,140,941

The average number of employed persons in high mortality risk 2000 Bureau of Census industries (indicator 16.1) and number of employed persons in high mortality risk 2000 Bureau of Census occupations (indicator 16.3) for each state in the region are displayed in Table 7. The 2008 percentage of workers employed in high risk industries (indicator 16.2) and occupations (indicator 16.4) shown in Figure 7 are 15.2% among the region and 13% as the estimated US rate.

Figure 7. 2008 Percentage of Workers Employed in High Risk Industries and Occupations



[20] High risk industries and occupations were derived from the Bureau of Labor Statistics 2008 Census of Fatal Occupational Injuries. Average annual employment numbers by industry and by occupation are from the Bureau of Labor Statistics 2008 Current Population Survey.

LIMITATIONS[21]

• The ranking of high-risk occupations and industries may differ by state and/or industry.

• Suicides that take place at the workplace are considered work-related fatalities even though these deaths may not be necessarily caused by work-related factors.

• Deaths reported are for the private sector only and exclude military deaths.

RECOMMENDATIONS[22]

• Identify the risk factors that contribute to high-risk industries and occupations to develop prevention intervention strategies.

TECHNICAL NOTES[23]

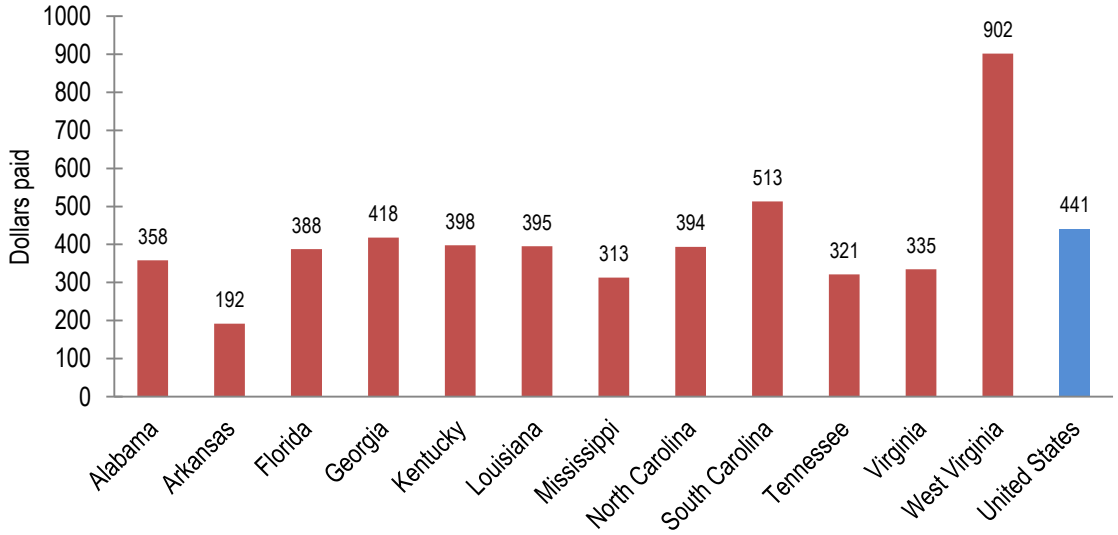
• This list of high-risk occupations will be updated every five years since over time there will be some changes to the list as occupational morbidity rates for individual occupations fluctuate. It is not anticipated that year-to-year changes will have significant effect on comparative or trend analysis.

[21] Adopted from WestON Indicators reports
[22] Adopted from WestON Indicators reports
[23] Adopted from WestON Indicators reports

Table 8. Indicator #19 Workers' Compensation Awards[24]													
	AL	AR	FL	GA	KY	LA	MS	NC	SC	TN	VA	WV	US
19.1 Total amount of workers' compensation benefits paid (in thousands $)	$648,094	$215,404	$2,787,022	$1,601,644	$696,185	$733,650	$331,508	$1,526,320	$915,014	$827,757	$1,148,354	$603,073	$57,632,944

The total amount of workers' compensation benefits paid in thousands of dollars (indicator 19.1), for each state in the region are displayed in Table 8. The 2008 average workers' compensation benefit paid per covered worker (indicator 19.2) shown in Figure 8 is $411 among the region and $441 as the estimated US rate.

Figure 8. Average Workers' Compensation Benefit Paid Per Covered Worker, 2008



[24] Source: Sengupta I, V Reno, JF Burton Jr. [2010]. Workers' Compensation: Benefits, Coverage, and Costs, 2008. Washington, DC: National Academy of Social Insurance.

LIMITATIONS[25]

• While the amount of benefits paid is an indicator of the direct cost of work-related injuries and illnesses, it does not reflect their true burden. Data do not describe the indirect burden of work-related injuries or illnesses, such as such as retraining and replacement worker costs, lost wages, administrative costs etc. In addition, not all individuals with work-related injuries and illnesses file a workers' compensation claim. Finally, several types of workers may not be covered by state worker's compensation systems, including the self-employed, corporate executives, domestic and agricultural workers, federal employees, and railroad, long shore, and maritime workers.

• There may be a lag time in reporting claims.

• Since payments are made over time, annual awards may not reflect the full cost of injuries and illnesses for that year.

• There are substantial differences between states in wages and medical costs, in workers' compensation eligibility, reimbursement, and other administrative regulations governing workers' compensation. Therefore, differences among states in benefits paid could be due to a variety factors other than injury and illness incidence. For this reason, this occupational health indicator should be used to monitor trends within states over time rather than to compare states.

RECOMMENDATIONS[26]

• Report details of awards, including industry, occupation and cost to employer to target prevention efforts and further describe the economic burden of occupational injuries and illnesses.

[25] Adopted from WestON Indicators reports
[26] Adopted from WestON Indicators reports

DISCUSSION

Comparison of data across states needs to be done with caution as many factors influence the counts and rates of occupational injury and illness. Differences in state workers' compensation programs, number of days of lost work before a claim is eligible, eligible conditions, state or federal OSHA plan, participation in ABLES, SOII, and other systematic differences limit comparison across states. For this reason, occupational health indicators are most helpful in monitoring trends within states over time rather than to compare states.

This report serves as the baseline data for a partial list of the occupational health indicators for each of the SouthON states. The authors hope that all the SouthON states will begin to collect baseline data for indicators unavailable for this report and continue to collect data for the indicators used in this report to monitor trends. This can help each of the states respond to occupational health threats, and prioritizes occupational health issues that are state-specific. The Occupational Health Indicators in Colorado published in 2010 provides a good example that we hope each of the states will model after [2]. Collecting and analyzing data on workplace injuries and illnesses will guide the development of new and safer technologies, educational activities, and policy changes that make workplaces healthier.

APPENDICES

Appendix A: References

1. Council of State and Territorial Epidemiologists (CSTE), Occupational Health Indicators: A Guide for Tracking Occupational Health Conditions and their Determinants, 2011, http://www.cste.org/dnn/ProgramsandActivities/OccupationalHealth/OccupationalHealthIndicators/tabid/85/Default.aspx
2. Colorado Department of Public Health and Environment, Occupational Health Indicators in Colorado, March 2010. http://www.cdphe.state.co.us/dc/oh/OHIs%20Colorado.pdf
3. Putting Data to Work: Occupational Health Indicators from Thirteen Pilot States for 2000, October 2005. http://www.cste.org/pdffiles/newpdffiles/CSTE_OHI.pdf
4. Occupational Health Indicators in Colorado: A Baseline Health Assessment (2001-2005), October 2008. http://www.cdphe.state.co.us/dc/oh/MAPERC_OHI%20Colorado_2001-2005.pdf
5. Occupational Health Indicators in Wyoming: A Baseline Health Assessment (2001-2005), October 2008. http://www.cste.org/dnn/Portals/0/WY%20OHI%20Report_FINAL.pdf

Appendix B: State Demographic Profiles

Alabama Employment Demographics			
Employed persons			2,061,554
P1. Percentage of civilian workforce unemployed			5.0%
P2. Percentage of civilian employment self-employed			8.8%
P3. Percentage of civilian employment in part-time jobs			15.2%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			29.5%
40 hours			47.5%
41+ hours			23.0%
P5. Percentage of civilian employment by sex			
Males			52.5%
Females			47.5%
P6. Percentage of civilian employment by age group			
16 to 17			1.1%
18 to 64			94.0%
65+			4.9%
P7. Percentage of civilian employment by race			
White			74.0%
Black			23.2%
Other			2.9%
P8. Percentage of civilian employment by Hispanic origin			4.0%
P9. Percentage of civilian employment by industry			
Mining	0.6%	Financial activities	6.7%
Construction	8.0%	Professional and health services	9.1%
Manufacturing: Durable Goods	8.3%	Leisure and hospitality	21.4%
Manufacturing: Nondurable Goods	5.3%	Other services	6.7%
Wholesale and retail trade	15.6%	Public administration	5.3%
Transportation and utilities	4.2%	Agriculture	5.8%
Information	2.0%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	12.3%	Farming, fishing, and forestry	0.3%
Professional and related occupations	19.4%	Construction and extraction	6.6%
Service	15.1%	Installation, maintenance, and repair	4.1%
Sales and related occupations	11.4%	Production	9.5%
Office and administrative support	14.4%	Transportation and moving	7.1%

Arkansas Employment Demographics			
Employed persons			1,302,840
P1. Percentage of civilian workforce unemployed			5.3%
P2. Percentage of civilian employment self-employed			11.9%
P3. Percentage of civilian employment in part-time jobs			15.3%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			30.9%
40 hours			45.1%
41+ hours			24.1%
P5. Percentage of civilian employment by sex			
Males			52.4%
Females			47.6%
P6. Percentage of civilian employment by age group			
16 to 17			1.2%
18 to 64			95.1%
65+			3.7%
P7. Percentage of civilian employment by race			
White			83.0%
Black			13.5%
Other			3.5%
P8. Percentage of civilian employment by Hispanic origin			4.8%
P9. Percentage of civilian employment by industry			
Mining	0.8%	Financial activities	4.8%
Construction	7.8%	Professional and health services	6.1%
Manufacturing: Durable Goods	7.9%	Leisure and hospitality	22.8%
Manufacturing: Nondurable Goods	7.3%	Other services	6.5%
Wholesale and retail trade	16.2%	Public administration	3.9%
Transportation and utilities	6.1%	Agriculture	3.7%
Information	2.3%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	13.2%	Farming, fishing, and forestry	1.7%
Professional and related occupations	18.6%	Construction and extraction	7.2%
Service	14.0%	Installation, maintenance, and repair	4.4%
Sales and related occupations	10.8%	Production	9.5%
Office and administrative support	13.1%	Transportation and moving	7.5%

Florida Employment Demographics			
Employed persons			8,618,000
P1. Percentage of civilian workforce unemployed			6.1%
P2. Percentage of civilian employment self-employed			5.4%
P3. Percentage of civilian employment in part-time jobs			15.3%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			29.1%
40 hours			48.5%
41+ hours			22.3%
P5. Percentage of civilian employment by sex			
Males			52.9%
Females			47.1%
P6. Percentage of civilian employment by age group			
16 to 17			1.0%
18 to 64			94.0%
65+			5.0%
P7. Percentage of civilian employment by race			
White			81.6%
Black			14.3%
Other			4.0%
P8. Percentage of civilian employment by Hispanic origin			21.2%
P9. Percentage of civilian employment by industry			
Mining	0.1%	Financial activities	8.2%
Construction	8.8%	Professional and health services	12.8%
Manufacturing: Durable Goods	4.1%	Leisure and hospitality	19.4%
Manufacturing: Nondurable Goods	1.7%	Other services	10.1%
Wholesale and retail trade	15.9%	Public administration	5.7%
Transportation and utilities	5.5%	Agriculture	5.1%
Information	2.2%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	15.6%	Farming, fishing, and forestry	0.3%
Professional and related occupations	19.3%	Construction and extraction	6.5%
Service	18.3%	Installation, maintenance, and repair	3.8%
Sales and related occupations	13.0%	Production	3.7%
Office and administrative support	14.0%	Transportation and moving	5.3%

Georgia Employment Demographics			
Employed persons			4,569,000
P1. Percentage of civilian workforce unemployed			6.4%
P2. Percentage of civilian employment self-employed			6.1%
P3. Percentage of civilian employment in part-time jobs			14.7%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			28.7%
40 hours			45.8%
41+ hours			25.5%
P5. Percentage of civilian employment by sex			
Males			53.7%
Females			46.3%
P6. Percentage of civilian employment by age group			
16 to 17			0.9%
18 to 64			96.0%
65+			3.1%
P7. Percentage of civilian employment by race			
White			68.2%
Black			27.3%
Other			4.5%
P8. Percentage of civilian employment by Hispanic origin			7.4%
P9. Percentage of civilian employment by industry			
Mining	0.1%	Financial activities	7.2%
Construction	8.7%	Professional and health services	11.4%
Manufacturing: Durable Goods	6.2%	Leisure and hospitality	20.0%
Manufacturing: Nondurable Goods	4.6%	Other services	7.7%
Wholesale and retail trade	14.1%	Public administration	4.6%
Transportation and utilities	6.5%	Agriculture	5.2%
Information	2.9%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	16.3%	Farming, fishing, and forestry	0.4%
Professional and related occupations	21.1%	Construction and extraction	6.2%
Service	14.6%	Installation, maintenance, and repair	3.8%
Sales and related occupations	11.9%	Production	6.0%
Office and administrative support	13.3%	Transportation and moving	6.4%

Kentucky Employment Demographics			
Employed persons			1,896,000
P1. Percentage of civilian workforce unemployed			6.3%
P2. Percentage of civilian employment self-employed			7.6%
P3. Percentage of civilian employment in part-time jobs			17.9%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			36.1%
40 hours			36.6%
41+ hours			27.4%
P5. Percentage of civilian employment by sex			
Males			53.6%
Females			46.4%
P6. Percentage of civilian employment by age group			
16 to 17			1.6%
18 to 64			93.6%
65+			4.9%
P7. Percentage of civilian employment by race			
White			91.6%
Black			6.3%
Other			2.1%
P8. Percentage of civilian employment by Hispanic origin			2.2%
P9. Percentage of civilian employment by industry			
Mining	1.3%	Financial activities	5.8%
Construction	6.6%	Professional and health services	7.8%
Manufacturing: Durable Goods	9.5%	Leisure and hospitality	22.6%
Manufacturing: Nondurable Goods	3.6%	Other services	8.7%
Wholesale and retail trade	13.3%	Public administration	5.2%
Transportation and utilities	6.6%	Agriculture	4.1%
Information	2.2%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	12.3%	Farming, fishing, and forestry	1.0%
Professional and related occupations	19.5%	Construction and extraction	6.3%
Service	15.8%	Installation, maintenance, and repair	4.5%
Sales and related occupations	10.7%	Production	8.5%
Office and administrative support	13.3%	Transportation and moving	8.1%

Louisiana Employment Demographics			
Employed persons			1,981,000
P1. Percentage of civilian workforce unemployed			5.0%
P2. Percentage of civilian employment self-employed			6.0%
P3. Percentage of civilian employment in part-time jobs			13.4%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			29.0%
40 hours			45.8%
41+ hours			25.2%
P5. Percentage of civilian employment by sex			
Males			52.4%
Females			47.6%
P6. Percentage of civilian employment by age group			
16 to 17			1.1%
18 to 64			94.5%
65+			3.7%
P7. Percentage of civilian employment by race			
White			71.1%
Black			26.8%
Other			2.1%
P8. Percentage of civilian employment by Hispanic origin			3.2%
P9. Percentage of civilian employment by industry			
Mining	4.5%	Financial activities	7.0%
Construction	8.2%	Professional and health services	8.7%
Manufacturing: Durable Goods	3.7%	Leisure and hospitality	23.6%
Manufacturing: Nondurable Goods	4.9%	Other services	8.4%
Wholesale and retail trade	14.2%	Public administration	4.6%
Transportation and utilities	5.8%	Agriculture	3.8%
Information	1.9%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	13.0%	Farming, fishing, and forestry	0.1%
Professional and related occupations	20.3%	Construction and extraction	7.6%
Service	17.4%	Installation, maintenance, and repair	4.3%
Sales and related occupations	11.1%	Production	6.3%
Office and administrative support	12.5%	Transportation and moving	6.9%

Mississippi Employment Demographics			
Employed persons			1,228,543
P1. Percentage of civilian workforce unemployed			6.8%
P2. Percentage of civilian employment self-employed			11.1%
P3. Percentage of civilian employment in part-time jobs			15.5
P4. Percentage of civilian employment by number of hours worked			
<40 hours			29.9%
40 hours			48.2%
41+ hours			21.9%
P5. Percentage of civilian employment by sex			
Males			51.9%
Females			48.1%
P6. Percentage of civilian employment by age group			
16 to 17			1.4%
18 to 64			93.9%
65+			4.8%
P7. Percentage of civilian employment by race			
White			66.8%
Black			31.5%
Other			1.8%
P8. Percentage of civilian employment by Hispanic origin			3.5%
P9. Percentage of civilian employment by industry			
Mining	0.9%	Financial activities	4.1%
Construction	7.8%	Professional and health services	5.3%
Manufacturing: Durable Goods	10.4%	Leisure and hospitality	24.9%
Manufacturing: Nondurable Goods	3.9%	Other services	7.9%
Wholesale and retail trade	13.2%	Public administration	5.2%
Transportation and utilities	6.2%	Agriculture	6.0%
Information	1.5%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	11.3%	Farming, fishing, and forestry	1.3%
Professional and related occupations	19.4%	Construction and extraction	6.8%
Service	16.6%	Installation, maintenance, and repair	4.2%
Sales and related occupations	9.3%	Production	9.9%
Office and administrative support	13.9%	Transportation and moving	7.4%

North Carolina Employment Demographics			
Employed persons			4,258,000
P1. Percentage of civilian workforce unemployed			6.37%
P2. Percentage of civilian employment self-employed			6.83%
P3. Percentage of civilian employment in part-time jobs			14.11%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			31.83%
40 hours			42.19%
41+ hours			25.96%
P5. Percentage of civilian employment by sex			
Males			52.65%
Females			47.35%
P6. Percentage of civilian employment by age group			
16 to 17			1.25%
18 to 64			94.52%
65+			4.23%
P7. Percentage of civilian employment by race			
White			75.29%
Black			19.86%
Other			4.85%
P8. Percentage of civilian employment by Hispanic origin			6.34%
P9. Percentage of civilian employment by industry			
Mining	0.2%	Financial activities	6.3%
Construction	9.1%	Professional and health services	9.3%
Manufacturing: Durable Goods	6.6%	Leisure and hospitality	23.2%
Manufacturing: Nondurable Goods	5.1%	Other services	9.3%
Wholesale and retail trade	14.1%	Public administration	5.1%
Transportation and utilities	4.4%	Agriculture	4.0%
Information	2.1%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	14.4%	Farming, fishing, and forestry	11.9%
Professional and related occupations	21.1%	Construction and extraction	0.6%
Service	16.8%	Installation, maintenance, and repair	7.1%
Sales and related occupations	11.0%	Production	4.0%
Office and administrative support	14.4%	Transportation and moving	7.1%

South Carolina Employment Demographics			
Employed persons			1,992,166
P1. Percentage of civilian workforce unemployed			6.8%
P2. Percentage of civilian employment self-employed			10.2%
P3. Percentage of civilian employment in part-time jobs			16.7%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			31.3%
40 hours			44.1%
41+ hours			24.6%
P5. Percentage of civilian employment by sex			
Males			51.8%
Females			48.2%
P6. Percentage of civilian employment by age group			
16 to 17			1.6%
18 to 64			94.3%
65+			4.1%
P7. Percentage of civilian employment by race			
White			73.2%
Black			24.7%
Other			2.1%
P8. Percentage of civilian employment by Hispanic origin			3.4%
P9. Percentage of civilian employment by industry			
Mining	0.2%	Financial activities	5.8%
Construction	8.7%	Professional and health services	9.3%
Manufacturing: Durable Goods	8.2%	Leisure and hospitality	19.8%
Manufacturing: Nondurable Goods	6.2%	Other services	10.1%
Wholesale and retail trade	14.6%	Public administration	4.5%
Transportation and utilities	5.6%	Agriculture	4.3%
Information	2.1%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	13.4%	Farming, fishing, and forestry	0.5%
Professional and related occupations	19.7%	Construction and extraction	6.2%
Service	16.6%	Installation, maintenance, and repair	4.9%
Sales and related occupations	11.1%	Production	9.2%
Office and administrative support	12.9%	Transportation and moving	5.7%

Tennessee Employment Demographics			
Employed persons			2,846,612
P1. Percentage of civilian workforce unemployed			6.6%
P2. Percentage of civilian employment self-employed			11.6%
P3. Percentage of civilian employment in part-time jobs			16.2%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			31.8%
40 hours			43.4%
41+ hours			24.8%
P5. Percentage of civilian employment by sex			
Males			53.4%
Females			46.6%
P6. Percentage of civilian employment by age group			
16 to 17			90.0%
18 to 64			94.9%
65+			4.1%
P7. Percentage of civilian employment by race			
White			82.4%
Black			15.0%
Other			2.7%
P8. Percentage of civilian employment by Hispanic origin			3.7%
P9. Percentage of civilian employment by industry			
Mining	20.0%	Financial activities	6.8%
Construction	8.0%	Professional and health services	8.5%
Manufacturing: Durable Goods	7.7%	Leisure and hospitality	21.3%
Manufacturing: Nondurable Goods	4.9%	Other services	8.9%
Wholesale and retail trade	14.2%	Public administration	4.8%
Transportation and utilities	7.1%	Agriculture	4.4%
Information	2.1%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	13.5%	Farming, fishing, and forestry	0.3%
Professional and related occupations	18.4%	Construction and extraction	7.4%
Service	17.1%	Installation, maintenance, and repair	3.9%
Sales and related occupations	11.7%	Production	7.8%
Office and administrative support	12.7%	Transportation and moving	7.3%

Virginia Employment Demographics			
Employed persons			3,993,877
P1. Percentage of civilian workforce unemployed			4.0%
P2. Percentage of civilian employment self-employed			10.4%
P3. Percentage of civilian employment in part-time jobs			16.1%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			31.0%
40 hours			44.2%
41+ hours			24.9%
P5. Percentage of civilian employment by sex			
Males			51.9%
Females			48.1%
P6. Percentage of civilian employment by age group			
16 to 17			1.4%
18 to 64			94.5%
65+			4.1%
P7. Percentage of civilian employment by race			
White			74.5%
Black			18.1%
Other			7.5%
P8. Percentage of civilian employment by Hispanic origin			6.3%
P9. Percentage of civilian employment by industry			
Mining	0.2%	Financial activities	7.1%
Construction	8.6%	Professional and health services	13.5%
Manufacturing: Durable Goods	4.2%	Leisure and hospitality	19.8%
Manufacturing: Nondurable Goods	3.0%	Other services	9.0%
Wholesale and retail trade	13.2%	Public administration	5.2%
Transportation and utilities	5.1%	Agriculture	7.5%
Information	2.4%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	18.4%	Farming, fishing, and forestry	0.6%
Professional and related occupations	24.5%	Construction and extraction	5.9%
Service	14.6%	Installation, maintenance, and repair	3.3%
Sales and related occupations	10.6%	Production	4.4%
Office and administrative support	12.4%	Transportation and moving	5.4%

West Virginia Employment Demographics			
Employed persons			785,600
P1. Percentage of civilian workforce unemployed			4.2%
P2. Percentage of civilian employment self-employed			6.8%
P3. Percentage of civilian employment in part-time jobs			15.8%
P4. Percentage of civilian employment by number of hours worked			
<40 hours			31.3%
40 hours			43.5%
41+ hours			25.2%
P5. Percentage of civilian employment by sex			
Males			53.8%
Females			46.2%
P6. Percentage of civilian employment by age group			
16 to 17			1.3%
18 to 64			95.1%
65+			3.6%
P7. Percentage of civilian employment by race			
White			95.5%
Black			3.2%
Other			1.4%
P8. Percentage of civilian employment by Hispanic origin			0.3%
P9. Percentage of civilian employment by industry			
Mining	4.8%	Financial activities	5.1%
Construction	7.9%	Professional and health services	6.9%
Manufacturing: Durable Goods	4.8%	Leisure and hospitality	25.5%
Manufacturing: Nondurable Goods	2.6%	Other services	7.5%
Wholesale and retail trade	15.2%	Public administration	4.4%
Transportation and utilities	5.4%	Agriculture	7.2%
Information	2.0%		
P10. Percentage of civil employment by occupation			
Management, business, and financial operations	10.4%	Farming, fishing, and forestry	0.7%
Professional and related occupations	18.9%	Construction and extraction	9.0%
Service	17.5%	Installation, maintenance, and repair	4.3%
Sales and related occupations	11.3%	Production	5.3%
Office and administrative support	14.4%	Transportation and moving	8.3%