

PRESS RELEASE

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Tracking Trauma: What the Data Says About Injuries in Luxembourg

New Comprehensive Report Highlights Injury Patterns and Prevention Priorities

The Health Directorate and the Luxembourg Institute of Health (LIH) have published a multi-year report on trauma and accident trends in Luxembourg based on emergency room data and mortality records.

The newly released "Report on Trauma and Accident Trends in Luxembourg" provides a broad analysis of injury-related cases recorded in emergency departments and trauma-related deaths between 2013 and 2020, with the aim of improving prevention strategies and enhancing public safety measures.

Trauma remains a top priority for public health in Luxembourg. In 2012, the Health Directorate introduced RETRACE, a comprehensive surveillance system in all four hospitals with emergency departments throughout the country. This system, modelled on the European Injury Data Base (EU-IDB), collects detailed information on the causes and circumstances of trauma cases, allowing for accurate comparisons at both national and European levels.

The report reveals that a total of 526,381 trauma cases were treated in Luxembourg's emergency departments from 2013 to 2020. The proportion of non-residents seeking emergency trauma care increased from 10% to 15% during this period, highlighting the importance of cross-border health surveillance. Furthermore, trauma-related injuries were the fourth leading cause of death in Luxembourg between 2013 and 2019. However, in 2020, they fell to sixth place, due to the major impact of the COVID-19 pandemic.

The report highlights the specific groups that are most affected by trauma. It shows that children, adolescents, young adults and the elderly are 1.4 to 1.8 times more at risk than adults aged 25 to 69. Moreover, the eight key areas defined by the EU-IDB to guide prevention efforts were adopted as guidelines for the analysis and presentation of results in this report: self-inflicted injuries, violence, road-traffic injury, school-related incidents, sports injuries, workplace accidents, home and leisure-related injuries, and undefined causes. The information provided by this report may help efforts to adapt strategies to different age groups, reduce trauma, and promote safety for all.

The analysis also underscores age-specific risk factors, emphasizing the need for tailored prevention initiatives. For instance, home and leisure activities-related injuries are the most common among very young children (0-4 years) and seniors, whereas sports-related injuries are more frequent among adolescents and young adults.

A particularly notable finding is the decline in emergency department visits for trauma in 2020 across all age groups except for seniors. The number of trauma cases among children dropped by 8.8%, while cases among adolescents and young adults fell by 28.3%. Conversely, trauma incidents among seniors increased by 4.4%, likely reflecting the unique risks faced by older adults during the pandemic.

The Registries & Epidemiological Studies (RES) Unit at the LIH played a key role in producing this report. As the operational manager of the project mandated by the Health Directorate, the RES supervised all aspects of data management from data collection, encoding, and cleaning to validation and in-depth



analysis. They also facilitated communication with hospitals and were responsible for drafting reports and factsheets. Overall, this report is the result of a highly effective collaboration between the Health Directorate, hospital partners and the RES unit.

Marie Louyot, Project Leader in Epidemiology in the RES Unit at the LIH summarized:

"This report offers a valuable perspective on the constantly changing nature of trauma in Luxembourg. By understanding these trends, we can implement targeted interventions that help protect those most at risk."

The RETRACE registry and the broader trauma surveillance system are instrumental in identifying vulnerable populations and promoting evidence-based public health interventions. The Health Directorate and the LIH will continue to refine data collection and analysis to enhance injury prevention strategies throughout Luxembourg.

The full report is available online on the SanteSecu.lu site.

About the Luxembourg Institute of Health (LIH)

The Luxembourg Institute of Health (LIH) is a public biomedical research organisation focused on precision health and invested in becoming a leading reference in Europe for the translation of scientific excellence into meaningful benefits for patients.

The LIH places the patient at the heart of all its activities, driven by a collective obligation towards society to use knowledge and technology arising from research on patient derived data to have a direct impact on people's health. Its dedicated teams of multidisciplinary researchers strive for excellence, generating relevant knowledge linked to immune related diseases and cancer.

The institute embraces collaborations, disruptive technology and process innovation as unique opportunities to improve the application of diagnostics and therapeutics with the long-term goal of preventing disease.

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