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AMERICA AT A GLANCE: OCCUPATIONAL INJURIES AMONG RURAL WORKERS

RTC:Rural
Research & Training Center
on Disability in Rural Communities

FACT SHEET

MAY 2022

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KEY POINTS

- High-injury occupations are primarily concentrated in rural areas.
- Rural workers report more occupational injuries/illnesses, and more days missed due to injuries/illnesses, than urban workers.
- High-wage occupations are more dangerous in rural areas than urban areas.
- Rural workers may be more prone to disability later in life due to working more dangerous jobs, lack of health insurance, and limited access to rehabilitation services.



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BACKGROUND



Disability is more prevalent in rural areas (1). Rural residents also report disability at rates similar to urban residents who are 10 years older, indicating that disparities in disability persist across the lifespan (2). Rural individuals also report lower rates of insurance coverage and less access to specialty medical care (e.g., rehabilitation services) (3,4). For instance, rural workers are less likely to use physical therapy services, which can lead to incomplete recovery from workplace injuries (5). Infrastructure in rural communities also tends to be more inaccessible (e.g., lack of sidewalks, limited transit, inaccessible buildings), which can create barriers to seeking services and community participation (6–8).

Recent research revealed that the rural-urban differences in disability rates are shaped by life events. For instance, Ipsen et al. (9) found that people had higher odds of experiencing mobility impairment at age 40 if they reported a broken bone in the last 10 years, reported ever being knocked unconscious, had any workplace injury in the prior 12 years, or lived in a rural area. In this report, we explore how occupation contributes to these differences.

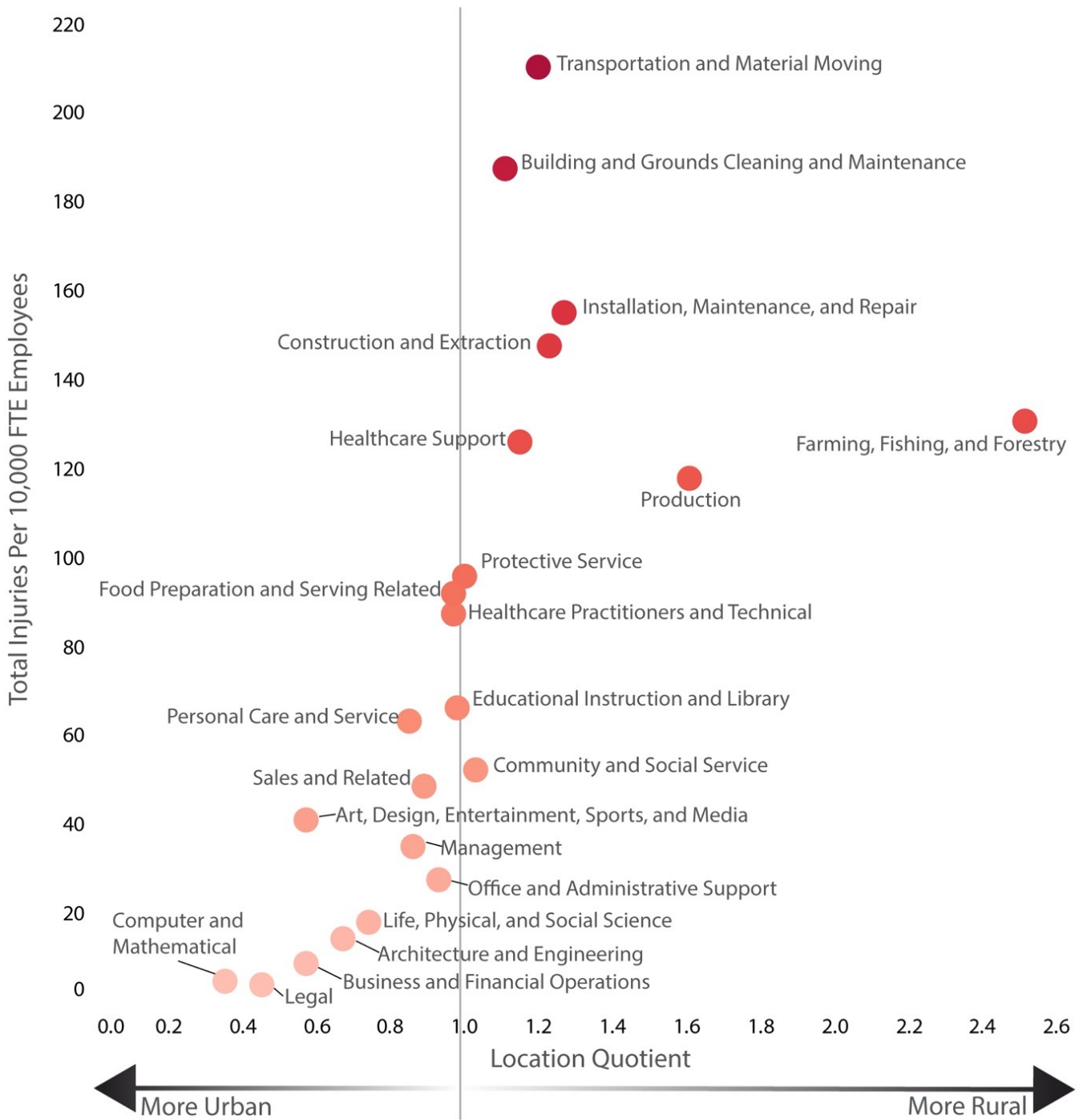
We used data from the 2019 Survey of Occupational Injury and Illness (SOII) and 2019 ACS public-use micro data obtained from IPUMS-USA (ACS) (10) to explore differences in types of occupations and workplace injuries across rural and urban areas. Specifically, we linked data about hours worked, non-metro/metro classifications (i.e., rural/urban) (11), and rates of non-fatal workplace injuries and illnesses per 10,000 full time equivalent employees (FTE).

HIGH-INJURY OCCUPATIONS ARE CONCENTRATED IN RURAL AREAS



Figure 1 shows how workplace injuries and illnesses vary by occupation and geography. Overall, rates of injuries/illnesses tend to increase with rurality. For example, workers in the most rural occupations (i.e., farming, fishing, and forestry) report 132 injuries/illnesses per 10,000 FTE over one year (2019), compared to workers in the most urban occupation (i.e. computer and mathematical) who report 5 injuries/illnesses per 10,000 FTE. Most occupations with the highest rates of injuries/illnesses, such as transportation and material moving (212/10K FTE), and building and grounds cleaning and maintenance (189/10K FTE) are also slightly more concentrated in rural areas. Occupations that are equally distributed in rural and urban areas, such as protective services, food preparation and serving, healthcare practitioners, and education, report approximately 67-97 injuries/illnesses per 10,000 FTE.

Figure 1: Occupational injuries and illnesses by geography



RURAL WORKERS REPORT MORE OCCUPATIONAL INJURIES THAN URBAN WORKERS

Based on occupational mix, urban workers expect injuries at a rate of 78.7 per 10,000 FTE, and rural workers expect injuries at a rate of 98.6 per 10,000 FTE. As such, rural workers' occupations are collectively associated with 25 percent more expected workplace injuries. The largest differences were observed in events such as fires and explosions, contact with object/equipment, overexertion, transportation incidents, and exposure to harmful substances/environments (Table 1).

Table 1. Occupational injuries/illnesses per 10K FTE by event and geography (2019)

Note: Bullets indicate parent categories.

Event type	Rural	Urban	Ratio
■ Fires and explosions	0.2	0.14	1.43
■ Contact with object or equipment	26.52	19.61	1.35
Caught or compressed by object or equipment	4.39	2.83	1.55
Struck by equipment	15.2	11.56	1.31
Struck against equipment	5.16	3.97	1.3
■ Overexertion and bodily reaction	30.96	24.18	1.28
Repetitive motion involving microtasks	2.06	1.51	1.36
Overexertion in lifting or lowering	9.71	7.63	1.27
■ Transportation incidents	5.56	4.54	1.22
Roadway incidents involving motor vehicles	3.72	3.15	1.18
■ Exposure to harmful substances or environments	3.76	3.07	1.22
■ Falls, slips, trips	26.41	22.27	1.19
Fall to lower level	5.64	4.39	1.28
Slips and trips without fall	4.28	3.51	1.22
Fall on same level	16	14	1.14
■ Violence or injuries by persons or animal	4.48	4.34	1.03
Animal and insect related incidents	1.5	1.27	1.18
Intentional injury by another person	2.09	2.12	0.99
Unintentional injury or intent unknown	0.86	0.91	0.94
■ All other events or exposures	0.7	0.54	1.3
Total cases (any event)	98.6	78.9	1.25

HIGH-WAGE OCCUPATIONS ARE MORE DANGEROUS IN RURAL AREAS

Table 2 shows injury rates across wage quintiles. People in rural areas also face higher expected injury/illness rates across all wage brackets. While injury rates decrease as income increases in both urban and rural areas, the geographical disparity is greatest among higher-wage workers, with those in rural areas experiencing far more injuries than higher-wage workers in urban. This suggests that people who want to earn higher wages in rural areas generally must accept more risk.

Table 2. Occupational injuries/illnesses per 10K FTE by wage and geography (2019)

Wage Quintile	Rural	Urban	Ratio
0-20%	100.9	91.8	1.10
Over 20-40%	102.6	98.6	1.04
Over 40-60%	100.5	89	1.13
Over 60-80%	96.4	73.3	1.32
Over 80-100%	78.1	49.4	1.58

RURAL WORKPLACE INJURIES RESULT IN MORE DAYS MISSED THAN URBAN WORKPLACE INJURIES

Table 3 shows the number of injuries/illness per 10,000 FTE by days missed in rural and urban areas. Throughout each range of days missed, rural workers tended to miss more days than urban workers. This may suggest that workplace injuries/illnesses in rural areas are more severe. This is highlighted by the ratio showing that rural workers are about 22%-29% more likely to miss days than urban workers.

Table 3. Days missed due to occupational injury/illness per 10K FTE by geography (2019)

Days missed	Rural	Urban	Ratio
1	13.2	10.8	1.22
2	10.6	8.7	1.22
3 to 5	17.1	13.9	1.23
6 to 10	11.2	8.9	1.26
11 to 20	10.6	8.3	1.28
21 to 30	6.3	4.9	1.29
31 or more	29.6	23.2	1.28

LIMITATIONS



There are several limitations to these findings. The SOII data includes non-fatal illnesses and injuries that require medical care beyond first-aid and result in at least one day away from work beyond the day of injury or onset of illness. The SOII does not include injuries to the self-employed, workers on farms with fewer than 10 employees, private household workers, postal service workers, volunteers, or federal government workers.

CONCLUSION



People in rural areas report higher rates of workplace injury. This disparity reflects the fact that rural economies differ from urban economies. Rural workers are concentrated in different occupations and in different industries. Unfortunately, the occupations and industries found in rural areas have higher rates of injury, and perhaps more severe injuries. Additionally, the disparity between rural and urban injury rates is highest among high-wage earners, indicating that rural workers incur greater risk for seeking good wages. Higher rates of occupational risk, combined with lower rates of health insurance and limited access to rehabilitation services, may contribute to higher rates of disability in rural areas.

RECOMMENDED CITATION



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FOR ADDITIONAL INFORMATION

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