A Comprehensive Analysis of Industrial Safety Control And Data Collection in Kazakhstan: Implications For OSH

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ABSTRACT

Methods: The study conducted a survey on 291 professions across various industries in Kazakhstan to assess the degree of occupational risk faced by workers. The survey used five indicators of occupational risk: chemical and biological factors, physical factors, harmful working conditions, injury risk of the labor process, and intensity of labor. The data was collected through the completion of the statistical form F.1. The lack of a unified interagency mechanism to reflect the actual number of workers in HWCs based on the occupational risk assessment and industrial control creates a challenge for accurately assessing the occupational risks (AOR) faced by workers. Completion of data based on the results of the AOR on working conditions once every 5 years and industrial control once every six months further complicates the issue. The incomplete indicators of the statistical form F.1-T (working conditions) and discrepancies in the data on the number of employees of HWCs and recipients of compensation for HWCs add to the complexity of the problem. The F1-T statistical form (working conditions) does not take into account various occupational risk factors such as unfavorable temperature conditions, high levels of intensity of electric, magnetic, electromagnetic waves, radio frequencies, the impact of radiation factor, and the impact of biological factors. Additionally, there is a lack of a methodology for calculating benefits/compensation for working in hazardous working conditions (HWCs). **Findings**: The study found that more than 50% of the surveyed professions in Kazakhstan have a high degree of occupational risk, with over 80% of the 291 professions surveyed having a high degree of occupational risk in two of the five indicators of occupational risk - harmful working conditions and injury risk of the labor process. However, according to three indicators of occupational risk of surveyed objects, the acceptable level of occupational risk was observed. The study also identified several challenges, including the lack of unified interagency mechanisms to reflect the actual number of workers in hazardous and other adverse working conditions, discrepancies in the data on the number of employees of HWCs and recipients of compensation for hazardous working conditions, incomplete indicators of the statistical form F.1-T (working conditions), and the lack of a methodology for calculating benefits/compensation for working in hazardous working conditions. **In conclusion**, Kazakhstan faces significant challenges in accurately assessing and mitigating occupational risks faced by workers in HWCs. Addressing these challenges will require the development of a unified interagency mechanism to accurately reflect the number of workers in HWCs based on AOR and industrial control, as well as the development of a methodology for calculating benefits/compensation for working in HWCs. Improving the completeness of data on working conditions and enhancing the accuracy of the statistical form F.1-T will also be crucial to ensure a comprehensive understanding of occupational risks in HWCs.

Keywords: Occupational risk, harmful working conditions, industrial control, compensation, Kazakhstan.