

Research shows UK waste collection systems causing significant musculoskeletal issues for workers

January 18 2019

Waste collection systems used throughout the UK could be causing significant long-term musculoskeletal issues for workers, research has shown.

Research by the University of Greenwich and Glasgow Caledonian University, and published in the latest edition of the Institution of Occupational Safety and Health's (IOSH) Policy and Practice in Health and Safety journal, has investigated musculoskeletal disorders (MSDs) among workers arising out of different recycling and waste [collection](#) systems.

MSDs cover any injury, damage or disorder of the joints or other tissues in the upper or lower limbs or the back and can be made worse by workplace conditions.

The research shows that wheeled bin-based services are associated with fewer MSD outcomes than services including boxes, baskets and sacks and suggests Local Authorities should discontinue 'box type' collections on MSD grounds as a matter of urgency.

The team observed workers' experiences of MSDs through body mapping, with workers identifying where they collectively felt pain or discomfort during their work activities and recording the results via a chart or questionnaire. The study is the first time body mapping has been

applied as a [risk assessment tool](#) for MSDs in waste collection.

To examine the severity of the pain, a unit of measurement termed "Average Pain Count," (APC), was created.

The study identified a relationship between pain quantity and distribution experienced by the workforce undertaking different collection systems.

Dr. David Thomas, an Academic Portfolio Lead in the School of Design at the University of Greenwich and a Member of IOSH's Environmental and Waste Management Group Committee said: "The findings of this research present a timely opportunity for organisations to consider how they protect their workforces. Rather than organisations focusing on generic 'capability' for a 'fit youngster' they need to consider how they accommodate an ever-increasing ageing workforce when developing systems of work.

"It is also an opportunity for organisations to accept that their current methods of managing work can create ill-health problems and consider ways to make workforces more sustainable in the future including changing systems of work."

As part of the study, three surveys were carried with the same local authority workforce over a four-year process.

The first survey examined the pain experienced by workers using waste management methods in use in 2010. The second two surveys examined the workforce after the implementation of a new waste management system in 2013 and then in 2014 after it had become embedded.

The overall APC dropped significantly when comparing 2010 and 2013, and only increased in 2014 by approximately 25 percent. This latter

increase included demands from additional garden waste and food waste collections over this period.

Workers reported the parts of the body with highest APC were the lower back, shoulder, neck and upper spine, which decreased with a reduction in manual handling following the removal of boxes and baskets and an increase in the use of wheeled bins.

Less pain and reduced MSD risk was also experienced when there were aspects of job rotation, due to the variation of task and the reduction in static loading for drivers.

The research confirms previously established links between awkward occupational postures and lower back pain, which can often be a result of bending, twisting, lifting boxes and sorting recycling into different components and bins.

Andy Robertson, IOSH Environmental & Waste Management Group Chair, said: "Figures released by the Health and Safety Executive (HSE) show around 70 percent of all workers in the Waste Management industry are involved in municipal household and commercial collections. These collections account for about 80 percent of all the reported injuries, with the most common being musculoskeletal disorders.

"Having been key to IOSH Environmental & Waste Management Group's development of a free training package for Local Authorities, which is aimed at the development of Line Managers' competence to safely manage teams carrying out municipal waste collection, this research further supports the direction Local Authorities should be taking in order to protect the health of workers collecting municipal [waste](#) on their behalf."

The HSE suggests that today's workforce is likely to contain a higher proportion of older workers because of factors such as increased life expectancy, removal of the default retirement age and raising of the State Pension Age, which means that many people will need and want to continue working.

By ensuring older workers have access to flexible working opportunities and support from within the business, employers will be better suited to respond to the challenges of ageing workforces.

The paper, "Using body mapping as part of the risk assessment process – a [case study](#)," appeared in the journal *Policy and Practice in the Health and Safety*, which is published by the Institution of Occupational Safety and Health.

More information: David Thomas et al. Using body mapping as part of the risk assessment process – a case study, *Policy and Practice in Health and Safety* (2018). [DOI: 10.1080/14773996.2018.1491146](https://doi.org/10.1080/14773996.2018.1491146)

Provided by University of Greenwich

Citation: Research shows UK waste collection systems causing significant musculoskeletal issues for workers (2019, January 18) retrieved 5 May 2024 from <https://medicalxpress.com/news/2019-01-uk-significant-musculoskeletal-issues-workers.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--