**Country update on Injury Surveillance: Estonia**

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Introduction

Injuries are a major public health concern in Estonia like in other EU-member states. Injury mortality rate per 100 000 inhabitants in Estonia has declined continually over the last two decades. However, it is still one of the highest in the EU, being more than two times higher than the EU average.

Injuries are the third leading cause of death in Estonia and they also cause large share of
morbidity and long term disability. There were 68 deaths per 100 000 inhabitants in Estonia in 2015, representing 6% of all death cases that year. A total of 25 years of life (Disability Adjusted Life Years, DALY) were lost per 1000 inhabitants in 2013 because of injuries, accounting for almost 7% of all DALYs. The proportion differs largely between age groups: it was largest in age group 25-34, where men lost 41% and women 14% of life years due to injuries.

Reducing injury mortality is one of the National Health Plan main spearheads. In 2013, the Government Office created a task force for injury mortality and morbidity prevention. Its aim was to analyse the current situation and prevention policy, and to offer additional targets and prevention methods to reduce injury mortality in Estonia to the level of EU average. The task force made its recommendations to the Government in the beginning of 2015, and thus ended its work.

*Data collection efforts*

National Institute for Health Development (NIHD) collects aggregated morbidity data annually as the basis of national health statistics. The reports include the number of new cases according to ICD-10 by patients’ age group, and the number of new cases by external causes. All Estonian health care providers are obliged to submit annual reports about all in- and out-patient injury cases to NIHD.

It is obvious that for in-depth analysis such aggregated data is not sufficient, and an individual level dataset is needed. At present, individual level data from National Insurance Fund is used for regular analysis of burden of disease. Case based data is available from Estonian e-health information system (HIS), but it is not used for regular statistics, yet. There is no stand-alone injury registry or database in Estonia, neither a hospital based injury surveillance system. One hospital in Estonia has piloted the FDS data collection but due to the lack of resources, they continued to use ICD-10 for registration of injuries.

The Estonian HIS was established in 2008. It is a nationwide database that has a standardized central information exchange function. Summaries of patients’ medical records are gathered from all healthcare service providers and stored in one central database. The main objective is to give healthcare professionals a comprehensive overview of patient’s diagnoses, prescribed medications, laboratory test results, and other health data. HIS enables patients to access their medical data through a patient portal.

This information can also be used, under strict anonymity, for statistical purposes and for research as well as for monitoring quality of treatment and for health policy planning.

Comparison with annual statistical reports shows that nearly 90% of in-patient case summaries and 75% of those of ambulatory visits done in hospitals are sent to HIS. While extracting data for IDB, the problem with ambulatory cases is that it is not known whether the visit is an emergency department (ED) attendance or not. Only ICD-10 coding is used for diagnoses, including injuries and external causes.

*Use of injury data*

Main users of injury data are NIHD, Ministry of Social Affairs (MoSA), Ministry of Interior, and the Road Safety Agency. Also other national and international organizations, local communities, media, students, scientists, etc. use the data. The HIS data provides valuable insights who, when and why have injuries and it helps to plan prevention policies and activities at national and community level, but it is also used for ad-hoc purposes.

*Future outlook*

Since 2015, MoSA is the coordinator of all actions in the field of injury prevention. For example, there is a need for target group specific preventions – one solution does not fit far all. More emphasis has to be put on accidental falls and suicides. Individual based data could be used to compile a profile of people who are prone to self-harm or commit suicide. The Government has agreed that the proposals made by the injury prevention task force will be implemented by 2020. It is also agreed that an overview of the current situation in the field on injuries has to be submitted annually to the Government.

As for comprehensive individual level data, efforts are made to encourage all health care providers to send all case summaries to HIS. It would be also helpful if we could link the case summaries with digital ambulance records.

Although it is widely recognised that using ICD-10 to code injuries does not provide sufficiently information on the causes and circumstances of injury events for prevention purposes, Estonian hospitals are not willing to implement a different coding or complementary surveillance system. Therefore, Estonia will continue to provide data for IDB as a Minimum Data Set on the basis of ED attendances, but from ALL hospitals in the country.

More information:

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*IDB-related publications:*

The report of injury prevention task force, 2014

[https://riigikantselei.ee/sites/default/files/content-editors/uuringud/vigastuste\_ennetamise\_rakkeruhma\_aruanne.pdf](https://owa.certsure.com/OWA/redir.aspx?C=B6f7_9Dw-Eqx8gKeCvWLp6sUCZS8SdQI5GpIT2HWJC3E-k07cRfLfi2KStmcyZAGS4QuLhceS8I.&URL=https%3a%2f%2friigikantselei.ee%2fsites%2fdefault%2ffiles%2fcontent-editors%2fuuringud%2fvigastuste_ennetamise_rakkeruhma_aruanne.pdf)

The analysis of injuries and injury deaths in Estonia, 2014

[https://goo.gl/8zSFsF](https://owa.certsure.com/OWA/redir.aspx?C=B6f7_9Dw-Eqx8gKeCvWLp6sUCZS8SdQI5GpIT2HWJC3E-k07cRfLfi2KStmcyZAGS4QuLhceS8I.&URL=https%3a%2f%2fgoo.gl%2f8zSFsF)

Injuries in Estonia, policy brief, 2009 (ENG)

[http://rahvatervis.ut.ee/bitstream/1/1921/2/Laijt2009\_inglisek.pdf](https://owa.certsure.com/OWA/redir.aspx?C=B6f7_9Dw-Eqx8gKeCvWLp6sUCZS8SdQI5GpIT2HWJC3E-k07cRfLfi2KStmcyZAGS4QuLhceS8I.&URL=http%3a%2f%2frahvatervis.ut.ee%2fbitstream%2f1%2f1921%2f2%2fLaijt2009_inglisek.pdf)

Non-fatal injuries resulting in activity limitations in Estonia: a retrospective population-based study, 2011 (summary in ENG)

[http://www.academia.edu/20464907/Toimetulekupiiranguid\_p%C3%B5hjustanud\_vigastused\_Eestis\_rahvastikup%C3%B5hine\_s%C3%BCndmuslooline\_uuring](https://owa.certsure.com/OWA/redir.aspx?C=B6f7_9Dw-Eqx8gKeCvWLp6sUCZS8SdQI5GpIT2HWJC3E-k07cRfLfi2KStmcyZAGS4QuLhceS8I.&URL=http%3a%2f%2fwww.academia.edu%2f20464907%2fToimetulekupiiranguid_p%25C3%25B5hjustanud_vigastused_Eestis_rahvastikup%25C3%25B5hine_s%25C3%25BCndmuslooline_uuring)

Injuries in Estonia, 2007

[https://docs.google.com/viewer?url=http%3A%2F%2Frahvatervis.ut.ee%2Fbitstream%2F1%2F1661%2F4%2FKaasikjt2007.pdf](https://owa.certsure.com/OWA/redir.aspx?C=B6f7_9Dw-Eqx8gKeCvWLp6sUCZS8SdQI5GpIT2HWJC3E-k07cRfLfi2KStmcyZAGS4QuLhceS8I.&URL=https%3a%2f%2fdocs.google.com%2fviewer%3furl%3dhttp%253A%252F%252Frahvatervis.ut.ee%252Fbitstream%252F1%252F1661%252F4%252FKaasikjt2007.pdf)