

Scoping study

# Suicide in the transport system

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# Summary in English

The National Centre for Suicide Research and Prevention (NASP) at Karolinska Institutet and Stockholm healthcare Services has conducted a scoping study about suicide in the transport system. The study was a collaboration with and funded by the Swedish Transport Administration's research and innovation funds.

The overall purpose of the current study was to provide a basis for future evidence-based suicide prevention in the Swedish transport system. More specifically: 1) to account for, describe and compile different data sources regarding suicide linked to the transport system; 2) to summarize the current knowledge about evidence regarding various preventive strategies; 3) to identify knowledge gaps and provide suggestions for future research and innovation activities; and 4) to make recommendations of preventive measures within the transport system.

Data from various databases show that during the period of 2015-2019, approximately 130 suicides had occurred annually within the Swedish transport system. Suicides occurred most frequently in association to railway and metro systems (approx. 84), followed by road traffic (approx. 31) and jumping from bridges (approx. 14). Suicides associated to shipping occurred to a somewhat lower extent and were very rare in the tram system and aviation. In addition to the problem of completed suicides in the transport system, it was noted that a relatively small number of individuals, with varying degrees of suicidality seek out the transport system on a daily basis to carry out suicide attempts or at least threaten to do so. The dangerous and disruptive impact of this behavior, and possible care for these persons is discussed.

A literature review was carried out to complement and synthesize results from previous reviews of suicide preventive interventions within the transport system. We found that the intervention with the strongest evidence were restrictions in the access to means, e.g., platform doors on train platforms or high non-climbable fences on bridges. There was less, evidence for other preventive efforts, e.g., partial suicide method restrictions, to influence the motivation of the suicidal individual, as well as for methods that increase the likelihood of detection and intervention.

There is a need to expand Swedish research about suicide in the transport system. Only a few Swedish studies are published in peer-reviewed scientific journals. Despite the fact that there is a high availability of high-quality data. A number of future research and innovation projects have been identified and prioritized. In general, it can be stated that a particularly important task for researchers and the other relevant actors (for example the Swedish transport administration, transport companies and Swedish counties), is to generate scientific evidence concerning suicide preventive activities. This is especially important for those preventive efforts for which evidence is currently lacking, but which are considered to be promising by experts.

A number of facilitators (or conditions) have been identified that are necessary for successful suicide prevention within the transport system: A political will to prevent suicides in the transport system; a long-term strategy; financial means; cooperation between the transport system's actors and researchers through an interdisciplinary approach. Based on the literature review of evidence concerning different suicide prevention efforts, as well as the consensus of the working group, various recommendations are given.

