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| **Name of research project:** | Preventing Amputations Caused by Machinery (PACMan) |
| **Background/Rationale** | From 2014 to 2017, major injuries leading to amputation second leading type of major injury at the workplace, after crushing, fractures and dislocations (CFDs). These accounted for 21% of the major workplace injuries (129 cases per year).<br><br>Amputation injuries were also more severe compared to CFDs injuries. They occurred mainly in the Manufacturing (34%) and Construction (32%) sectors.<br><br>An analysis of the 660 amputation cases from 2012 to 2016 found that 55% were contributed by unsafe workplace conditions e.g. unguarded machines, use of improper equipment, lack of safe work procedures (SWP). 36% of the cases were contributed by unsafe acts e.g. clearing chokes while machine is running and doing last minute adjustments during lifting operation.<br><br>Hence, the focus of this research study is to reduce workplace accidents resulting in amputations. |
| **Study Objectives and Design** | The aim of this study is to understand the following:<br>a) underlying organizational and human risk factors for amputation injuries;<br>b) whether a combined solutions and guidance program for machine guarding will be effective in reducing amputation injury risk;<br>c) what are the differences between small and big companies in managing machinery safety?<br><br>The study will include a survey on organization and human factors, pre and post program evaluation and Randomized Controlled Trial (RCT) to test effectiveness of the guidance program and safety team in small companies. |
| **Interim findings/reports:** | NA |
| **Collaborator/s:** | Workplace Safety and Health Council |