

healthcare, yet the ageing workforce means a high number of workers exiting the workforce. Working in close collaboration with the insurer responsible for the healthcare system in New South Wales and Australian Capital Territory, this multi-stage mixed methods project sought to design interventions to support older healthcare workers to return to work after work-related injury/illness.

Materials and methods: Evidence gained from literature and workers' compensation claim analysis on existing interventions and risk factors for injury and no return to work was presented to focus groups made up of insurance and healthcare system stakeholders. Across a series of sessions the first 4 of 6 intervention mapping steps were completed.

Results: Five possible interventions were presented to the insurer to implement alone or in conjunction with the health organisations to prevent work-related injury or support return to work including: exercise; lifting training and/or equipment; education (at time of injury); return to work management, and; workplace environmental changes.

Conclusions: The insurer has already begun to act on the recommendations and create a "Best Practice" guide to support workers and employers alike. Success of this project was largely due to the ability to engage with stakeholders both "on the front line" who regularly deal with injured workers and policy makers to determine what is possible to deliver in practice.

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Alcohol use and risk of work injuries among health care workers: a pilot study

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Introduction: Alcohol use accounts for 11% of all workplace injuries and alcohol-related absenteeism amounts to \$2 billion/year. Literature is lacking of information on potential association between occupational injuries among health care workers and alcohol use. This study aims to conduct a pilot study on alcohol induced injuries in health care workers and analyzes the use of Carbohydrate-Deficient Transferrin (CDT) in health surveillance programs in occupational settings.

Materials and Methods: A retrospective study was conducted in a large Local Health Unit in Italy. The sample consisted in 75 cases defined as workers who sustained an occupational injury. We analyzed serum ALT, AST, γ GT, MCV and CDT levels. CDT refers to a temporary alteration in the glycosylation pattern of transferrin that occurs in sustained heavy alcohol consumption (50–80 g of alcohol/day for at least 2 weeks).

Results: As for the type of occupational injury, biological injuries 36% are the most common ones, followed by slipping and falls 33%, commuting accidents 15%, musculoskeletal injuries caused by

manual handling 9% and verbal/physical aggressions 7%. Globally the majority of samples had low or medium CDT levels but no one was positive (cut-off value equal to 2%); no gender difference was detected.

Conclusions: In the health care sector, alcohol plays a minor role in the occurrence of occupational injuries. The use of CDT in health surveillance protocols could play a role, such as a specific biomarker, as well as a deterrent for operators who may incur in important work sanctions.

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Hepatitis B immunization survey at fitness assessment of newly recruited hospital care workers

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Introduction: Hepatitis B virus (HBV) immunity assessment is mandatory in hospital care workers (HpCW) since HBV is preventable even after significant percutaneous exposure. Anti-HBs specific IgG antibody serum concentration (atHBsIgG), should be above 10 IU/l, a widely accepted protective cutoff. Since most of newly recruited HpCW had a 3-dose recombinant hepatitis B vaccine (rHBvac) under age 16 without any post-vac control, we've conducted a atHBsIgG biohazard preventive survey.

Methods: Two year (y) survey (2020–2021) of 550 newly recruited HpCW (F:429 78%; F/M:3.5) submitted to work fitness assessment (13.1% of 4200) with blood testing that included atHBsIgG (IU/l) by CLIA immunoassay.

Results: 75 (13.6%; F:60, 34.1±11.4y; M:15, 31.6±8.2y) had aHBsIgG <10 U/l. A single rHBvac boost was administered to 39 (52.0%); a month later, 19 (48.7%) showed protective atHBsIgG but 10 (25.6%) were unresponsive and so fulfilled 3-dose rHBvac. Discussion: A high proportion of new HpCW had low HBsIgG at admission but had a swift response upon single-dose revaccination (boosting fast-responders). A few are "boosting slow-responders" (after 2nd/3rd dose) and some remain "non-responders", candidates for rHBvac+adjuvant.

Conclusion: Screening of atHBsIgG is mandatory since percutaneous HBV infection risk (correlated to HBeAg+/HBv-load) implies that lower-than-protective atHBsIgG could impair an effective immediate response to a sudden incidental circulatory viral load.

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Enhanced personal protective equipment can cause acute kidney injury in health care workers during COVID-19 pandemics

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Introduction: Enhanced personal protective equipment (PPE) can expose health care workers (HCWs) to high heat stress and dehydration. The objective of this study was to assess the risk of acute kidney injury (AKI) among HCWs during the pandemic.

Material and Methods: We recruited 52 HCWs worked on the mobile COVID-19 screening bus in the summer of 2021. We