





Co-funded by the European Union

Country Profile "Norway"

Suicide and Suicide Prevention: Key Facts and National Priorities

of JA ImpleMENTAL, WP6

Author(s):	Lead author: Wenche Øiestad, Senioradvisor Norwegian Directorate of health
	Co-authors: Sudan Prasad Neupane, Kim Sverre Larsen
Version:	2.2
Date:	05. 07. 2023







Contents

Introduction	1
1. Context	1
1.1 Country, Health, and Social System	1
1.2 Mental Health System	2
2. Suicide and Suicide Prevention	4
2.1 Situation Analysis (SA)	4
2.2 Needs Assessment (NA)	7
3. Reflection on SANA results	9
4. Next steps	9
5. References	10
6. Corresponding authors	12

This report arises from the Joint Action on Implementation of Best Practices in the area of Mental Health, which has received funding from the European Union through the European Health and Digital Executive Agency (HaDEA) of the European Commission, in the framework of the Health Programme 2014-2020, GRANT NUMBER 101035969 — JA-02-2020. The content of this report represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the HaDEA or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.







Introduction

The EU-Co-funded "Joint Action on Implementation of Best Practices in the area of Mental Health", short **JA ImpleMENTAL** has a duration of 3 years, lasting from October 2021 to September 2024. Detailed information can be found at the project's website <u>JA ImpleMENTAL ja-implemental.eu</u>. It aims to promote and improve mental health structures, services, capacity, and outcomes in participating countries in two specific areas:

- mental health reform (promoting community health services) and
- suicide prevention.

Two national best practices - mental health reform in Belgium and the Austrian suicide prevention programme SUPRA - serve as best practice examples. Selected components of these should be prioritised and implemented over the course of the JA in fourteen i.e., 17 participating EU-countries. JA ImpleMENTAL comprises 6 Work Packages (WPs), four horizontal WPS and one for each best practice. **WP6 on suicide prevention** aims to support improvement in knowledge and quality of suicide prevention services. Defined elements of SUPRA should be transferred and pilot implemented at national/regional level, suicide prevention strategies in participating countries developed i.e., revised.

The present country profile is one of the major deliverables of the JA, presenting national priorities for suicide prevention embedded in contextually relevant facts. It summarizes results of the national Situation- and Needs Assessment (SANA), lists lessons learned, recommendations and prioritized measures for suicide prevention. It includes challenges and opportunities as well as outlining next steps necessary to scale-up i.e., promote national/regional suicide prevention activities. The country profile is a basis for strategy formulation, for decision-making and a declaration of commitment to suicide prevention.

1. Context

1.1 Country, Health, and Social System

Table 1: Norway - Population structure: year, expressed as number of persons, by age and sex (1).

	Sex					
Age group	male	female	total			
<18	571 123	541 068	1 112 191			
18 - 64	1 719 357	1 645 975	3 365 332			
65+	474 990	536 471	1 011 461			
Total	2 765 470	2 723 514	5 488 984			

In 2022, life expectancy at birth for women in Norway was 84.35 years, and 80.92 years for men (2).







Most Norwegian households are financially relatively well-off. Income inequality has remained the same in 2020 as in 2017. During the same period, the proportion of people in low-income households remained stable – and even fell a little – both in terms of relative and absolute measures of low-income. In 2020, 11 percent of the population (excluding students) belonged to a low-income household, compared to 11.2% in 2017 and 10.8% in 2014 (3).

Norway has universal health and social insurance coverage, known as the National Insurance Scheme (NIS), or *Folketrygd*. The establishment of universal coverage has a long history in Norway. The national government is responsible for providing health care in accordance with the goal of equal access to care regardless of social or economic status or geographical location. It is also responsible for regulating, funding, and overseeing the provision of care. However, responsibility for the administration of care is shared with the municipalities, through the municipal councils (4).

Primary, preventive, and nursing care are organized locally. In addition, the municipalities (*kommunene*), often in cooperation with the counties (*fylkene*), decide on public health initiatives or campaigns to promote healthy lifestyles and reduce social health disparities. Municipalities are also responsible for providing long-term care, which is not included in universal health insurance.

The national government is responsible for hospital and specialty care, which are managed at a local level through four Regional Health Authorities (RHAs) The RHAs have the overall responsibility for implementing national health policy through planning, organizing, managing, and coordinating activities with the hospital and pharmacy trusts in their region (4).

1.2 Mental Health System

- In 2023 Norway will have a new <u>escalation plan for mental health</u> (*Opptrappingsplan for psykisk helse*). The national plan is under development. The plan will be finished in June 2023 and will thereafter be implemented.
- Norway has an ongoing action plan for suicide prevention (2020-2025)- called "*No one to lose*". This is Norway's third national strategy for suicide prevention (5).
- Mental health care: Mental health care is provided in municipalities by GPs, psychologists, psychiatric nurses, and social care workers. Many municipalities have multidisciplinary mental health outreach teams. Preventive services for mental health are directed toward children and adolescents through the school system. For specialized care, GPs may refer patients either to private psychologists and psychiatrists or to community mental health centers, which provide acute-care services (inpatient, outpatient, and day care) and rehabilitation services while also supervising and supporting primary care. These centers are dispersed throughout the country and often include psychiatric outreach teams. More advanced specialized services are provided in the inpatient psychiatric wards of general hospitals or in mental health hospitals. Hospital inpatient treatment is provided free of charge, and outpatient services are subject to the same cost-sharing as other ambulatory visits. Psychiatric services in hospitals and community mental health centers are funded in full by block grants through the RHAs. Private mental hospitals account for about 12 percent of mental health care, including services for eating disorders, nursing home care for older psychiatric patients, and some psychiatrist and psychologist outpatient practices, mostly contracted by the RHAs. The role of private treatment centers for addiction (mainly to drugs and alcohol) is prominent and funded mostly through contracts with RHAs. In general,







treatment for drug dependence is delivered by specialized treatment units, while GPs participate in opioid substitution treatment (4).

- total government expenditure on mental health care in the specialist mental health service in 2021 was 27.2 billion Norwegian kroner (approximately 2.4 billion Euros) (6).
- main forms of government social support available for persons with severe mental health conditions; income support, housing support, employment support, education support, social care support, legal support.
- share of people reporting unmet mental health care needs due to financial reasons Norway has universal health coverage. If necessary, an exemption from self-payment/user fee is available.
- proportion of involuntary admissions to number of total admissions- 20,2 % (2021) (7).
- follow-up care (the share of patients, who receive out-patient visits within one month after discharge is unknown. 59 % (2021) of the patients receive follow-up care (consultation at community-based mental health outpatient facility or out-patient visit) (7).
- community-based mental health outpatient facilities: 77 (8) (2018).

Table 2: Facilities, number of beds and hospital admissions related to mental health, latest available	2
year (9).	

Indicator at national level	number	rate per 100.000 adult/minor population	
Mental health hospitals	Facilities	**	**
	Beds	**	**
	Admissions	**	**
Psychiatric wards/units in general hospitals	Wards/units		
	Beds	3288*	77
	Admissions	42 862*	1001
	Facilities		
Mental health inpatient facilities specifically for children and adolescents	Beds	316*	28
	Admissions	3455*	311

*Numbers from 2021. SAMDATA The specialist health service in Norway.

** The specialist health service in Norway is organized in four regional health organizations (Helse Vest RHF, Helse Midt Norge RHF, Helse Nord RHF, Helse Sørøst RHF). Each of the regional health organizations have several associated health organizations. The mental health institutions in Norway have been added to the





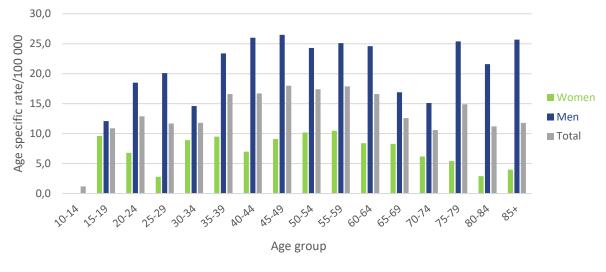


various health institutions in the region. In Norway the mental health institutions are integrated with the general hospitals. The focus of an ongoing reform is to shift emphasis from long- term hospitalisations toward shorter hospitalisations for acute states of mental illness and to provide log- term care in the community settings.

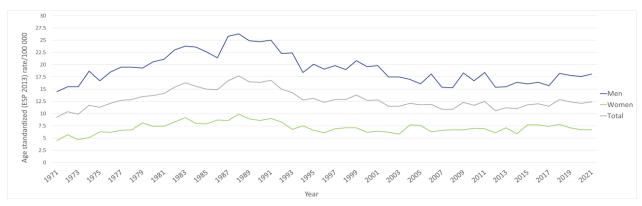
2. Suicide and Suicide Prevention

2.1 Situation Analysis (SA)

Figure 1: Suicide rates per 100 000 inhabitants in Norway (2021) by age groups and sex (10) (Cause of Death Register (CoDR) from 2021)







As shown in Fig. 2, suicide rates doubled between 1970 and 1990 before falling again. Much of the reduction in suicide rates after 1990 was due to reduction in total suicides among men (firearm safety regulations). For women, the reduction continued until mid-1990s before stabilizing. Among men, the reduction continued until recent years when a stable trend began to level off. Of note, a small but statistically significant increase in age standardized suicide rates was observed between 2010 and 2019 (11). Most recent suicide trends remain within the limits of expected fluctuations.







According to the data from the Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services, individuals in contact with one or more specialized mental health services or substance misuse services during the one-year period preceding suicide accounted for 45% of all suicides in Norway (12).

Every year the Norwegian Institute of Public Health provides data about deaths, including death by suicide as registered in the Cause-of-death register (CoDR). These data are published in the annual public health report and is publicly available at (11).

Sex/Age	0-19	20-39	40-59	60-79	80+
Women	 Hanging and suffocation (X70) Poisoning (X60-X66) Shooting and explosives (X72-X75) 	 Hanging and suffocation (X70) Poisoning (X60-X66) Other or unspecified way (X 67-69, X76-X77, X79, X81-84, Y870) 	 Hanging and suffocation (X70) Poisoning (X60-X66) Leaped from a high place (X80) 	 Poisoning (X60-X66) Hanging and suffocation (X70) Drowning (X71) 	1 2 3
Men	 Hanging and suffocation (X70) Drowning (X71) Other or unspecified way (X 67-69, X76-X77, X79, X81-84, Y870) 	 Hanging and suffocation (X70) Other or unspecified way (X 67-69, X76-X77, X79, X81-84, Y870) Shooting and explosives (X72-X75) 	 Hanging and suffocation (X70) Shooting and explosives (X72- X65) Poisoning (X60-X66) 	 Hanging and suffocation (X70) Shooting and explosives (X72- X75) Poisoning (X60-X66) 	 Hanging and suffocation (X70) Shooting and explosives (X72- X75) I. Poisoning (X60-X66)

Table 3: Most common methods of suicide: year 2021, by age group and sex (10) CoDR 2022

Note: The data is based on coding acording to ISD 10

Box 1. Groups most vulnerable to suicide (5).

Group 1: People with mental health problems

Group 2: In and outpatients at mental health services

Group 3: People with substance use disorders

Group 4. Patients admitted to medical hospital following deliberate self-harm, post discharge

As noted in Box 1., people with mental health and substance use problems represent the group most vulnerable to suicide. As many as 45% of all suicides registered in Norway are accounted for by suicides among individuals who have been in contact with specialized mental health- or substance







use services during the 12-month period preceding suicide (ref. kartleggingssystemet)(11). Suicide among recipients of in- and outpatients mental health is particularly notable post-discharge. Suicide rates are also relatively higher among patients in substance misuse Services, during outpatient care and after discharge from such care. Vulnerability according to age and gender categories is reflected in Fig. 1. however, other demographic groups are not designated according to grades of vulnerability. Please refer to the followiing publications for details (12,13,14 and 15).

Box 2. Most common barriers people face when seeking psychosocial help (5).

Barrier 1: Stigmatisation of mental illness and suicidal behaviourBarrier 2: Lack of knowledge of mental healh servicesBarrier 3: Access barriers including geographically remote locationsBarrier 4. No appointments available in time/ long wainting periodBarrier 4: Complexity of the mental health system

Note: The barriers presented above do not reflect order of their occurrence, since we do not have empiricallysupported data in this regard.

Table 4: Number of hospital-treated self-harm incidents and corresponding rate (/100 000 population) by sex and age group, year 2018 (16)

	0-19		20-	-39	40	-59	60-	-79	80)+
	N	rate	Ν	rate	Ν	rate	N	rate	Ν	rate
female	874	282.1	1497	216.4	836	121.2	399	80.6	204	148.1
male	236	72.0	890	121.8	690	95.1	342	71.4	129	151.7

Note: The data were based on episodes treated in specialist healthcare services thus recorded in Norwegian Patient Registry in year 2018; *The rate for the age group 0-19 was calculated upon population of 10 to 19 years old; The numbers were derived from unpublished research project data with the approval of access by the Ethical Committee for Health Research South-East (2013/1620/REK Sør-Øst) and the Norwegian directorate of Health (14/5589). In 2018, the incidence rate was 163.9/100 000 for women and 97.4/100 000 for men of 10 years old and above in Norway.

Table 5: Most common methods of self-harm with or without a suicidal intent: year, by age group and sex (16).

Sex/Age	0-19	20-39	40-59	60-79	80+
Female	 Medication poisoning Injury on forearm, hand, arm (cutting) Suffocation, drowning, burning, embedment 	 Medication poisoning Injury on other body parts Suffocation, drowning, burning, embedment 	 Medication poisoning Other substance poisoning Injury on other body parts 	 Medication poisoning Injury on other body parts Other substance poisoning 	 Medication poisoning Injury on other body parts Suffocation, drowning, burning, embedment







Co-funded by the European Union

Male1. Medication poisoning1. Medication poisoning2. Other substance poisoning2. Other substance poisoning2. Other substance poisoning3. Suffocation, drowning, burning, embedment3. Injury on other body parts	 Medication poisoning Other substance poisoning Injury on other body parts 	 Medication poisoning Injury on other body parts Suffocation, drowning, burning, embedment 	 Medication poisoning Injury on other body parts Suffocation, drowning, burning, embedment
--	---	---	---

Note: The data were based on episodes treated in specialist healthcare services thus recorded in Norwegian Patient Registry; Period of data: 2008-2018. The numbers were derived from unpublished research project data with the approval of access by the Ethical Committee for Health Research South-East (2013/1620/REK Sør-Øst) and the Directorate of health in Norway (14/5589).

- national suicide prevention strategy/-policy/-plan incl. monitoring Norway has an ongoing National Action Plan for Suicide prevention (2020 – 2025) called- No one to lose. The plan has 6 targets with sixty-one measures (5).
- overview over existing services: Norwegian helplines, chat, and messaging services report to the Norwegian Directorate of Health if necessary and requested.

2.2 Needs Assessment (NA)

Norway has an ongoing action plan for suicide prevention- called no one to lose 2020 – 2025. This is Norway's third national action plan for suicide prevention. The Action Plan has been prepared in collaboration between eight ministries. It contains a broad societal perspective, recognizing that suicide prevention is needed in other arenas in addition to the health sector. The National Action Plan for Suicide prevention 2020 – 2025 has six targets with sixty-one measures (5).

In the preparation of the suicide prevention action plan the following activities were conducted:

- the action plan for suicide prevention is based on the previous two action plans that have been implemented in Norway
- several insight meetings were held with several stakeholders, such as the Directorate of Health, the Norwegian Institute of Public Health (NIPH), the Norwegian Board of Health Supervision, specialists, communities, professional organizations, and several organizations representing patients, relatives, survivors and from voluntary and non-profit organizations.
- research review was conducted by the Norwegian Institute of Public Health (NIPH), which presented an overview of suicide prevention measures that are known to have a documented effect, as well as pointing to areas where evidence-base remain inadequate.
- a summary/explanation was given of suicide prevention tools that have been put into use in Norway. The summary was conducted by the Norwegian Directorate of Health in collaboration with other stakeholders in the field.
- as part of the preparatory work for the action plan, NIPH was also commissioned to make two further summaries of knowledge:
- Suicide in men: A review of risk factors, causes, measures, and treatment
- Suicide in the elderly: A review of risk factors, causes, measures, and treatment

Many of the action plans targets are in progress. To ensure the follow-up of the plan, the Norwegian Directorate of health has, on behalf of the Norwegian Ministry of Health and Care Services,







established a cross-sectoral national forum for suicide prevention, cooperating closely with an associated directorate. The forum consists of competence clusters, services, clients/ patients, and survivors' organizations.

See also the summaries, on pages 4-6 National Action Plan for suicide prevention 2020 – 2025 (5).

Table 6: SWOT Analysis: The SWOT analysis is based on studies, political strategies, discussions, and professional consensus.

Factors		Cont	ents		
Strengths	1.More reliable data on suicide and self- harm	2.Norway has a National action plan for suicide prevention 2020 -2025	3. Established partnership/ collaboration between eight ministries' in preparing and in following up of the national plan for suicide prevention	4. Well-established healthcare services	5. There is a broad consensus across political parties that work on suicide prevention should be prioritized
Weaknesses	1.Data on suicide and self-harm for the calendar year available only in June the following year	2. Stigmatisations of individuals with mental illness and of those who self-harm or those with history of suicidal behaviour	3. Challenges in enabling and motivating men to seek help for suicidal thoughts, and mental issues in general	4. Lack of health literacy	
Opportunities	1. Awareness raising	2. New websites on suicide and self-harm, which could be used in many ways- advocating for the topic, and raising awareness	3. Established collaboration between eight ministries can lead to more comprehensive suicide prevention	4. The action plan contributes with more knowledge about suicide and suicide prevention	5. In Norway, it has been politically decided that we must have a vision of zero suicides. (Vision zero)
Threats	1.Stigmatisations of individuals with mental illness and of those who self-harm or those with history of suicidal behaviour	2 Lack of health literacy	3.Further reductions in human resources availability	4.Competing interests leading to lack of prioritization. Example: suicide prevention in schools, different stakeholder interests	5. Problems with stakeholder involvement and support







3. Reflection on SANA results

To prevent self-harm and suicide among general population and specific vulnerable groups (see box 1), it is necessary to:

- actively initiate and implement activities in the National action plan for suicide prevention "No one to lose" (2020-2025) (5).
- involve clients and their relatives in all activities in the development of relevant services.
- implement regional public information campaigns in the period of 2020- 2025. The target group for the campaigns is the general population, in addition to the fact that there is a special focus on men. The reason for this is that around 70% of those who take their own lives in Norway today are men. The aim of the public information campaigns is to increase awareness in the population of suicidal thoughts, to help more people seek help and to get more people to ask if they are worried about someone having suicidal thoughts. These are often multilevel efforts; during the period in which the campaign work takes place, several efforts are conducted at the same time based on the region's needs. For example, activities such as courses and training aimed at services and key personnel, as well as information aimed at the population. Information has been prepared on helsenorge.no "suicidal thoughts and suicide" (17), Here they can get advice and guidance both for those who are having a difficult time and those who are worried about someone. Through this initiative, the health authorities, the competence environment, organizations for service users and their relatives, services and volunteers in a region work together to raise focus and contribute knowledge.
- conduct competence measures to contribute to increased knowledge about suicide prevention among general population and in the health services
- continuing with activities focused om raising awareness, increasing help- seeking.
- training aimed at increasing practical skills and raising awareness among key professions (GPs, social workers nurses, teachers etc.) should be implemented.

Success factors/ facilitators:

- contribute to ensuring that the services adopt evidence-based methods
- actively reflecting needs of the patients/ clients and involve them and their relatives in all activities in the development of health services.
- actively involve stakeholders and strengthening professional bonds with them
- actively guide the municipalities in developing municipal action plans for the prevention of suicide.

Barriers:

- the gap between the level of political ambition and the allocation of resources
- competing interests can lead to lack of prioritization, example: suicide prevention in schools, different stakeholder interests
- lack of focus; too many objectives at the same time
- problems with a continuing focus on stakeholder involvement and support
- lack of local awareness for suicide prevention work

4. Next steps

The National Action Plan for Suicide prevention has six targets with sixty-one measures. Norway will work with these measures until 2025.







- Measure 1: Systematic and comprehensive approach in suicide prevention efforts.
- Measure 2: Safe communication about suicide
- Measure 3: Limited access to methods for suicide
- Measure 4: Competent help and good treatment paths for individuals in risk
- Measure 5: Immediate and long-term follow-up for the bereaved Measure 6: Better statistics, increased research, knowledge, and competence on suicide prevention

The National Action Plan for Suicide prevention lasts until 2025. During this time and after, Norway will report, document, evaluate, continue, and work for increased cooperation between participants in the work of suicide prevention. As a part of our participation in JA Implemental and especially in WP6, Norway will exchange information and experiences on suicidal prevention. As participants in WP6, we will take part in discussions and knowledge from meetings and collaboration in JAS. This will be an important contribution in obtaining more knowledge and will be contributing to improving the quality of our suicide prevention work in Norway.

Norway implements regional public information campaigns with national structure. The campaign includes training of health personnel, gatekeepers, relatives and bereaved. The goals are to reduce stigma and increase openness about mental health challenges and suicidal thoughts. Further goals are that more people seek help for suicidal thoughts and more people ask directly if they are concerned about whether someone, they know has suicidal thoughts. In extension of this, it is prepared a separate website to provide guidance and knowledge in suicide prevention. The purpose is to make available knowledge-based advice for those who have suicidal thoughts and those who are worried about whether someone close to them is having suicidal thoughts.

Implementation of the measures in Norway's Action plan for suicide prevention is anchored in the national forum for the prevention of suicide and across directorates. The national forum receives a report on the implementation of the measures in the action plan is presented to the national forum and the directorate collaboration for ongoing feedback.

Norway shares and gain experiences trough participation in JAImpleMENTAL within coordination, implementation, and politics challenges. The gain and shared experiences contribute to better goal achievement for Norway's measures in the action plan for the prevention of suicide. This knowledge is shared with the Ministry of Health and Welfare and the National forum for the prevention of suicide to ensure better enforcement of the plan.

5. References

- Statistics Norway. 07459: Population, by region, age, contents, year and sex [Internet]. [cited 2023 May 15]. Available from: https://www.ssb.no/en/statbank/table/07459/
- Haug M. Statistics Norway. Forventa levealder falt i 2022 [Internet]. 2023 Mar 7 [cited 2023 May 15]. Available from: https://www.ssb.no/befolkning/fodte-ogdode/statistikk/dode/artikler/forventa-levealder-falt-i-2022







- Statistics Norway. The economic welfare of low-income households 2022 [Internet]. [cited 2023 May 15]. Available from: https://www.ssb.no/en/inntekt-og-forbruk/inntekt-og-formue/artikler/the-economic-welfare-of-low-income-households-2022
- Saunes I.S. in Tikkanen R., Osborn R., Mossialos E., Djordjevic A., Wharton G.A. The Commonwealth Fund. International Health Care System Profiles – Norway. 2020 June 5 [cited 2023 May 15]. Available from: https://www.commonwealthfund.org/international-healthpolicy-center/countries/norway
- The Norwegian Ministries (2020). Handlingsplan for forebygging av selvmord 2020–2025 Ingen å miste. Helse-og omsorgsdepartementet [Action plan for prevention of suicide 'No one to lose' 2020–2025. The Ministry of Health and Care Services]. Oslo. Available from: https://www.regjeringen.no/no/dokumenter/regjeringens-handlingsplan-for-forebygging-avselvmord-2020-2025/id2740946/
- Norwegian Directorate of health (2022). Sterk kostnadsvekst for spesialisthelsetjenesten under pandemien [Internet]. Oslo. 2022 sept 22, [cited 2023 May 15]. Available from: https://www.helsedirektoratet.no/nyheter/sterk-kostnadsvekst-for-spesialisthelsetjenestenunder-pandemien
- 7. Norwegian Directorate of health (2021). Norwegian Patient Registry [Database]. Available from: https:// helsedirektoratet.no/norsk-pasientregister-npr
- 8. Norwegian Directorate of health (2018). Norwegian Patient Registry [Database]. Available from: https:// helsedirektoratet.no/norsk-pasientregister-npr
- 9. Norwegian Directorate of health (2021). SAMDATA, The specialist health service in Norway [Database]. https://statistikk.helsedirektoratet.no/bx/Dashboard/9b94e820-7892-48dd-927f-cd943ec7cffe?e=false&vo=viewonly6
- 10. Norwegian Institute of Public Health (2021). Norwegian Cause of Death Registry [Database]. Available from: https://www.fhi.no/en/hn/health-registries/cause-of-death-registry/
- 11. Raknes, G. and Sveen, K.A. (2022). Figures from the Norwegian Cause of Death Register 2021 [online document]. Oslo: Norwegian Institute of Public Health. Updated 10.06.2022 [cited 2023 May 15]. Available from https://www.fhi.no/hn/helseregistre-ogregistre/dodsarsaksregisteret/tall-fra-dodsarsaksregisteret-2021/#ytre-aarsak-inkl-ulykkerselvmord-og-narkotikautloeste-ddsfall
- 12. Walby, F.A., Astrup, H., Giil, E & Myhre, M.Ø (2023). Nasjonalt kartleggingssystem for selvmord i psykisk helsevern og tverrfaglig spesialisert rusbehandling. Årsrapport 2019-2020 Selvmord under døgnopphold. Nasjonalt kartleggingssystem for selvmord i psykisk helsevern og tverrfaglig spesialisert rusbehandling [The Norwegian Surveillance System for Suicide in Mental Health and Substance Misuse Services. Annual Report 2019-2020]. National Centre for Suicide Research and Prevention, University of Oslo. Available from: www.uio.no/kartleggingssystemet
- 13. Lunde KB, Mehlum L, Melle I, Qin P, Psychiatric admissions after hospital presented deliberate self-harm in the young: A national study, Journal of Psychiatric Research (2022), doi: doi:







10.1016/j.jpsychires.2022.05.020

- Qin P, Stanley B, Melle I, Mehlum L. Association of Psychiatric Services Referral and Attendance Following Treatment for Deliberate Self-harm With Prospective Mortality in Norwegian Patients. *JAMA Psychiatry*. 2022;79(7):651–658. doi:10.1001/jamapsychiatry.2022.1124
- Qin P, Mehlum L (2020) Deliberate self-harm: Case identification and incidence estimate upon data from national patient registry. PLoS ONE15(4): e0231885. doi: 10.1371/journal.pone.0231885
- 16. Norwegian Patient Registry; Period of data: 2008-2018. [unpublished].
- Norwegian Directorate of health and National Centre for Suicide Research and Prevention, University of Oslo. "Suicidal thoughts and suicide (2021)" Updated 2021 Oct 12[Internet]. [cited 2023 May 15]. Available from: https://www.helsenorge.no/en/psykisk-helse/suicidalthoughts-and-suicide/

6 Corresponding authors

Sudan Prasad Neupane, MBBS, MPhil, PhD. Researcher. National Centre for Suicide Research and Prevention, University of Oslo Email: <u>s.p.neupane@medisin.uio.no</u>

Kim Larsen, Specialist in Psychology. Lecturer. National Centre for Suicide Research and Prevention, University of Oslo Email: <u>kim.larsen@so-hf.no</u>