

## The effectiveness of safe injection facilities

### Summary

**Objectives:** To evaluate the effectiveness and cost-effectiveness of safe injection facilities (SIF) and the need for them in Estonia.

**Methodology:** A literature review was conducted in order to describe the use of safe injection facilities elsewhere in the world and to gather evidence on the effectiveness and cost-effectiveness of SIFs. A Markov cohort model was constructed to evaluate the cost-effectiveness of an established SIF compared to current Estonian harm reduction practice. In the base-case analysis the SIF was assumed to have 4 booths and to be open for 12 hours a day. In the model a hypothetical cohort of 500 injection drug users (IDUs) was followed in monthly cycles for a year. Treatment effectiveness and quality of life data were derived from published literature. Parameters on drug use, costs and mortality were based on available Estonian data. The model evaluated the number of HIV cases and overdoses, HIV and overdose mortality, associated costs and quality-adjusted life-years (QALYs). The incremental cost-effectiveness ratio (ICER) was calculated comparing SIF to current harm reduction practice. In order to reflect parameter uncertainty one-way sensitivity analysis was performed. Additional budget-impact analysis was carried out to determine the effect of changing the size and opening hours of the facility on healthcare payers' budget.

**Results:** Compared to the overall cost of €116,805 per cohort of 500 IDUs in current harm reduction practice, the use of SIF would be €20,199 more expensive. At the same time, the SIF would enable to prevent 4 HIV cases and 1 death per the cohort of IDUs in a year. In current analysis deterministic ICER was €67,444 per QALY. In sensitivity analysis the ICER varied in the range of €7297 – 148,199 per QALY. The ICER was most influenced by SIF costs and changes in opening hours. In budget-impact analysis total annual cost from the healthcare payer's perspective would be in the range of €155,331 – 319,663 depending on the size and opening hours of the SIF.

**Conclusions:** Based on the results, establishing a SIF is expected to have some effect on HIV prevention. Considering the costs and budget impact of the intervention a pilot SIF programme should be considered in Estonia.

**Citation:** Kiisk E, Abel-Ollo K, Pääsukene AL, Lutsar K, Reile R, Kutsar A, Kiiwet RA. *Ohutu süstimise ruumide efektiivsus*. Tartu: Tartu Ülikooli peremeditsiini ja rahvatervishoiu instituut; 2018.