



Safety: It Starts Between the Ears April 23, 2009

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Topics

- Who we are and what we do in Research & Planning
- Fatal & nonfatal work-related injury statistics
 - U.S.
 - Wyoming
- Relationship of injuries to tenure, age, and turnover
- The people behind the numbers
- Discussion



Getting to Know Research & Planning

[Our Organization](#)

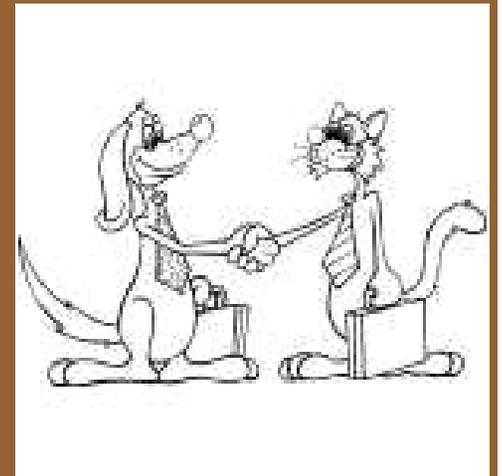
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[What We Do](#)

R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards.

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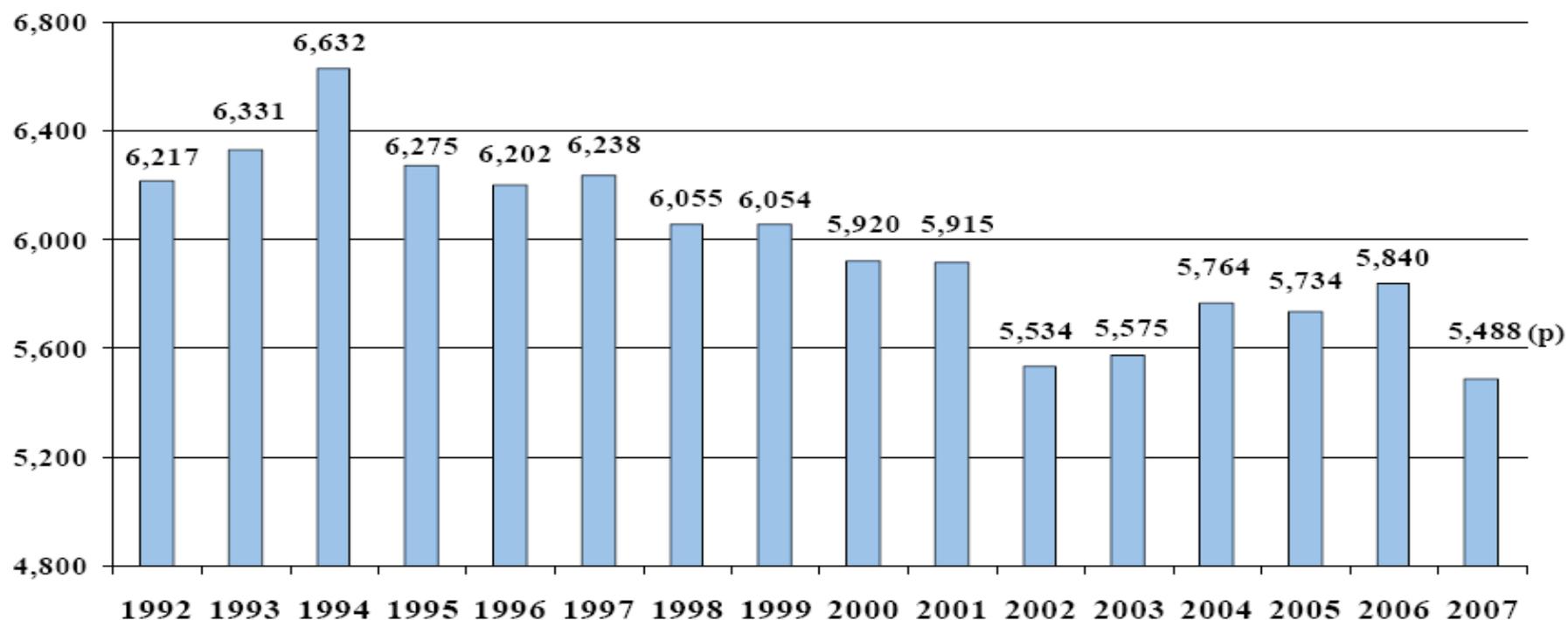
LMI makes the labor market more efficient by providing the public and the public's representatives with the basis for informed decision making.



By the Numbers

U.S. Fatal Work-Related Injuries

Number of fatal work injuries, 1992–2007



The 2007 preliminary count of 5,488 work-related fatalities represented a 6 percent decrease from the revised total of 5,840 fatal work injuries reported for 2006.

p = Preliminary

NOTE: Data from 2001 exclude fatalities resulting from the September 11 terrorist attacks.

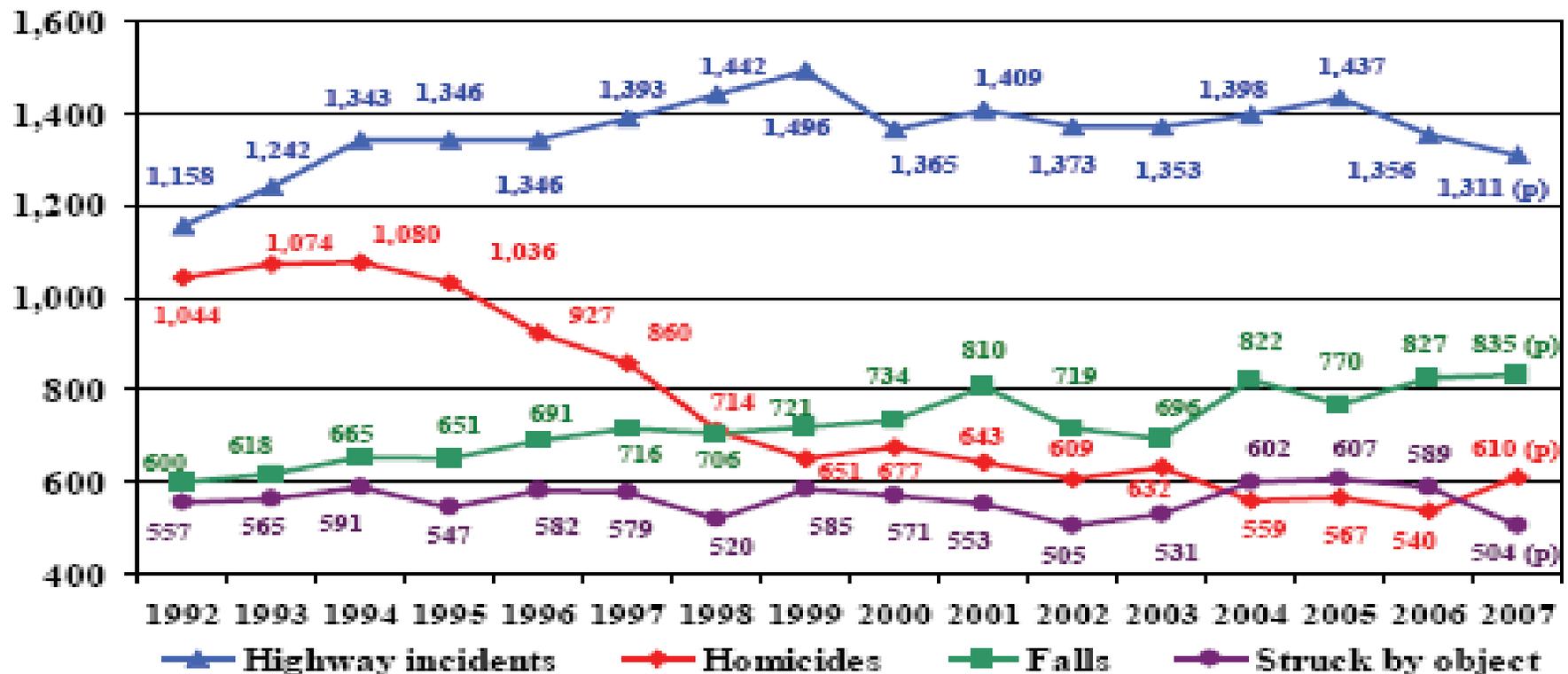
SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2008

By the Numbers

U.S. Fatal Work-Related Injuries

Four most frequent work-related fatal events, 1992–2007

Number of fatalities



p = Preliminary

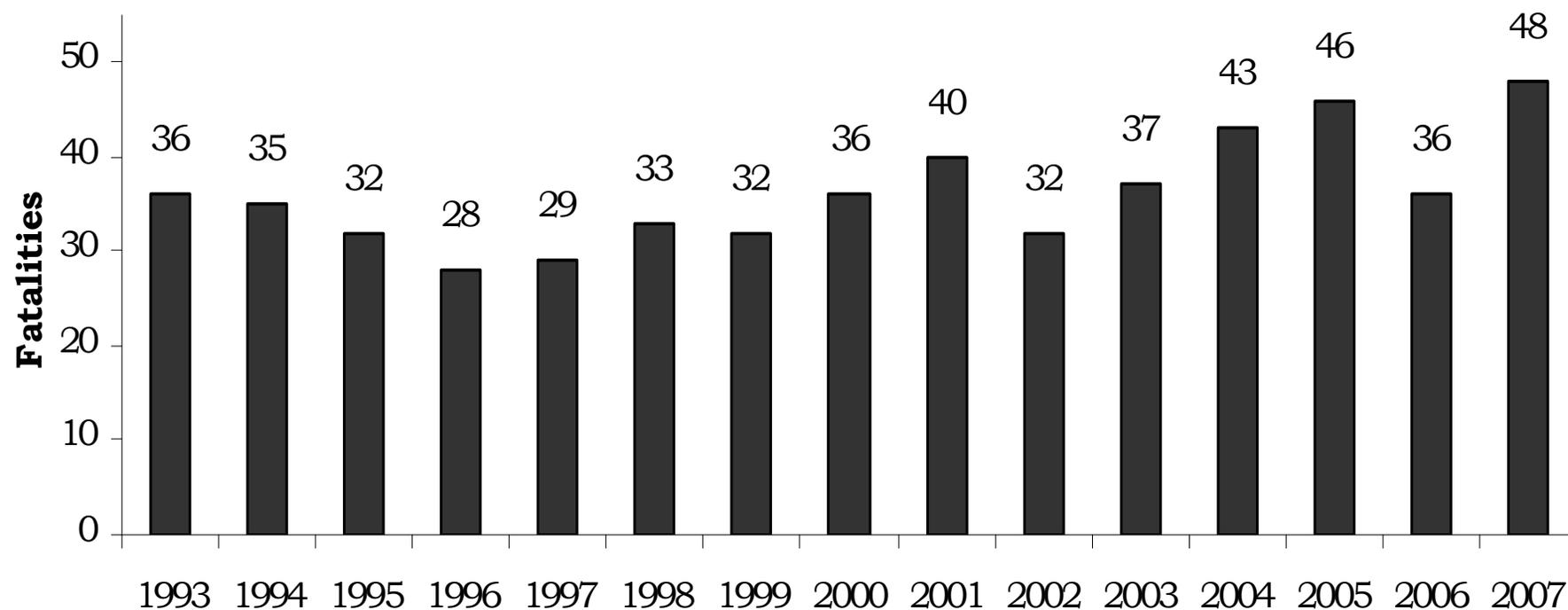
NOTE: Data from 2001 exclude fatalities resulting from the September 11 terrorist attacks.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2008

By the Numbers

Wyoming Fatal Work-Related Injuries

Figure: Wyoming Occupational Fatalities, 1993-2007



Source: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, in cooperation with state and federal agencies.

By the Numbers

Wyoming Fatal Work-Related Injuries

Table 1: Wyoming Occupational Fatalities by Event or Exposure, 2007

Event or Exposure ^a	N ^b	% of Total Fatalities	Net Change From 2006	% Change from 2006
Transportation Accidents	34	70.8%	11	47.8%
Highway Accident	22	45.8%	3	15.8%
Collision between vehicles, mobile equipment	3	6.3%	-5	-62.5%
Vehicle struck object on side of road	6	12.5%	3	100.0%
Nonhighway accident, except rail, air, water	4	8.3%	ND	ND
Aircraft accident	6	12.5%	ND	ND
Contact with Objects & Equipment	7	14.6%	0	0.0%
Struck by object or equipment	3	6.3%	ND	ND
Caught in or compressed by equipment or objects	4	8.3%	-1	-20.0%
Exposure to Harmful Substances or Environments	3	6.3%	ND	ND
All Other Events & Exposures	4	8.3%	-2	-33.3%
Total	48	100.0%	12	33.3%

^aBased on the 1992 Bureau of Labor Statistics Injury and Illness Classification Manual.

^bTotals for major categories may include subcategories not shown separately.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, in cooperation with state and federal agencies.

ND: Not disclosable due to confidentiality of data.

Wyoming Fatal Highway Injuries: Comparison of Work-Related Highway Deaths and Highway Deaths Generally

Table: Wyoming Work-Related Fatalities Due to Highway Incidents and Total Wyoming Highway Fatalities, 1993-2007

Year	Work-Related Fatalities Due to Highway Accidents		All Wyoming Highway Fatalities	
	Number of Fatalities	% of Total Fatalities	Total Fatalities	Work-Related Fatalities as % of Total Fatalities
1993	11	30.6%	120	9.2%
1994	11	31.4%	144	7.6%
1995	11	34.4%	170	6.5%
1996	ND	ND	143	ND
1997	7	24.1%	137	5.1%
1998	16	48.5%	154	10.4%
1999	12	37.5%	189	6.3%
2000	11	30.6%	152	7.2%
2001	17	42.5%	186	9.1%
2002	12	37.5%	176	6.8%
2003	20	54.1%	165	12.1%
2004	25	58.1%	164	15.2%
2005	17	37.0%	170	10.0%
2006	19	52.8%	195	9.7%
2007	22	45.8%	149	14.8%

ND - Not disclosable due to confidentiality of data.

Sources: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries in cooperation with state and federal agencies; and Wyoming Department of Transportation, Highway Safety Program. (2007, February). *Wyoming Fatal Crash Fast Facts*. Retrieved April 17, 2009, from

<http://dot.state.wy.us/webdav/site/wydot/users/SJLUCERO/public/Fatal%20Fast%20Facts/2007%20Fatal%20Traffic%20Crash%20Fast%20Facts.pdf>



Why Do So Many Die on Wyoming's Highways?

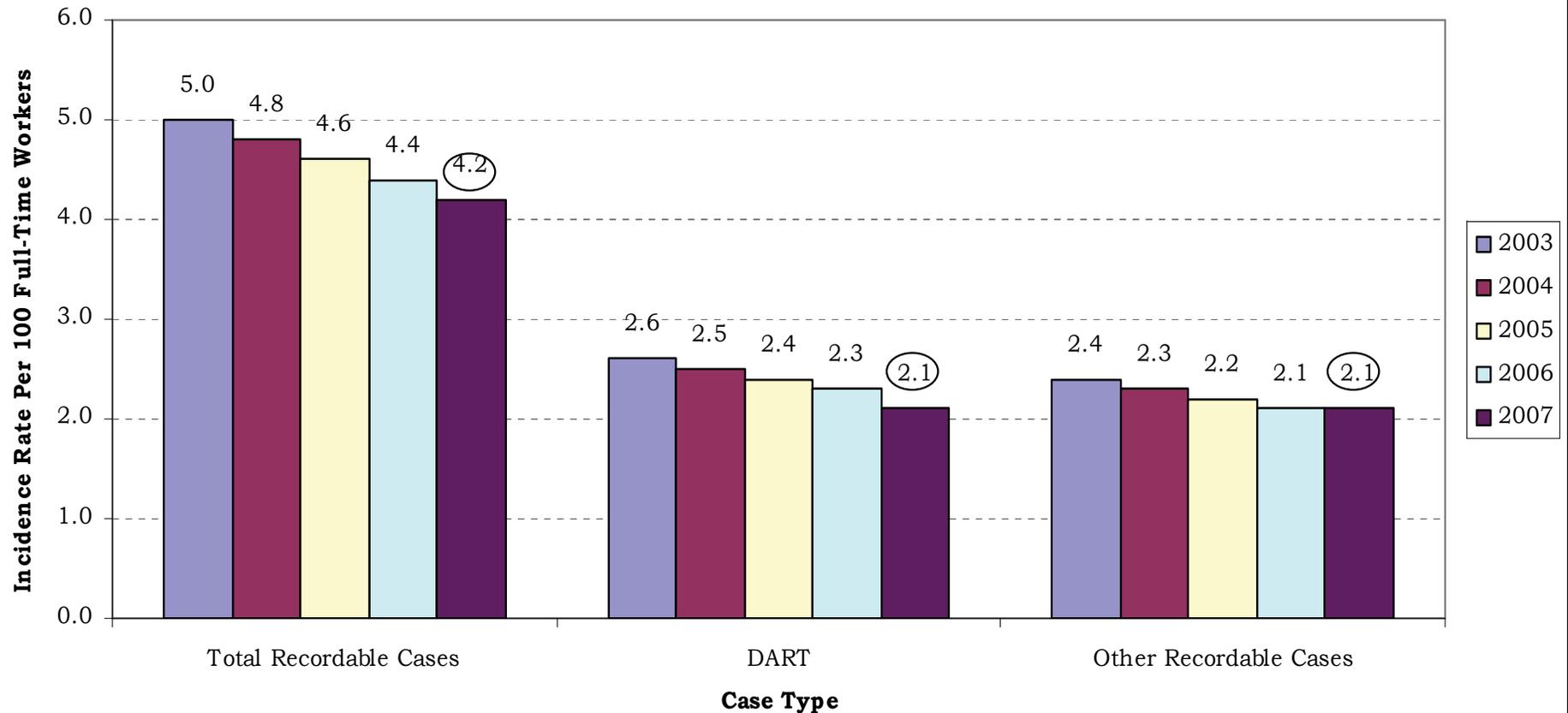
- A significant percentage of drivers and passengers aren't wearing their seat belts.
- Wyomingites drive more on average than anyone else in the country.
- Drinking and driving.
- Distractions.
- Swerving to avoid animals.
- Types of vehicles driven.
 - Of the 128 deaths in 2007 on Wyoming highways, 52% were in light pickup trucks and light utility trucks
- Long distances to medical care.
- Surprising fact: the majority of highway fatalities occur on dry roads.



Sources: Matteson, C. (2007, February 11). Over and over again. *Casper Star Tribune*. Retrieved March 13, 2007, from http://www.casperstartribune.net/articles/2007/02/11/news/top_story/673da102888aded08725727e00267929.txt ; Wyoming Dept. of Transportation. (2007, February). *Wyoming Fatal Crash Fast Facts*. Retrieved April 22, 2009, from http://dot.state.wy.us/webdav/site/wydot/shared/Highway_Safety/Fatal%20Fast%20Facts/2007%20Fatal%20Traffic%20Crash%20Fast%20Facts.pdf

Injuries By the Numbers

Figure: U.S. Non-Fatal Workplace Injuries and Illnesses by Selected Case Type, Private Industry, 2003-2007



DART - Days away from work, job transfer, or restrictions

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, <http://www.bls.gov/news.release/pdf/osh.pdf>

By the Numbers

U.S. and Wyoming Non-Fatal Workplace Injuries & Illnesses

Table: Wyoming and U.S. Nonfatal Occupational Injury and Illness Rates by Employment Size Class, Private Industry, 2007

Employee Size Class	Wyoming	U.S.
1 to 10	3.5	1.9
11 to 49	4.9	3.8
50 to 249	5.2	5.3
250 to 999	ND	4.7
1,000 or more	ND	4.5
All Establishments	4.6	4.2

ND - Not disclosable due to confidentiality of information

Source: U.S. Department of Labor, Bureau of Labor Statistics, Survey of Occupational Injuries and Illnesses in cooperation with participating state agencies.



Comparison of Employment by Employer Size

Table: U.S., Wyoming, and Selected States Employment by Employer Size Class, First Quarter 2007

State	Total		0 to 19 Workers		20 to 99 Workers		100 or More Workers	
	% of U.S. Firms	% of U.S. Employment	% of U.S. Firms	% of U.S. Employment	% of U.S. Firms	% of U.S. Employment	% of U.S. Firms	% of U.S. Employment
U.S. Total	100.0%	100.0%	87.9%	26.3%	10.1%	30.9%	2.0%	42.8%
Wyoming	0.3%	0.2%	90.4%	40.7%	8.6%	34.9%	1.0%	24.4%
Colorado	2.0%	1.7%	89.1%	30.4%	9.3%	33.0%	1.6%	36.6%
Idaho	0.6%	0.5%	90.1%	35.2%	8.7%	33.2%	1.2%	31.6%
Montana	0.5%	0.3%	90.9%	41.6%	8.2%	35.7%	0.9%	22.6%
Nebraska	0.6%	0.7%	87.4%	28.8%	10.7%	30.7%	1.8%	40.5%
South Dakota	0.3%	0.3%	89.1%	34.1%	9.5%	32.2%	1.5%	33.7%
Utah	0.9%	0.9%	88.0%	29.3%	10.3%	32.8%	1.7%	37.9%

Source: Rhode Island Department of Labor & Training, Labor Market Information. (n.d.). *National Employment by Size of Establishment, 2007*. Retrieved April 22, 2009, from <http://www.dlt.ri.gov/lmi/pdf/sizestate.pdf>



Comparison of U.S. and Wyoming Employment by Industry

Table: Wyoming and U.S. Employment by Industry, Second Quarter 2008

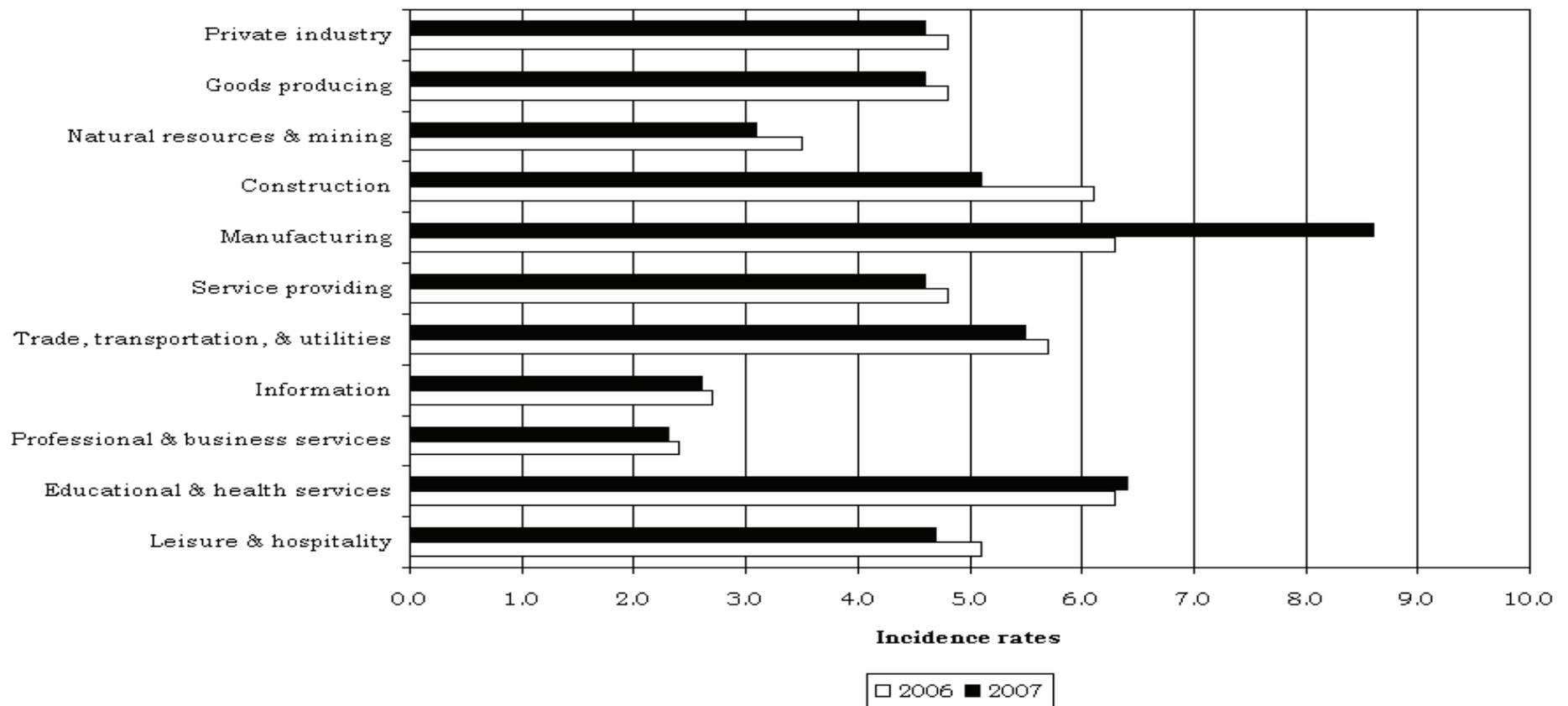
Industry	Wyoming		U.S.	
	Number	% Total Employment	Number	% Total Employment
Goods-Producing	69,108	24.0%	22,725,412	19.9%
Natural Resources & Mining	31,023	10.8%	1,925,608	1.7%
Mining	28,619	9.9%	706,493	0.6%
Construction	28,230	9.8%	2,381,247	2.1%
Manufacturing	9,855	3.4%	13,519,896	11.8%
Service-Providing	218,671	76.0%	91,424,182	80.1%
Trade, Transportation, & Utilities	53,015	18.4%	26,121,618	22.9%
Information	4,004	1.4%	3,017,669	2.6%
Financial Activities	11,624	4.0%	8,018,702	7.0%
Professional & Business Services	18,956	6.6%	17,880,527	15.7%
Education & Health Services	23,376	8.1%	17,926,937	15.7%
Leisure & Hospitality	34,856	12.1%	13,720,406	12.0%
Other Services	8,380	2.9%	4,524,651	4.0%
Government	64,460	22.4%	21,984,412	19.3%
Total	287,779	100.0%	114,149,595	100.0%

Sources: Wyoming Department of Employment, Research & Planning. (n.d.). *Wyoming Quarterly Census of Employment and Wages (QCEW)*. Retrieved April 10, 2009, from http://doe.state.wy.us/lmi/toc_202.htm; and U.S. Department of Labor, Bureau of Labor Statistics. (n.d.). *Quarterly Census of Employment and Wages*. Retrieved April 22, 2009, from <http://data.bls.gov/cgi-bin/dsrv?en>

By the Numbers

Wyoming Non-Fatal Workplace Injuries & Illnesses

Figure 3: Incidence rates per 100 full-time workers for total nonfatal occupational injuries and illnesses by major industry sector, Wyoming, 2006 & 2007

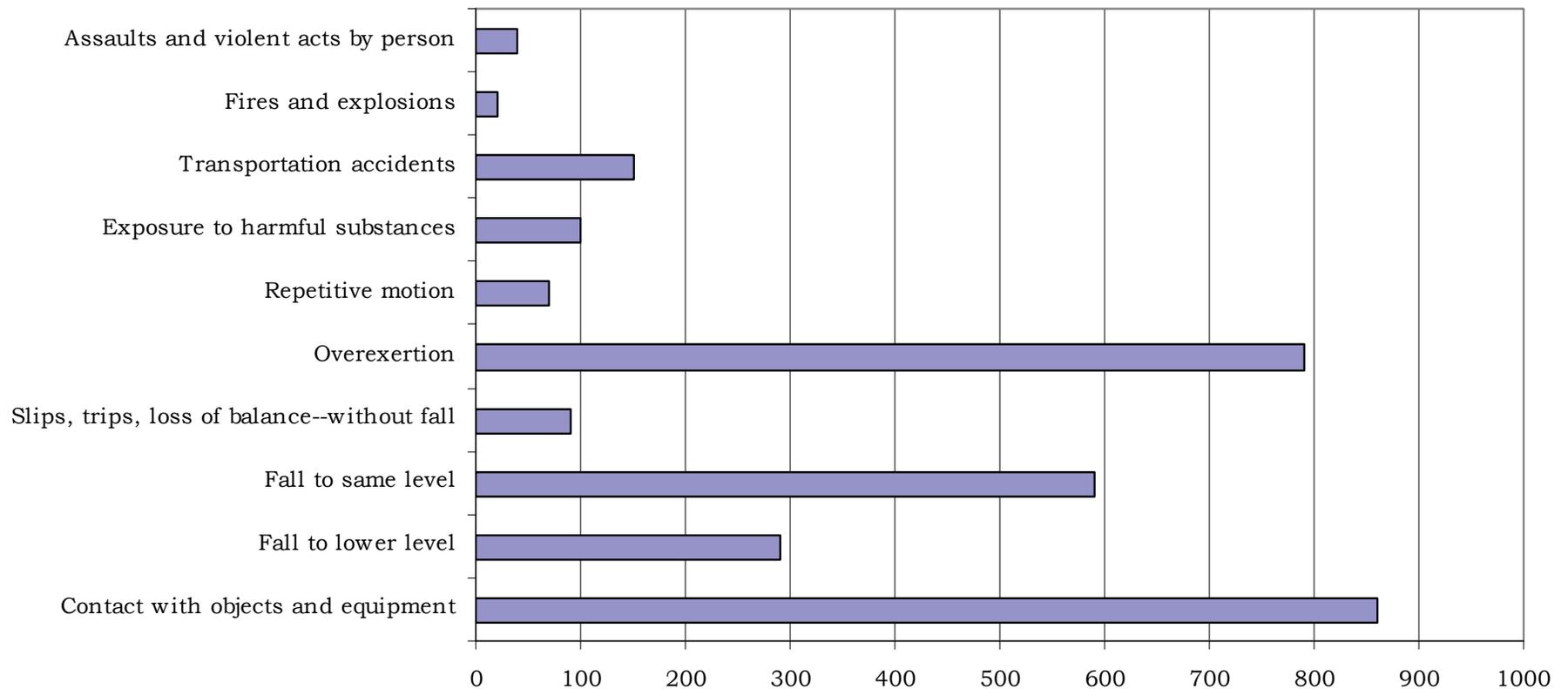


SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational 14 Injuries and Illnesses in cooperation with participating State agencies.

By the Numbers

Wyoming Non-Fatal Workplace Injuries & Illnesses

Number of Wyoming Private Industry^a Nonfatal Injuries and Illnesses Involving Days Away from Work^b by Event or Exposure, 2006



^aExcludes farms with fewer than 11 employees.

^bDays-away-from-work cases include those that result in days away from work with or without job transfer or restriction.

SOURCE: Bureau of Labor Statistics, U. S. Department of Labor, Survey of Occupational Injuries and Illnesses in cooperation with participating State agencies.

How Workplace Injuries Relate to Employee Tenure, Age, and Turnover



- Employee turnover relates to opportunities in the labor market.
 - The more the economy is expanding the greater likelihood that workers will engage in job changing.
- Shorter tenure tends to be associated with workers who are younger and/or have less education or skills.
- Lower skilled jobs are also usually more physical in nature and consequently present more risks to life and limb.

Sources: Mott, D.A. (2000, October). Pharmacist job turnover, length of service, and reasons for leaving, 1983-1997 [Abstract]. *American Journal of Health-System Pharmacy*. Retrieved February 12, 2009, from <http://www.medscape.com/viewarticle/406884-1>; Economic Trends. (1998, October). Job tenure. *Economic Trends*. Retrieved February 12, 2009, from <http://proxy.lib.wy.us/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=1320661&site=ehost-live&scope=site>; Capell, P. (1995, August). Nerds get best jobs – tough guys finish last. *American Demographics*. Retrieved February 13, 2009, from <http://proxy.lib.wy.us/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9508107516&site=ehost-live&scope=site>

Workplace Injuries, Employee Tenure, Age, and Turnover *cont'd.*

- Lower employee tenure is also linked to increased frequency of accidents.
- Tenure and employee age are strongly correlated.
- 2004 Wyoming Workers' Compensation claims data indicate that younger workers are more likely than their older colleagues to file a claim.
- **HOWEVER ...** longer tenure may lead to complacency about safety.



Sources: Rinefort, F.C., and Van Fleet, D.D. (1998, June). Work injuries and employee turnover. *American Business Review*. Retrieved February 12, 2009, from

<http://proxy.lib.wy.us/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=694992&site=ehost-live&scope=site> ; Smith, S., de Hoop, C., Marx, B., and Pine, J. (1999, March). Logging injuries in Louisiana: nature, trends, and rehabilitation considerations. *Work*. Retrieved February 12, 2009, from

<http://proxy.lib.wy.us/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=4838283&site=ehost-live&scope=site>; U.S. Department of Labor, Bureau of Labor Statistics. (2004, September 21). Employee tenure in 2004. 17

News. Retrieved February 13, 2009, from http://www.census.gov/compendia/statab/2006/labor_force_employment_earnings/



The People Behind the Numbers: Workplace Fatalities In the News

A 27-year-old Sheridan man was electrocuted while working on a coal-bed methane rig. Authorities say [the man] died Tuesday, which was his birthday. According to Johnson County Coroner Dave Harness, Brown was holding a cable that was attached to a boom, and the boom was accidentally lifted into a 14,000-volt electrical wire.

Casper Star-Tribune, 2/22/08

A 59-year-old railroad worker died that month when a rail-mounted crane he was operating fell off the tracks about 20 miles east of Gillette. A month later, another railroad worker was injured when a railway crane tipped over in Campbell County. *Gillette News-Record, June 10, 2008*

A 49-year-old man died Tuesday in a haul truck accident at a coal mine north of Gillette ... The crash happened at about 5:15 p.m. at Clovis Point coal mine off North Garner Lake Road. Two haul trucks were working in the pits removing overburden, or topsoil, when one backed into the other, Undersheriff Scott Matheny said. The cab of one of the trucks collapsed, pinning the man's legs and crushing his hips ... He was to be transferred to Wyoming Medical Center in Casper but died either before or while being airlifted, Matheny said. No one else was hurt in the crash.

Gillette News-Record, 2008



The People Behind the Numbers: Workplace Injuries In the News

CHEYENNE - A gas line explosion Tuesday morning inside the new Marriott SpringHill Suites hotel on Fox Farm Road in south Cheyenne left two people badly injured. Cheyenne Fire and Rescue spokesman Jeff Pallack said fire crews arrived at the hotel at about 8:25 a.m. with reports of a structure fire. ... [I]nvestigators later said a gas line explosion from a gas pipe resulted in the flash fire. "It looks like they were purging the system. There was a gas build-up, and some kind of ignition source blew a flash fire at these guys," Pallack said. "The fire was knocked out by 8:40 a.m. inside the furnace room, which is by the hotel's swimming pool." Two construction crew members working around the pool area got second-degree burns to their bodies as a result of the blast ... One of the men was said to have sustained severe burns to his upper extremities. The other was given morphine after suffering burns to his face, back and neck, firefighters said.

Wyoming Tribune Eagle, 2008

... His troubles began in 2005 when he went to work on a rig outside Shoshoni. One day a set of elevators came crashing down on his left foot with the weight of an old straight six-cylinder engine, splitting his toes in opposite directions.

Casper Star-Tribune, 12/29/08

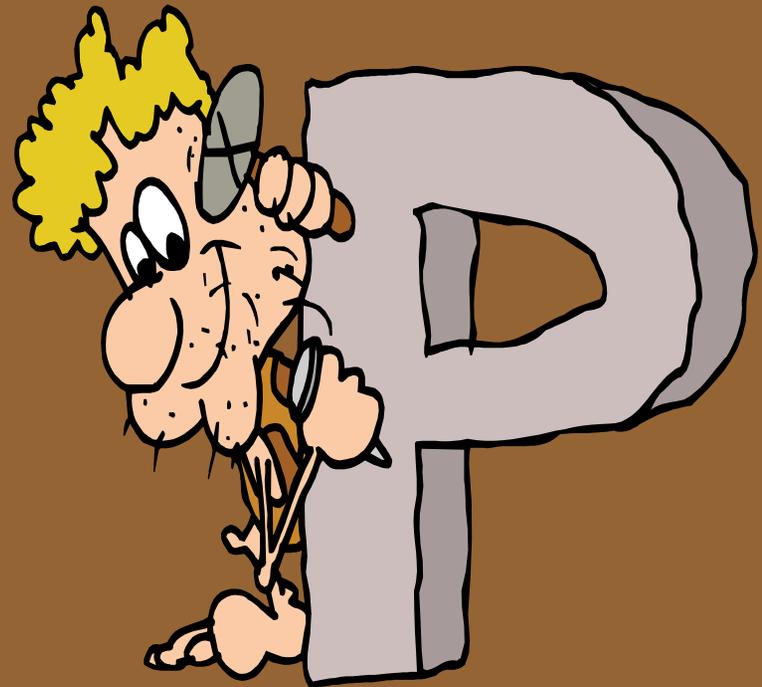
Why Do These Stories Matter?



- They attach people to the numbers
- People injured or killed on the job are not equivalent to broken or destroyed machinery
- Each one is someone's husband, wife, friend, father, mother....
- Example

Preventable Accidents Versus Bad Luck

- Most accidents, whether fatal or nonfatal, are preventable.
 - Wearing a seatbelt
 - Paying attention to hazards
 - The rule of 6 P's: Prior Planning Prevents Pathetically Poor Performance
- Sometimes it's bad luck
 - The boulder that rolls off the cliff at the exact moment you're driving under it.
 - The bridge collapse in Minnesota
- There is no such thing as zero risk
- The rule of 6 P's still applies here - control as many of the risk factors that you can



How to Show Your Employees That Safety Matters to Your Company

- Training
 - Make it relevant
 - Use humor
- Award employees for working safely
- Discipline employees who break the rules
- Listen to your employees about safety concerns
 - Don't penalize them for bringing up safety issues
- Safety inspections



Discussion



"Never talk on a cell phone while driving a forklift off a cliff."

- ✓ What are your safety pet peeves?
- ✓ How do you get employees to take responsibility for their own safety?
- ✓ What factors are within the control of employers?
- ✓ What factors are within the control of employees?
- ✓ Which factors are beyond the control of both employers and employees?

Summary

- More than 5,400 people in the U.S. die in work-related accidents every year.
- Thousands of others are injured.
- Workers die most frequently in highway accidents both in Wyoming and the U.S.
- The people in the statistics aren't just numbers.
- With some thought, the vast majority of fatal and non-fatal work-related accidents are preventable.
- Your most valuable safety resource may be your fellow employers.



Let's be safe out there

