Musculoskeletal disorders and total occupational exposure in commercial lobstering

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Background. The main objective of this study was to collect data for estimating the denominator or full-time equivalent (FTE) for calculating the rates of morbidity and mortality in the American Lobster harvesting industry in the United States. Secondary objectives were to calculate incidence densities for acute injuries and to report on prevalence of non-acute injuries within this population. This is the first study to estimate these rates for this industry.

Methods. A randomly selected cohort of lobstermen licensed to fish in Maine and Massachusetts was followed prospectively. Data on work exposure and acute injuries that occurred on the boat were collected using a survey administered quarterly via phone interview with the captain. This survey assessed parameters of total occupational exposure and relevant data on acute injuries. A second questionnaire, based on the Nordic Musculoskeletal Questionnaire, assessed pain having non-specific or non-acute onset. It was administered in-person with the captain and crew.

Results. A total of 395 individuals participated from 287 boats. The average annual FTE calculated for the lobstermen (2,453 days) is higher than all American fisheries except Alaskan salmon (3,429 days). As expected, the summer months had the highest FTE and the winter the lowest FTE. The incidence density for all injuries (49.7/100 FTE) and for injuries requiring treatment (15.0/100 FTE) was much higher than reported in other commercial fisheries and higher than general industries reported to the U.S. Occupational Safety and Health Administration (OSHA). Half of respondents reported low-back pain. Low-back pain was prevalent and attributed to or exacerbated by lobstering. Sternmen reported more hand/wrist pain than captains. Multiple locations for pain were common in individual subjects.

Discussion. Equipment to assist material handling ought to be a priority for intervention, as the body segments with high prevalence of pain (back, hand/wrists, shoulders, knees) are all affected by the repetitive and forceful handling of the lobster traps.

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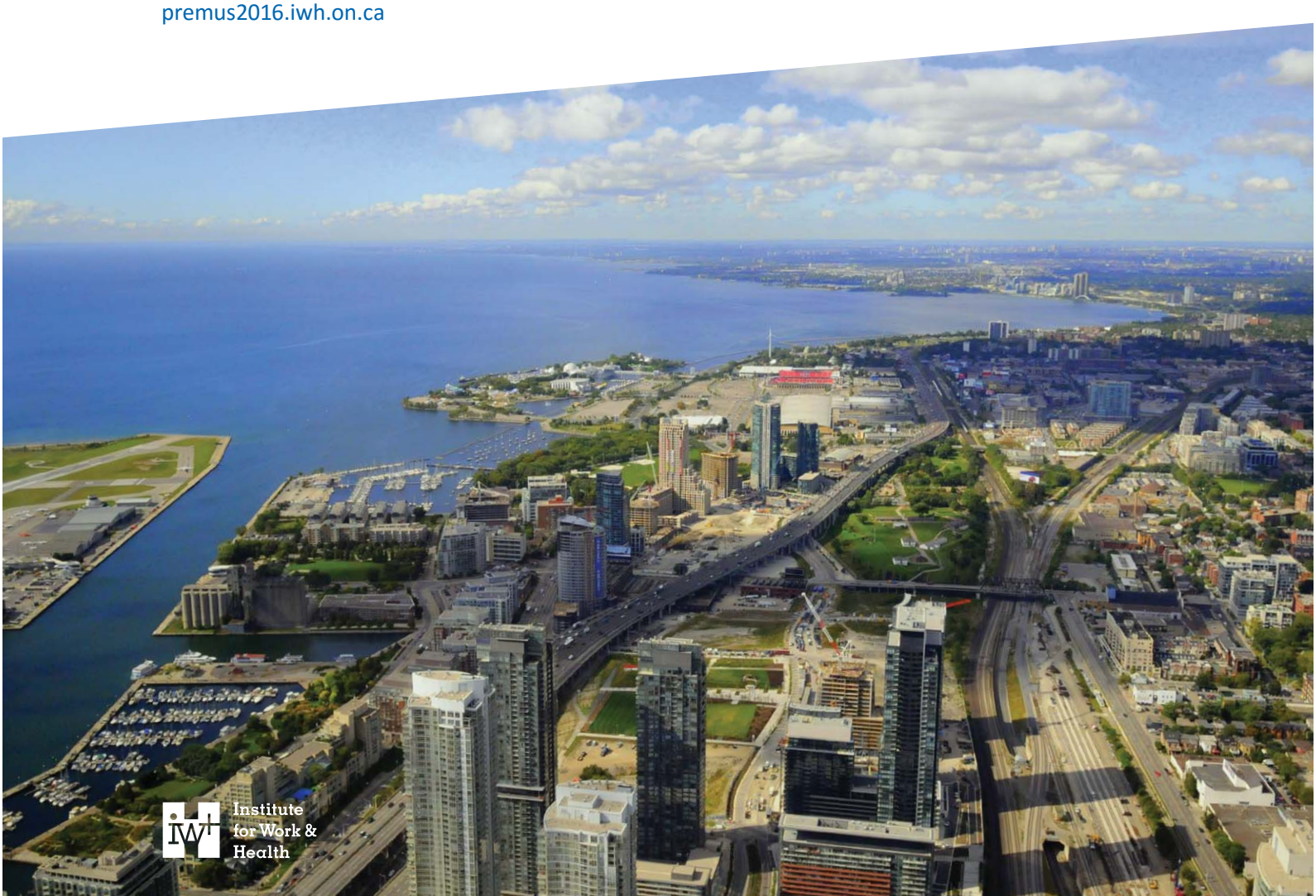

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