Mom's off Work 'Cause She Got Hurt

The Economic Impact of Workplace Injuries and Illnesses in the U.S.'s Growing Low-Wage Workforce

A Policy Brief by Liz Borkowski & Celeste Monforton, DrPH, MPH • December 2012

In 2011, the Milbank Quarterly journal published an important study by health economist J. Paul Leigh of University of California Davis, who calculated that workplace injuries and illnesses cost the U.S. economy a total of $250 billion in healthcare services, lost earnings, and home production in 2007 alone.[1] We requested that he return to his data and calculate the costs imposed specifically by injuries to low-wage U.S. workers, who make up a large and growing share of the workforce. In a 2012 white paper, Leigh concluded that the more than 1.7 million injuries and illnesses suffered by low-wage workers in 2010 incurred costs of more than $39 billion. This quantitative estimate is a useful complement to qualitative knowledge about low-wage workers and the ways in which workplace injuries and illnesses impact their lives. It is the first paper of its kind examining the burden of work-related injuries and illnesses among workers in low-wage occupations.

Workplace injuries are common in low-wage occupations. Workers employed in restaurants, as hotel housekeepers, as office cleaners, and in other low-wage jobs receive burns, break bones, lose fingers or toes, are overcome by chemical fumes, and even die in the course of employment. The injuries affect workers and their families' finances as well as their physical and mental health, and low-wage workers and their families are especially vulnerable to financial crises.

The low-wage workforce: growing and vulnerable

Our nation's economic recovery continues to rely heavily on job growth in low-wage occupations,[2] and with the federal minimum wage not adjusted for inflation, more and more Americans find themselves in low-wage work. Low-wage workers account for between one-fifth and one-third of the U.S. workforce, and new job growth in the U.S. during the 2010 - 2011 recovery has occurred primarily in industries with median wages below $15 per hour.[3] The overwhelming majority of low-wage workers are adults over age 20, and their paychecks contribute substantially to their household income.[2]

Tens of millions of U.S. families are living paycheck to paycheck.[4] By the time the rent is paid, the gas tank filled or the bus pass bought, and the grocery shopping done, there's not much left. When unforeseen events occur—an abscessed tooth or a car in need of repair—there's no extra money to cover the cost. Low-wage workers are consumers at their neighborhood groceries, retailers, and service establishments, spending directly and regularly in their local economies. With consumer spending comprising 70 percent of the U.S. gross domestic product, spending by low-wage workers helps to power our economy.[2]

An on-the-job injury or illness can quickly disrupt this paycheck-to-paycheck balancing act, and have an immediate effect on a family's spending with local retailers. A serious injury at work, like a third-degree burn, amputation, or broken bone, can come with a physician's order to take a few days off of work. But a few missed shifts mean a much smaller paycheck. Paid sick leave is uncommon for low-wage workers; only 19% have a job that provides that protection.[5]

Employees might expect workers' compensation insurance to cover the cost of wages lost while recovering from an on-the-job injury, but they are often unpleasantly surprised to learn how limited these benefits are. The wage replacement benefit under most State laws doesn't kick in unless a worker needs to miss at least three to seven consecutive work shifts,[6] and employers often urge workers to return to the job before that time elapses. Moreover, workers' compensation protections are not available to all workers. Texas does not require employers to carry workers' compensation insurance, and nationally, several million farm workers and domestic workers are excluded altogether from workers' compensation[7] and other basic labor protections.[8] (See page 6 for more on the shortcomings in the workers' compensation system.)

Who is in the low-wage workforce?

In his analysis, Leigh defines low-wage occupations as those paying an annual, full-time, and median wage at or below the poverty line for a family of four. In the 48 contiguous states and the District of Columbia, the poverty line falls at $22,350; dividing that by 2,000 hours (40 hours per week, 50 weeks per year) yields an hourly rate of $11.18.

Leigh used data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages and Current Population Survey to rank more than 800 occupations by their median wage for 2010. He identified 65 occupations with median wages at or below $11.18 per hour. (See page 6.) It is important to remember that because these are the median wages, up to half of the workers in each occupation are earning less than that hourly wage.

Employment in these 65 occupations is nearly 31 million, or 22.2 percent of the total U.S. workforce of 139 million. The low-wage occupations are concentrated in service industries, in particular, retail sales, restaurants and food service, hotels and hospitality, housekeeping, and personal care. Workers in these low-wage occupations make up Leigh's study population.

There is an important but unavoidable hole in these calculations. Due to data limitations, Leigh's analysis does not include the self-employed, certain workers in agriculture, or domestic workers. Although many of these workers earn less than $11.18 per hour, they are excluded because tthe Bureau of Labor Statistics does not include them in its employment or its occupational injury and illness surveys.

Top 20 Low-Wage Occupations in the U.S. by Employment, 2010

Occupation	Total Employment	Median Hourly Wage ($)
Retail Salespersons	4,270,550	10.10
Cashiers	3,314,870	9.05
Combined Food Preparation & Serving Workers, Including Fast Food	2,799,430	8.76
Waiters & Waitresses	2,289,010	8.93
Janitors & Cleaners, Except Maids & Housekeeping Cleaners	2,068,460	10.75
Stock Clerks & Order Fillers	1,782,800	10.52
Cooks, Restaurant	947,060	10.61
Home Health Aides	924,650	9.91
Maids & Housekeeping Cleaners	877,980	9.32
Personal Care Aides	820,600	9.49
Food Preparation Workers	775,140	9.27
Packers & Packagers, Hand	666,860	9.55
Childcare Workers	631,240	9.34
Bartenders	512,230	9.06
Dishwashers	504,280	8.83
Cooks, Fast Food	502,450	8.80
Counter Attendants, Cafeteria, Food Concession, & Coffee Shop	441,830	8.90
Helpers—Production Workers	420,910	10.83
Counter & Rental Clerks	420,070	10.93
Cooks, Institution & Cafeteria	396,970	10.92
Total (represents 82% of employment in the 65 low-wage occupations)	**25,367,390**	

Injuries and illnesses in the low-wage workforce

Public health and worker safety advocates have long criticized the fragmented programs in the U.S. to track work-related injuries and illnesses. The federal government's system relies on a voluntary survey of businesses, and many employers are exempt from it. State-based workers' compensation systems provide another source of data, but studies show that as many as 53 percent of non-fatal injuries are not accounted for in the insurers' data.[9] Neither the federal government's survey nor workers' compensation systems adequately capture data on occupational disease deaths, which often develop years after occupational exposures occur and may be diagnosed by physicians unaware of patients' work histories.

In his analyses of costs associated with occupational injuries and illnesses, Leigh uses data from a variety of sources on occupations, wages, work-related injury counts, portions of disease cases attributable to occupational exposures, cost-of-injury estimates, and estimated productivity losses. Sources of data include the U.S. Department of Labor's Bureau of Labor Statistics and Office of Workers' Compensation Programs; the National Council of Compensation Insurance; and the Agency for Healthcare Research and Quality. Leigh's analysis adjusts for under-reporting of cases by employers and employees.[10] It also attributes fractions of specific diseases to occupational exposures. For example, all cases of coal workers' pneumoconiosis (black lung) are considered work-related, while only about 3 percent of leukemia diagnoses, between 3-19 percent of bladder cancer cases, and 5 percent of tuberculosis cases are attributed to occupational exposures.[11]

The estimated number of work-related fatalities, illnesses, and injuries experienced by workers in low-wage occupations in 2010 exceeds 1.72 million (Table I). This includes more than 1.62 million injuries, and 87,857 occupational illnesses, such as dermatitis, asthma, and chronic bronchitis.

Table I: Work-Related Injuries and Illnesses (Fatal and Nonfatal) within 65 Low-Wage Occupations, 2010

Incident Type	# of cases
Non-fatal injuries	1,625,152
Non-fatal illnesses	87,857
Fatal diseases	12,415
Fatal injuries	596
	1,726,020

Among the 1.63 million injuries, an estimated 466,315 incidents occurred among workers employed in food service, including cooks, dishwashers, and servers, and nearly 298,000 involved janitors, cleaners, maids, and housekeepers. The 596 acute fatal injuries occurred across occupations, but were most prevalent among taxi drivers, cashiers and retail clerks, and personal care aides.

Seventy-seven percent of the 1.73 million injuries and illnesses are attributed to the top 20 low-wage occupations by employment. More than 1.3 million nonfatal injuries and illnesses are estimated, including 195,961 among retail sales workers, 170,836 among janitors and cleaners, and 143,157 among maids and housekeepers. An additional 9,861 fatal injuries and illnesses are estimated for the top 20 low-wage occupations (Table II).

Table II: Estimate of Fatal and Nonfatal Injuries and Illnesses for the Top 20 Low-Wage Occupations in the U.S., 2010

SOC	Occupation	Nonfatal Injuries & Illnesses	Fatal Injuries & Illnesses
41-2031	Retail Salespersons	195,961	1,456
37-2011	Janitors & Cleaners, Except Maids & Housekeeping Cleaners	170,836	1,278
37-2012	Maids & Housekeeping Cleaners	143,157	1,046
43-5081	Stock Clerks & Order Fillers	114,374	836
35-3021	Combined Food Preparation & Serving Workers, Including Fast Food	97,739	713
41-2011	Cashiers	80,690	639
35-2014	Cooks, Restaurant	76,548	563
35-2021	Food Preparation Workers	70,336	537
35-3031	Waiters & Waitresses	59,982	441
31-1011	Home Health Aides	59,500	435
39-9021	Personal Care Aides	55,289	429
53-7064	Packers & Packagers, Hand	36,238	286
35-2012	Cooks, Institution & Cafeteria	35,824	274
35-9021	Dishwashers	27,264	202
39-9011	Childcare Workers	26,505	200
35-3011	Bartenders	18,085	135
35-3022	Counter Attendants, Cafeteria, Food Concession, & Coffee Shop	17,464	142
51-9198	Helpers—Production Workers	14,840	112
35-2011	Cooks, Fast Food	12,218	92
41-2021	Counter & Rental Clerks	5,660	45
Total:		**1,318,510**	**9,861**

SOC: Standard Occupational Classification

Costs of injuries and illnesses among low-wage workers

Workers injured or made ill on the job face a range of costs. Medical costs, which may be covered (at least in part) by insurers and employers, include costs for hospitals, clinics, physicians, diagnostic tests, and pharmaceuticals. Productivity costs include lost current and future compensation (including fringe benefits as well as wages) and "home production" activities like home repairs, cooking, cleaning, and child rearing that people are unable to perform when ill or injured. Leigh's estimate includes both medical and productivity costs.

The costs of the estimated 1.73 million injuries and illnesses among workers in the 65 low-wage occupations are substantial. For 2010, the medical costs and productivity losses total more than $39.1 billion (Table III). About 61 percent of the total costs (i.e., $23.85 billion) represent lost wages and other productivity costs, with the remaining $15.23 billion in medical care payouts.

The majority of the cases were non-fatal injury and illness incidents (i.e., 1.71 million), and for these events the productivity losses exceed $19.63 billion and medical costs reached $10.68 billion. Leigh also estimates an additional 13,011 fatal disease and injury cases with costs exceeding $9.21 billion.

While it is useful to have these cost estimates, it is important to remember that they are far lower than they would be for an employee population working similar hours at higher wages. By convention, economists calculate losses based on workers' wages. From the individual perspective, low-wage workers for whom five missed days of work means $400 of lost income are likely to experience far more financial hardship than higher-wage workers who normally earn $1,000 each week—but an economist counts the value of one lost work week at $400 for the lower-earning worker and $1,000 for the higher-earning one. Workers earning lower wages are also less likely to be able to afford paid help for the cooking, cleaning, childrearing, or other home production tasks they cannot perform while injured.

Even with this understatement in productivity cost calculations, occupational injuries and illnesses among low-wage workers cost an estimated $39.1 billion every year. This figure is comparable to the annual national cost of stroke, which is estimated at $36.6 billion, and hypertension, with a price tag of $54.0 billion.[12] We cannot put a dollar value on the financial and emotional stress that lost productivity and reduced quality of life cause workers and their families, let alone on the devastation of a death. One figure captures some of this toll, however: On average more than 4,000 workers are injured on the job every day.

We hope that having a $39 billion price figure for illnesses and injuries in low-wage workers will motivate public officials to address this problem more forcefully than they currently do. We recommend efforts to address both prevention and mitigation. Improvements in workplace health and safety can prevent injuries and illnesses from occurring in the first place. A stronger safety net can reduce the likelihood that missing a few days of work will spell missed rent payments or children going hungry.

Table III: Medical and Productivity Costs of Work-related Injuries and Illnesses among Workers in 65 Low-Wage Occupations, 2010

Incident Type	Number of Cases	Medical Costs	Productivity Costs	Total Costs
Non-fatal injuries	1,625,152	$10.11 billion	$18.23 billion	$28.34 billion
Non-fatal illnesses	87,857	$546.4 million	$985.6 million	$1.53 billion
Fatal diseases	12,415	$4.54 billion	$4.23 billion	$8.77 billion
Fatal injuries	596	$36.86 million	$404.58 million	$441.45 million
Total	**1,726,020**	**$15.23 billion***	**$23.85 billion***	**$39.1 billion***

*May not sum due to rounding.

Problems with the Workers' Compensation System

Each state runs its own workers' compensation program, which leads to substantial variation between states. Employers are generally required to carry workers' compensation insurance, but some states exempt smaller employers or employers in certain industries, and Texas does not require employers to have coverage at all.

All states require workers' compensation insurers to cover medical costs for work-related injuries. Insurers must also provide wage-replacement benefits for workers who are out of work for more than a specified number of days; this waiting period varies from three to seven days.[7] The percentage of wages that insurers must replace varies, as does the duration for which they must be paid.

States' programs use different criteria and procedures to determine which injuries and illnesses are work-related, and some have insufficient resources to process all workers' claims. When medical claims are approved, states often restrict the types of care workers can receive, the duration for which they can receive care, and the providers from whom they can get it.

The result is that some workers who are injured on the job receive prompt and sufficient care and compensation, while others get inadequate compensation or no compensation at all. Legitimate claims may be denied, or claimants may wait months or years for a decision, while their medical conditions worsen and they face financial ruin. For those whose claims are approved, medical care and wage-replacement benefits may or may not be adequate.

With so many injured workers enduring long waits and receiving inadequate benefits, the costs of work-related injuries and illnesses are pushed onto workers' families, non-workers' compensation health insurers, and taxpayer-funded programs like Medicare and Medicaid. Leigh calculates that workers' compensation carriers absorb less than 25% of the costs of occupational injuries and illnesses.

65 Occupations in U.S. with Median Wages at or below $11.18 per Hour

Ambulance Drivers & Attendants, Except EMTs
Amusement & Recreation Attendants
Automotive & Watercraft Service Attendants
Baggage Porters & Bellhops
Bartenders
Bicycle Repairers
Cashiers
Childcare Workers
Cleaners of Vehicles & Equipment
Cooks, All Other
Cooks, Fast Food
Cooks, Institution & Cafeteria
Cooks, Restaurant
Cooks, Short Order
Counter & Rental Clerks
Counter Attendants, Cafeteria, Concession, & Coffee Shop
Dining Room & Cafeteria Attendants & Bartender Helpers
Dishwashers
Door-to-Door Sales Workers, News & Street Vendors
Driver/Sales Workers
Entertainment Attendants & Related Workers, All Other
Farmworkers & Laborers, Crop, Nursery, & Greenhouse
Farmworkers, Farm, Ranch, & Aquacultural Animals
Food Preparation & Serving Related Workers, All Other
Food Preparation & Serving Workers, Including Fast Food
Food Preparation Workers
Food Servers, Non-Restaurant
Funeral Attendants
Gaming & Sports Book Writers & Runners
Gaming Dealers
Gaming Service Workers, All Other
Graders & Sorters, Agricultural Products
Hairdressers, Hairstylists, & Cosmetologists
Helpers—Production Workers
Home Health Aides
Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop
Hotel, Motel, & Resort Desk Clerks
Janitors & Cleaners, Except Maids & Housekeepers
Laundry & Dry-Cleaning Workers
Lifeguards, Ski Patrol, & Recreational Protective Service
Locker Room, Coatroom, & Dressing Room Attendants
Maids & Housekeeping Cleaners
Manicurists & Pedicurists
Meat, Poultry, & Fish Cutters & Trimmers
Models
Motion Picture Projectionists
Nonfarm Animal Caretakers
Packers & Packagers
Parking Lot Attendants
Personal Care & Service Workers, All Other
Personal Care Aides
Pharmacy Aides
Photographic Process Workers & Processing Machine Operators
Pressers, Textile, Garment, & Related Materials
Recreation Workers
Retail Salespersons
Sewing Machine Operators
Shampooers
Stock Clerks & Order Fillers
Taxi Drivers & Chauffeurs
Telemarketers
Transportation Attendants, Except Flight Attendants
Ushers, Lobby Attendants, & Ticket Takers
Veterinary Assistants & Laboratory Animal Caretakers
Waiters & Waitresses

Notes

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The authors thank J. Paul Leigh, PhD for his expert review of this policy brief and Anthony Robbins, MD, MPA for his editorial assistance.

This report was produced with funding from the Public Welfare Foundation, but the views expressed in it are those of the authors alone.

J. Paul Leigh's 2012 white paper *Numbers and Costs of Occupational Injury and Illness in Low-Wage Occupations* is available at http://defendingscience.org/low-wage-workers.

Graphic Design: TheresaWellingDesign.com