



Work-Related Falls in Healthcare – Who's at Risk?

Sharla Drebit, Salomeh Shajari, Hasanat Alamgir, Shicheng Yu, Dave Keen



Slip, trip and fall (STF) incidents make up approximately 20-40% of disabling occupational injuries in developed countries [1]. In British Columbia (BC), the healthcare and social assistance sector is responsible for over 1200 time-loss compensation claims from falls each year, costing the province over \$7.5 million in claims costs [2].

Although the risk factors and costs of falls have been studied in other industries, this is the first study to examine falls across an entire healthcare sector – acute, community and long term care settings.

Given the current budgetary constraints in Canada, sustainability of most OH&S programs depends on providing sufficient return on investment through primary prevention of injuries, and the subsequent burden of disability. Thus, quantifying the costs of occupational injury is warranted.

Project Scope

This study seeks to identify the risk factors and economic burden of time-loss fall injuries using incident reporting and compensation data from a large population of healthcare workers in BC.

Methods

Falls resulting in workers' compensation over a three-year period for healthcare workers in BC were extracted from the WHITE™ Database – a standardized incident reporting database, developed by OHSAH. Merged with payroll and workers' compensation (WorkSafeBC) databases WHITE™ obtained detailed analyses stratified by independent variables (age, gender, occupation, subsector, location of fall, etc). Incident rates per 1,000 person years were calculated using the health region's payroll productive hours (defined as paid and overtime hours). Adjusted relative risk of incidents was derived using Poisson regression, (with the occurrence of a work-related event as the dependent variable), to examine its association with sub-sector (acute, long-term or community care), gender, age group and occupation. Numbers of days lost per fall and compensation costs (wage loss and healthcare only) were obtained from WorkSafeBC.

Results

- The rate of falls is increasing by year
- Facility Support Workers and Community Health Workers are at the highest risk for falls compared to Registered Nurses
- Females and older workers are at high risk of falls
- The high risk locations for falls were hallways, dish rooms/kitchens, patient rooms and outside of patient homes. The location of fall varied by occupation and subsector
- A total of \$ 2,478,882 (Median \$1703) was spent on time-loss falls claims, resulting in 19,887 days lost from work (Median 19.9 days) over a three year period in one of BC's health regions
- The Long Term sector had the highest median days lost per claim compared to Acute Care and Community Care
- With respect to occupation, Licensed Practical Nurses had the highest median number of days lost: 48.5 days followed by Care Aides (27) and Maintenance Workers (21.5).

Figure 1: Summary of falls that occurred between January 1, 2005 and December 31, 2007.

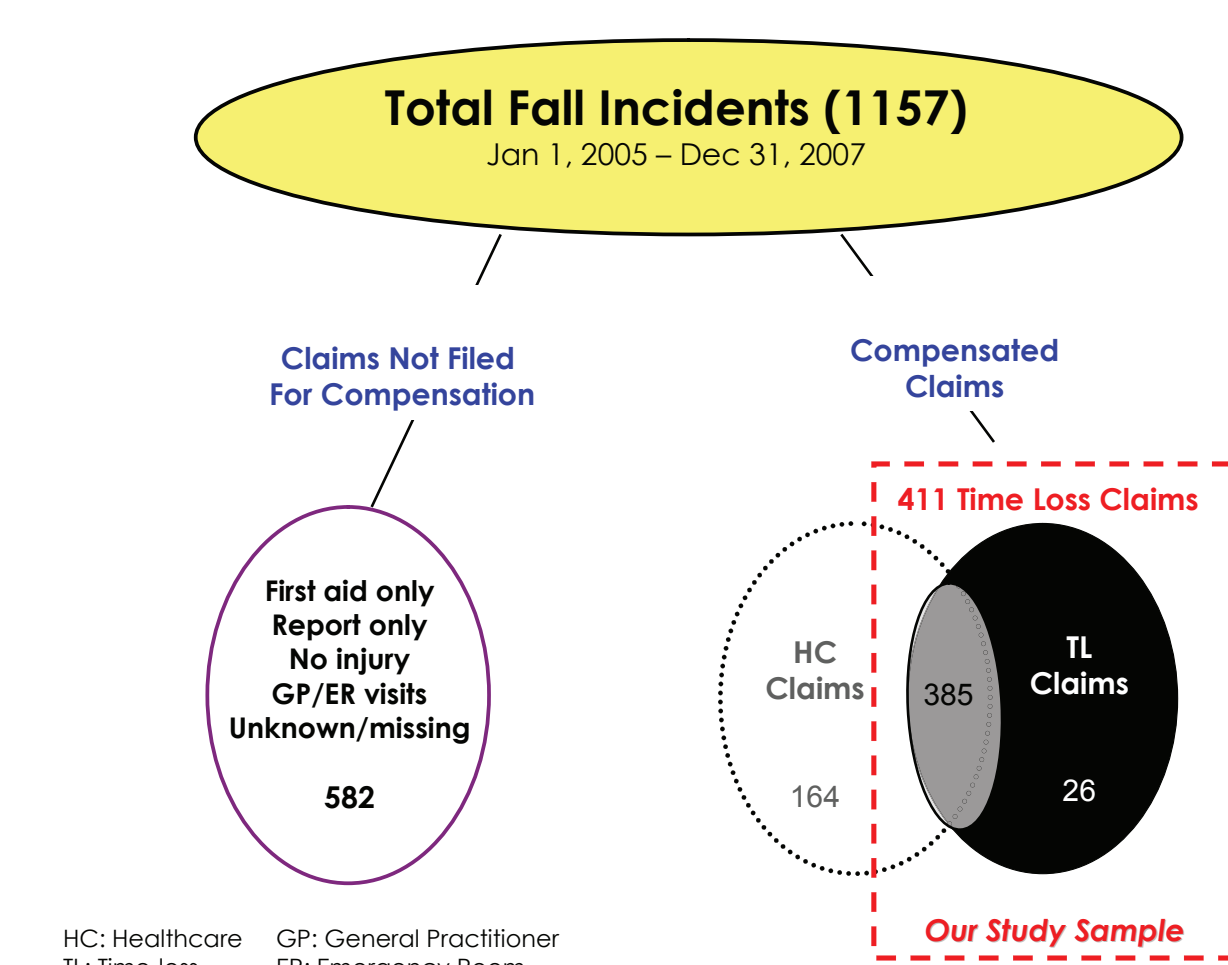


Figure 2: The rate of falls by age group for January 1, 2005 to December 31, 2007

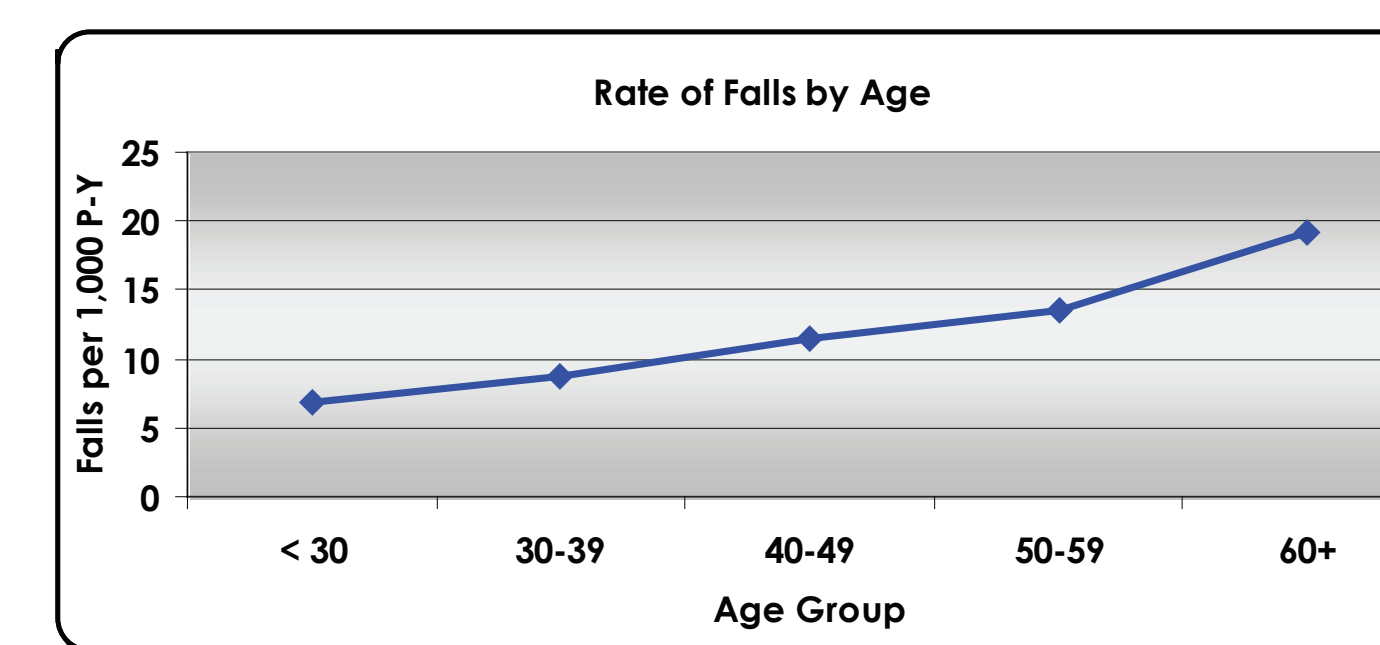


Figure 3: Rate of falls by subsector and occupation for January 1, 2005 to December 31, 2007.

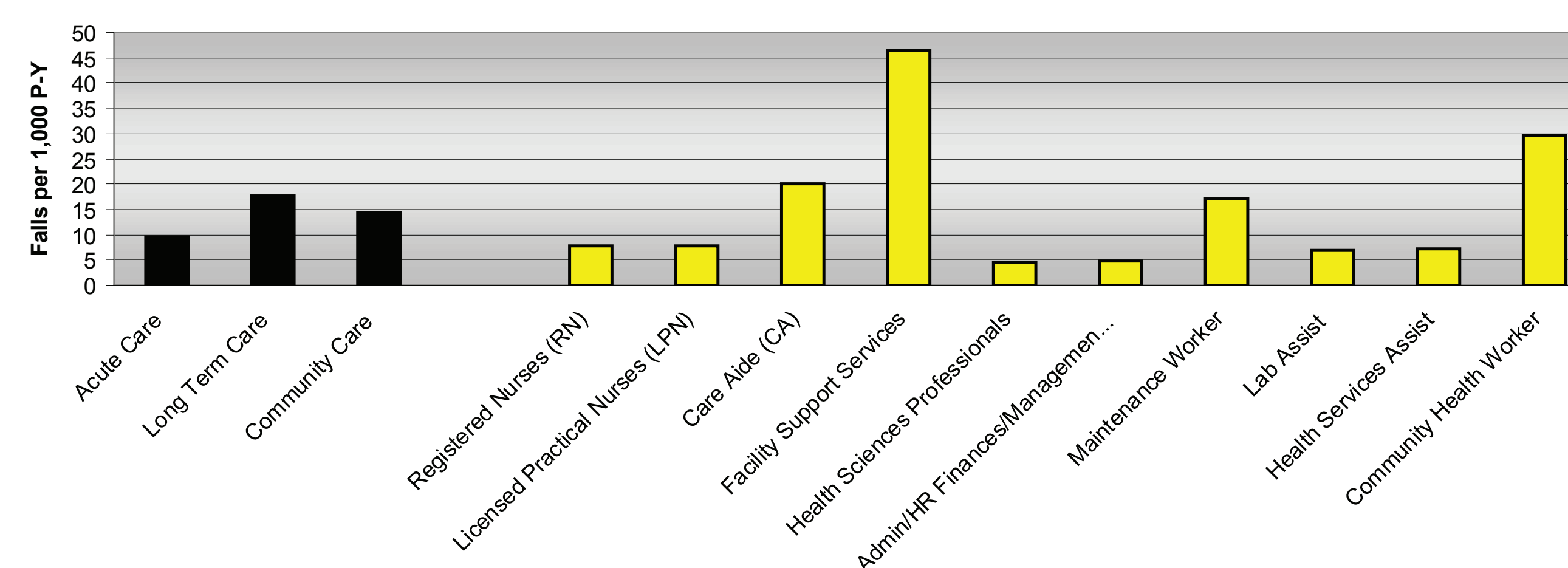


Figure 4: Location of falls by occupation for January 1, 2005 to December 31, 2007

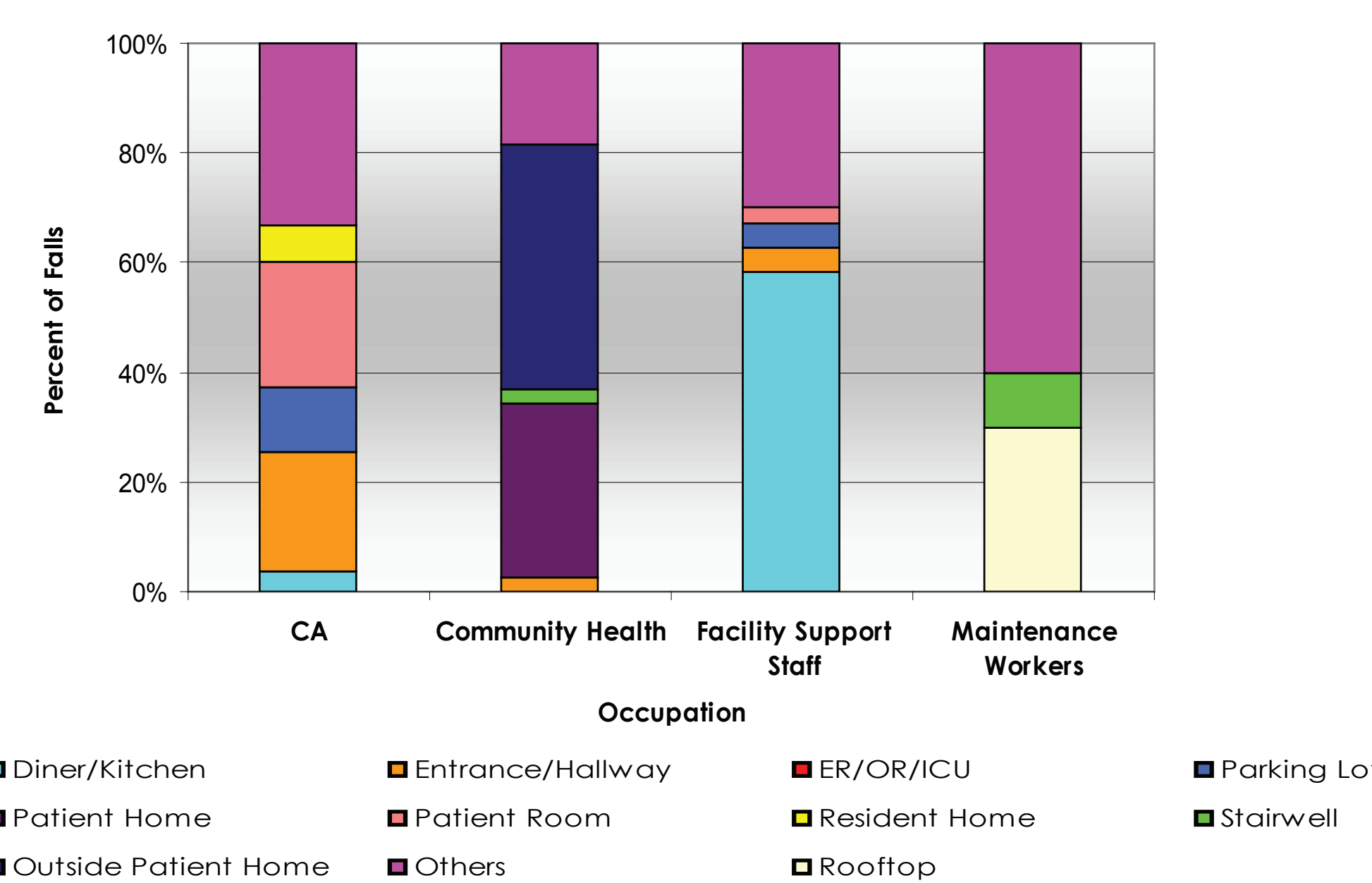


Figure 5: Location of falls by subsector for January 1, 2005 to December 31, 2007

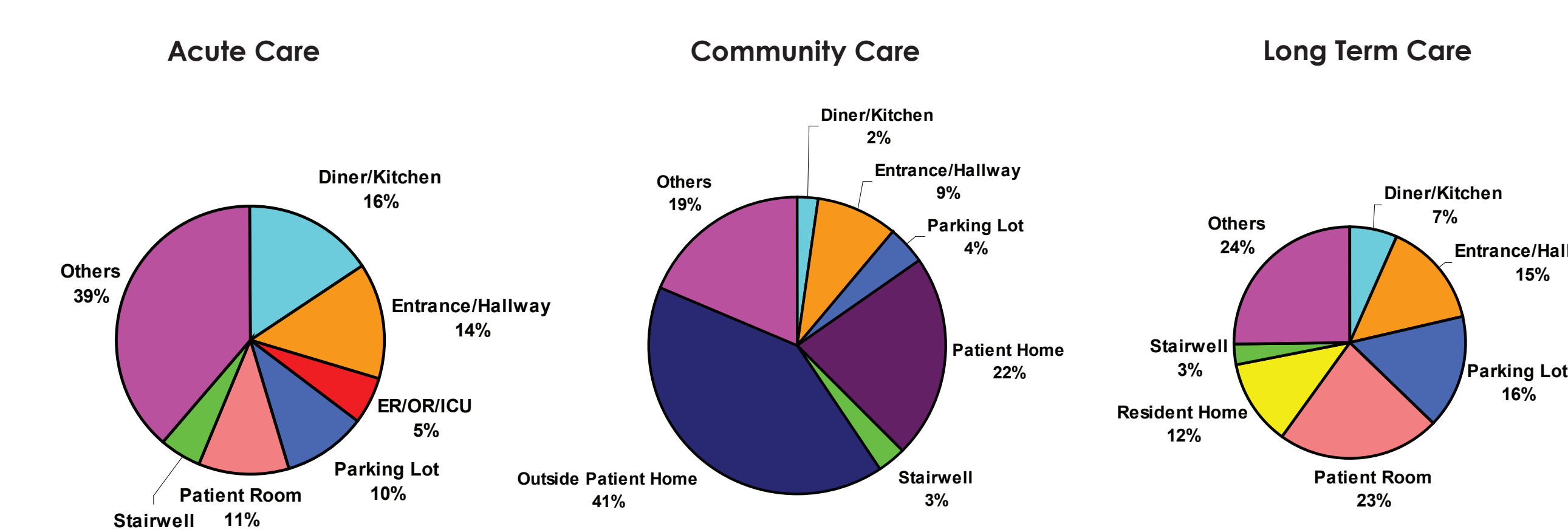


Table 2: Total and median days lost and compensation costs (wage loss and healthcare costs combined)

Variables	# of falls	Days Lost		Compensation Costs	
		Total	Median	Total (\$)	Median(\$)
Sub-sector					
Acute Care	242	12,169	13	1,586,537	1,616
Community Care	75	3,311	16	402,548	1,571
Long Term Care	91	4,233	27	473,394	3,222
Occupation					
Registered Nurse	97	5,544	12	868,226	4,438
Licensed Practical Nurse	14	789	48.5	74,911	4,355
Care Aide (CA)	78	4,867	27	560,134	2,599
Facility Support Services	67	2,720	14	240,095	980
Admin/HR/Management/Clerk	23	1,003	5	124,763	837
Maintenance	10	638	21.5	106,929	7,166
Community Health Worker	38	1,418	13.5	127,400	1,348
Other	84	2,908	9.3	376,424	1,125
Total	411	19,887	14	2,478,882	1,703

Implications

- The burden of falls is not equally shared by all workers and worksites
- Knowing the burden of fall injuries, by worksites and worker groups will help employers, compensation officials and OHS professionals identify vulnerability in the healthcare sector to target evidence-based preventive measures
- Workers' compensation data is a great tool for policy makers to use as a safety incentive. However, the economic burden of the indirect costs to the injured worker, employers and healthcare system still needs to be explored
- This research presents a unique and thorough analysis of falls in a large population of healthcare workers in British Columbia, Canada. Further research is warranted for the occupations at high risk for falls: Care Aides, Community Health Workers, Facility Support Workers and Maintenance Workers.

Acknowledgments

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[1] Collins, J., Bell, J.L., Gronqvist, R., Courtney, T.K., Sorock, G.S., Chang, W.R., Wolf, L., Chiou, S., and Evanoff, B., 2006. Slip, trip and fall (STF) prevention in health care workers. 2006. Maastricht, Netherlands: World Congress of the International Ergonomics Association IEA.

[2] Workers Compensation Board of British Columbia (WorkSafeBC). 2009. Statistics 2009. WCB of British Columbia, Vancouver, Canada.