NORWEGIAN SURVEILLANCE SYSTEM FOR SUICIDE
in Mental Health and Substance Misuse Services

ANNUAL REPORT 2019-2020

Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services

Suicide among inpatients in Mental Health Services for Adults

English Summary

FREDRIK A. WALBY HELENE ASTRUP EBBA GIIL MARTIN Ø.MYHRE

Background

The Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services (NoSS) is based on *The National Confidential Inquiry into Suicide and Safety in Mental Health* at the University of Manchester (NCISH, 2023) and adapted to be feasible for use in Norway.

The NoSS systematically collects national data on suicide among people who have been in contact with secondary mental health- and substance misuse services in the 12 months preceding death.

The aim is to systematically describe deaths by suicide and identify factors that may be related to suicide among people in contact with secondary mental health- and substance misuse services. The purpose is to identify areas for improvement and make recommendations for preventive measures at the system level and eventually evaluate the effectiveness of implemented measures.

In this summary of our annual report 2019–2020, we present registry-data on people who died by suicide within one year after contact with secondary mental health- and substance misuse services in the period 2010–2020. We also present results from the questionnaire on patients who died by suicide in the period 2018–2020 within one year after contact with secondary mental health- and substance misuse services. In this report we also pay special attention to patients that died under inpatient stay in secondary mental health services for adults.

Method

The Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services is collecting data from two sources using a hybrid registry design.

Data from the Cause of Death Registry, containing all deaths by suicide or deaths by undetermined intent (X60-X84, Y10-Y34, Y87.0, Y87.2), and data from the Norwegian Patient Registry, including all people that had contact in secondary mental health- or substance misuse services in the year before suicide, are linked annually.

These data are then linked to data from an electronic questionnaire, registered by clinicians who had contact with or clinical knowledge of the patient's care.

For more information and details about the NoSS, see Walby et al. (2021) and a recent paper describing the design of the system (Myhre et al., 2023).

Results

Suicide after contact with any of the secondary mental health- and substance misuse services in the period 2010-2020.

- 45% of all people who died by suicide in Norway had contact with secondary mental health- and substance misuse services in the year preceding death, 37% had contact in the last 90 days before suicide. The proportion in contact was higher for women than for men.
- In total, 2276 (76%) people had their last contact in mental health services for adults, 449 (15%) had their last contact in substance misuse services, 189 (6%) had their last contact with publicly funded private mental health specialists and 73 (2%) had their last contact with child- and adolescent mental health services.

Suicide among people in contact with secondary mental health services for adults (hereby: mental health services)

- In the period 2010–2020, the suicide rate was 114.5 per 100,000 female patients and 234.0 per 100,000 male patients.
- The suicide rate among patients with at least one inpatient stay in the last year was 3.7 times higher than among patients with outpatient contact the last year, respectively, 566.0 and 154.8 per 100 000 patients.
- The median time from inpatient discharge to suicide was 45 days among all people with at least one inpatient stay in mental health services in the year before suicide.
- 55% had a psychiatric history lasting more than five years, and very few had a medical history of less than a month
- 54% had at least one known episode of deliberate self-harm.
- 52% had a known history of substance misuse.
- Among those who had been prescribed psychotropic medications (87%), it was reported that the medications were taken as prescribed in the last month in 40% of the cases. In more than half of the cases, it was not known whether the medications were taken as prescribed.
- 25% did not show up for their last appointment.
- 28% of the patients had a crisis management plan.
- In 39% of the cases, the services had contact with next of kin during the last month before the suicide.
- 46% had depressive symptoms at last contact and 40 % had symptoms of anxiety or distress. The proportion with suicidal ideation at last contact was 24%.
- For most of the people who died by suicide, both long-term and immediate suicide risk were assessed as low at last contact (median of 3 for short-term risk and 4 for long-term risk on a scale from 1-10).

Suicide among people in contact with substance misuse service

- The suicide rate was 197.1 per 100,000 female patients and 209.0 per 100,000 male patients.
- The majority (64.3%) of the people who had contact with substance misuse services in the year before suicide, also had contact with mental health services during the last year.
- Most of those with at least one inpatient stay in the last year before suicide had their last discharge from mental health services (55%), and a higher proportion died shortly after discharge from mental health services than substance misuse services.
- The majority (70%) had a psychiatric medical history lasting more than 5 years.
- 57% had a known episode of deliberate self-harm.
- 32% did not show up for their last appointment.
- 28% of the patients had a crisis management plan.

Suicide during inpatient stay in mental health services for adults

- 268 patients died by suicide during an inpatient stay in mental health services in the period 2010-2020.
- The suicide rate was 0.87 per 1,000 inpatients.
- In the period 2010-2020, more men (58%) than women (42%) died as inpatient in mental health services, and the average age was 46.5 years.
- Violent suicide methods were mainly used, with hanging or strangulation being the most used method (56%).
- Affective disorders were the most common mental disorders (41%), followed by psychotic disorders (21%), and unspecific diagnosis/no diagnosis (18%).
- 32% died during the first week of admission, and 62% died within the first 30 days.
- Of the 81 patients who died in the period 2018-2020, 7.4% were involuntary committed to an inpatient facility.
- 58% had a psychiatric history lasting more than five years.
- The proportion with a known episode of deliberate self-harm was 59%.
- 47 % had experienced an adverse life event in the last three months before suicide.
- Most of the patients (96%) had been prescribed psychotropic medication, with hypnotics (60%) and Benzodiazepines (59%) being the most frequently prescribed medications.
- The most common observed symptom at the last admission was depressive symptoms (59%), followed by anxiety or distress (47%). Only 24% had suicidal ideations.
- Both long-term and immediate suicide risk were assessed as low at the last admission (median of 2 for short-term risk and 3 for long-term risk on a scale from 1-10).
- More patients died at an inpatient unit at a district psychiatric center

(53%) than in a psychiatric hospital department (47%).

- Among the patients who died during an inpatient stay in the period 2018-2020, 63% died outside the ward and most of those who died outside the ward were on leave (43%).
- Among the patients who died at the ward, 40% were under intermittent or continuous observation, 79% died in private rooms, 80% died by hanging, and there were no major differences regarding what time of day the death occurred.

Recommendations

In this section we first present recommendations based on implications from the previous annual report (Walby et al., 2021), as well as other previous reports (www.uio.no/kartleggingssystemet). Then we present several recommendations for mental health services based on new data, as well as new recommendations for inpatient units.

Recommendations that continue based on previous implications

- Ensure sufficient availability and access to specialized services within mental health services and substance misuse services.
- Deliberate self-harm and other forms of suicidal behavior should be identified and addressed directly, and measures aimed at suicidal behavior should be integrated in the patient's treatment.
- Fast and adequate follow-up after discharge from an inpatient facility.
- Identify substance use disorders among patients in mental health services and ensure integrated treatment for concurrent substance use and mental disorder.
- Ensure attention and measures in case of increased symptoms, especially symptoms of depression and anxiety.
- Pay more attention to patients with extensive and long-term psychosocial burdens.

Recommendations for preventing suicide in mental health services

Strengthen system-based approaches to prevention in mental health services

Most of the patients who died by suicide were assessed to have low suicide risk and only a quarter had known suicidal ideations. This is a striking illustration of the limitations of high-risk strategies. If the presence of suicidal ideation is used as an indication of the need for preventive measures, only one in four will be targeted. An alternative is system-based approaches to prevention where, instead of focusing on the individual high-risk patient, the focus will be on broad groups of patients with indirect and less intensive measures. Therefore, there is a need to develop, evaluate and implement more system-based preventive measures in the services.

Individualized assessments of suicide risk based on clinical condition and patient needs

Patients who die by suicide are a heterogeneous and complex group. The risk of suicide is always connected to the individual patient's vulnerability, burden and psychiatric condition. An assessment of suicide risk should therefore focus on both the patient's current condition and other problems and needs, in the context of individual factors that contribute to increase and decrease the risk for the patient. A suicide risk assessment should also include specific measures that contribute to reduce and protect the individual patient's risk. Such assessments are made through an overall assessment of the patient and not just through checklists of risk factors.

Practices and measures to prevent patient drop-out

One in four missed their last appointment before suicide. Providing effective and suitable services, increase focus on the development of collaboration and therapeutic alliance, using ambulant services, and ensuring practices for assessing what to do when the patient do not show up to the appointment may be useful measures to avoid drop-out.

More systematic monitoring of medicinal treatment

Many of those who died by suicide during or after contact with mental health services used one or more psychotropic medication, however compliance and possibly also the effect was unknown for many. Better systematics in the follow-up of medical treatment is important to increase compliance and to optimize the effect of such treatment.

Procedures for contact with and involvement of next of kin

Next of kin are an important resource for many patients, and our findings show that there is a clear potential for more systematic involvement of next of kin, particularly in vulnerable periods like discharge from an inpatient facility and after treatment in general.

Recommendations for preventing suicide during inpatient stay in mental health services

Ensure inpatient stay at the right level (hospital vs. district psychiatric units)

Almost half of the patients who died during an inpatient stay died in a district psychiatric unit and had a depression diagnosis. At a clinical level, it must be considered if the district psychiatric unit level is safe enough for the patient or whether the severity of depression or suicidal behavior may indicate a need for a higher level of care. There are major differences in the organization of the services locally and regionally, and collaboration and patient flow between hospitals and district psychiatric units should be assessed and adapted to ensure safe and adequate services.

Restricting access to means of suicide, such as removal of ligature points

Removing ligature points and restricting access to other means of suicide is one of the best documented suicide prevention measures in inpatient wards.

In the case of an acute imminent risk of suicide, continuous observation should be used

Special observation related to suicide risk is a very invasive measure and should be used restrictively. At the same time, if there is a need for special observations as a protective measure, continuous observation should be used to a greater extent than intermittent observations. Intermittent observation do not provide sufficient protection in the case of acute imminent suicide risk.

Activate and engage the patients in the institution's shared environment

All suicides in the ward occur in private rooms or bathrooms and during the day/evening. One suicide-preventive measure could be to activate and engage the patients in the ward's common area. Engage and facilitate for participation in an active environment will

probably be wanted by many patients and may also help improve the patient's condition.

Assessment of exit and leave from the ward

The majority of suicides occur outside the ward and most of the patients who died during an inpatient stay were on leave. It is therefore important to balance the risk and the need for protection against the therapeutic effects and the patient's wishes and needs. Assessment of exit and leave should be integrated into an overall assessment of the patient and should be included in the patient's clinical treatment plan.

References

Myhre, M.Ø., Kildahl, A.T, Astrup, H., Bergsager, D & Walby, F.A. (2023) Suicide in services for mental health and substance use: A national hybrid registry surveillance system. Health Informatics Journal. https://doi.org/10.1177/14604582231167439

NCISH (2023). *National Confidential Inquiry into Suicide and Safety in Mental Health.* The University of Manchester. https://sites.manchester.ac.uk/ncish/

Walby, F.A., Astrup, H., Myhre, M.Ø. & Kildahl, A.T. (2021) Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services. English Summary of Annual Report 2018. Norwegian surveillance system for suicide in mental health and substance misuse services. Retrieved from www.uio.no/kartleggingssystemet

Email: nssf-kartlegging@klinmed.uio.no

Twitter: @NSSFKartlegging

Website: www.uio.no/kartleggingssystemet

Please refer to this document as:

Walby, F.A., Astrup, H., Giil, E & Myhre, M.Ø. (2023*) Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services. English Summary of Annual Report 2019-2020.* Norwegian surveillance system for suicide in mental health and substance misuse services, National Centre for Suicide Research and Prevention, University of Oslo. Retrieved from www.uio.no/kartleggingssystemet

NORWEGIAN SURVEILLANCE SYSTEM FOR SUICIDE in Mental Health and Substance Misuse Services

National Centre for Suicide Research and Prevention
University of Oslo

Sognsvannsveien 21,
Building 12, 0372 OSLO,
NORWAY