

The syndemic of COVID-19 and Substance Use Disorders



Wossenseged Jemberie, MPH



UMEÅ UNIVERSITY

Department of Social Work
Centre for Demography and Ageing Research
Umeå University.



LUND
UNIVERSITY

The Swedish National Graduate School for Competitive Science on
Ageing and Health (SWEAH), Department of Health Sciences,
Faculty of Medicine, Lund University.

Umeå



Source: Wikipedia

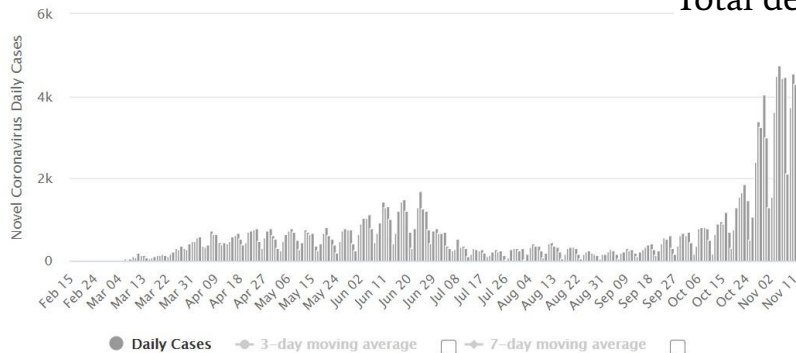


Source: Worldatlas

Daily New Cases in Sweden

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

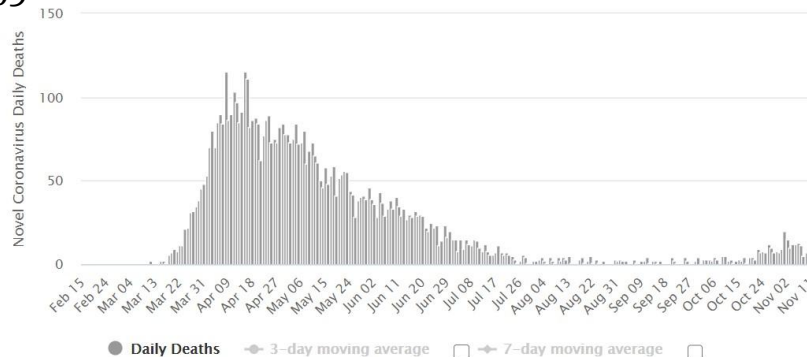


Total Infection/ 1 Million= 16, 930
Total death/ 1 million= 605

Daily New Deaths in Sweden

Daily Deaths

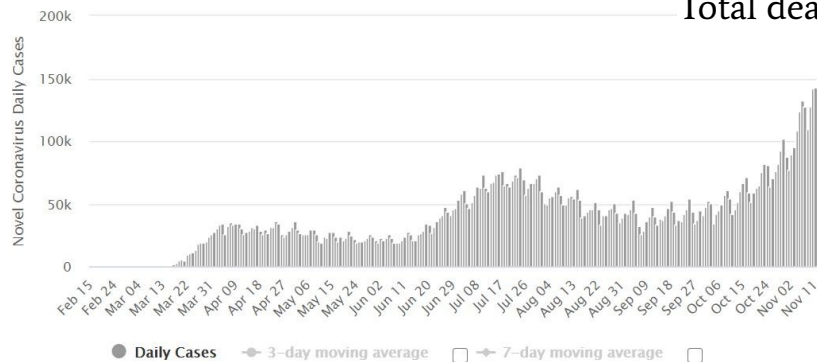
Deaths per Day
Data as of 0:00 GMT+8



Daily New Cases in the United States

Daily New Cases

Cases per Day
Data as of 0:00 GMT+0

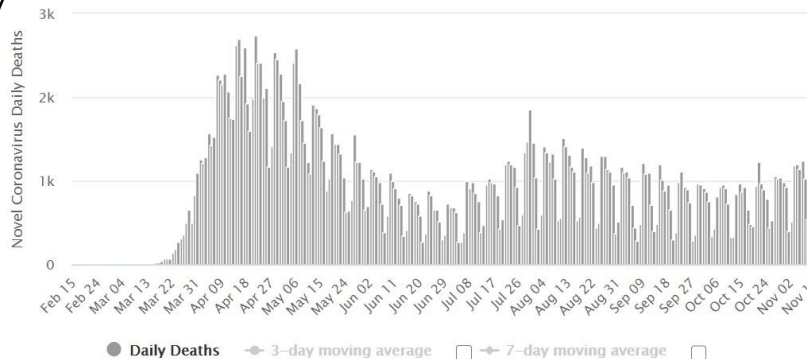


Total Infection/ 1 Million= 32, 406
Total death/ 1 million= 747

Daily New Deaths in the United States

Daily Deaths

Deaths per Day
Data as of 0:00 GMT+8

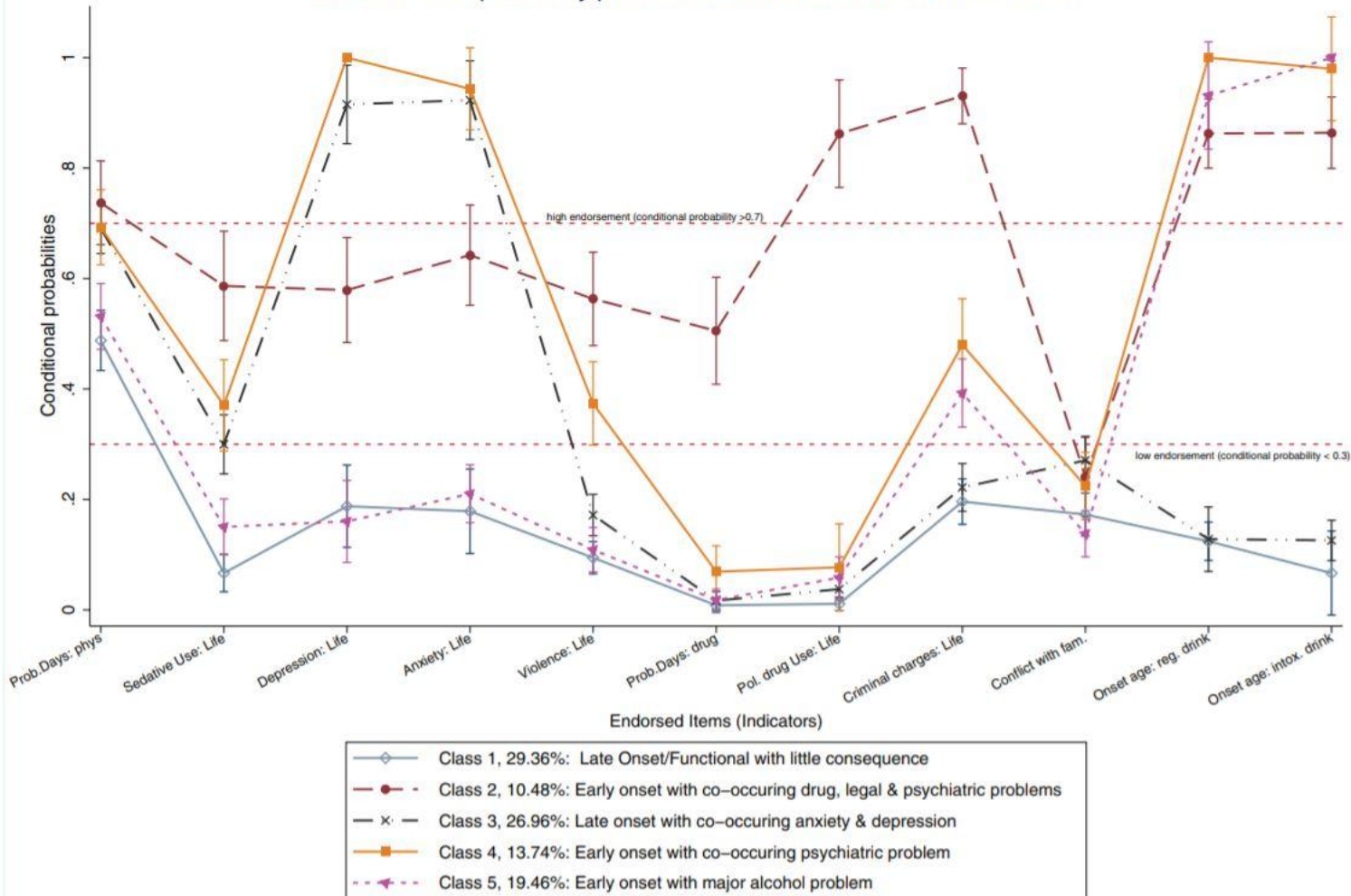


Substance Use Disorders (SUDs)

Are biopsychosocial disorders:

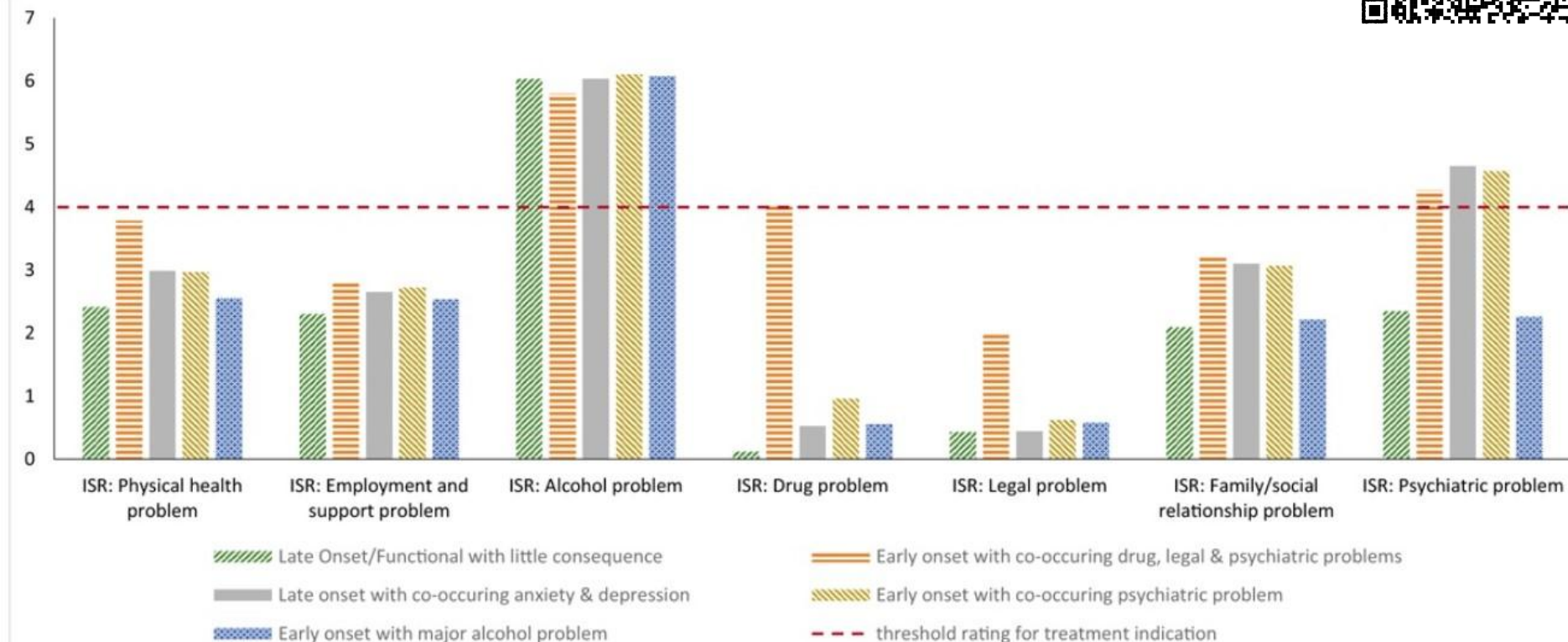
- With multiple risk factors interacting at individual & contextual levels
- Result in comorbid health conditions

Conditional item probability profile for the five-class model. with 95% CIs



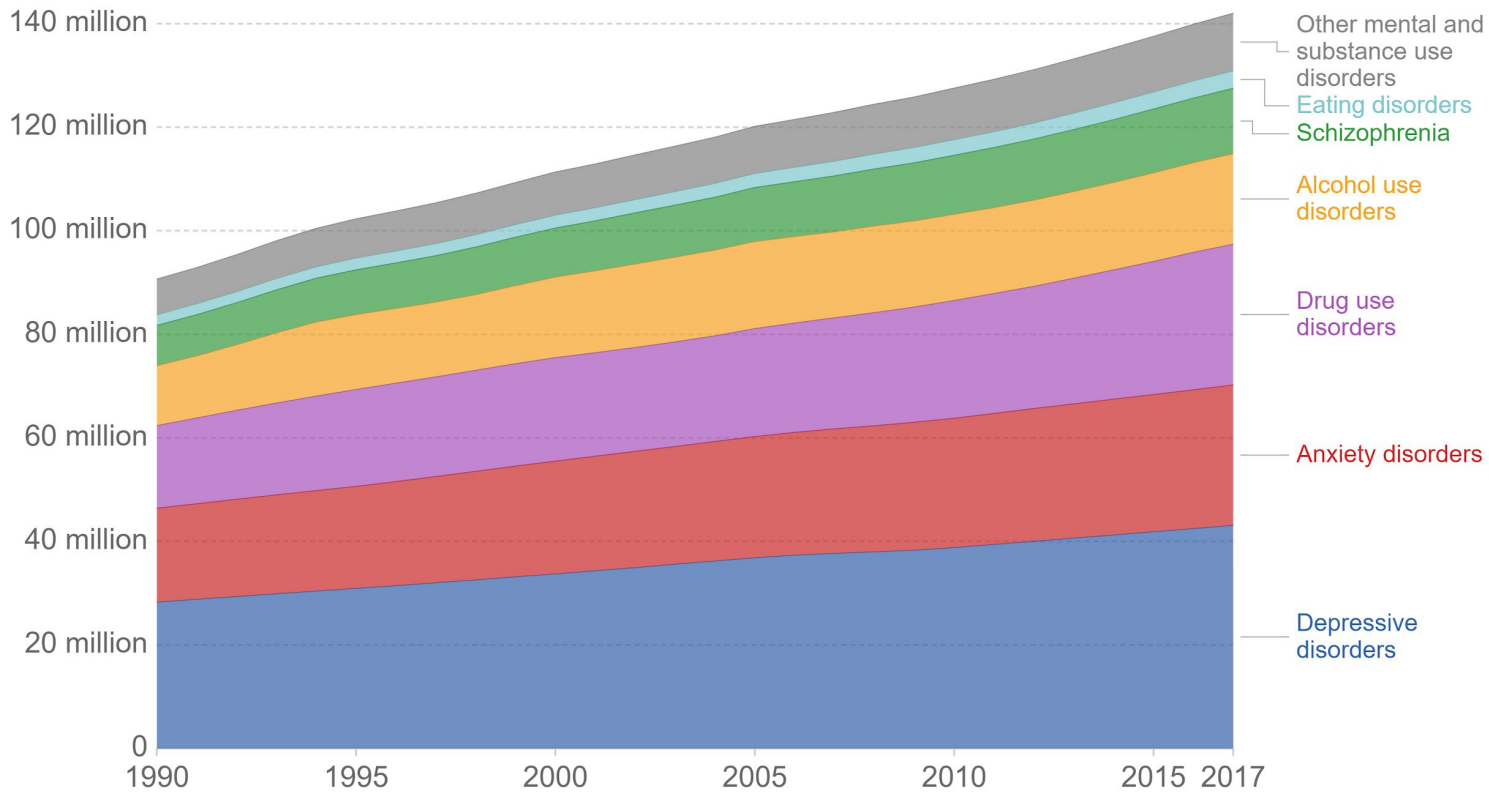
Jemberie et al., 2020



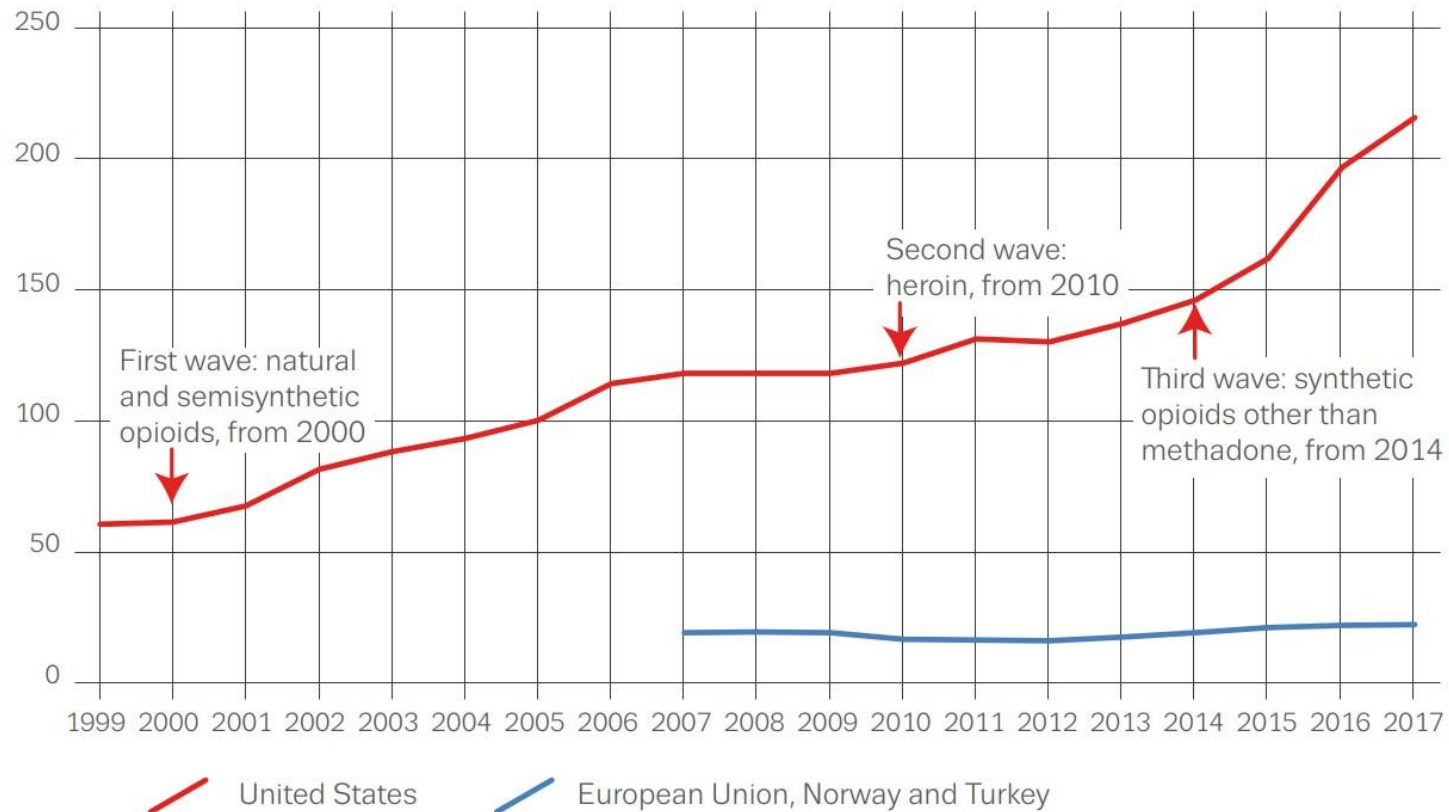


DALYs from mental health and substance use disorders, World, 1990 to 2017

Annual DALYs (Disability-Adjusted Life Years) from mental health and substance use disorders. DALYs are used to measure total burden of disease - both from years of life lost and years lived with a disability. One DALY equals one lost year of healthy life.

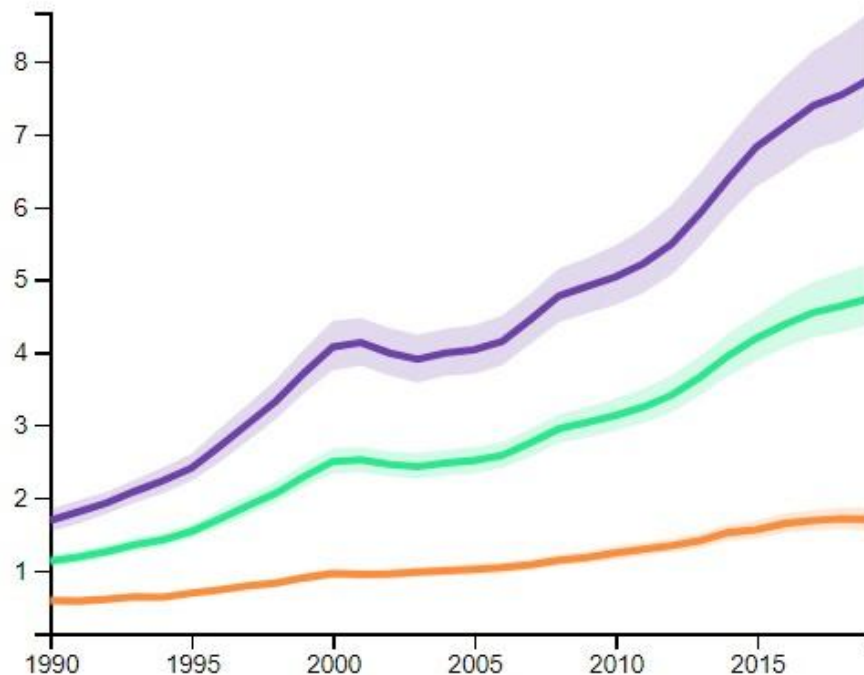


Deaths per
million
population



Note: Age-adjusted overdose death rates. The European trend for all drug-induced deaths rates per million population aged 15-64 is presented for comparison. Sources: National Center for Health Statistics, National Vital Statistics System, Mortality; EMCDDA. Both adapted by the EMCDDA.

Deaths, rate per 100k



Legend

- Sweden, Males, All Ages, Drug use disorders
- Sweden, Females, All Ages, Drug use disorders
- Sweden, Both sexes, All Ages, Drug use disorders

Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2017 (GBD 2017) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2018.



PERSPECTIVE ARTICLE

Front. Psychiatry, 21 July 2020 | <https://doi.org/10.3389/fpsy.2020.00714>



Substance Use Disorders and COVID-19: Multi-Faceted Problems Which Require Multi-Pronged Solutions

EDITED BY



Giuseppe Bersani

Sapienza University of Rome, Italy

REVIEWED BY



Domenico De Berardis

Azienda Usl Teramo, Italy



Ruben D. Baler

National Institutes of Health (NIH), United States

The editor and reviewers' affiliations are the latest provided on their Loop research profiles and may not reflect their situation at the time of review.

TABLE OF CONTENTS

Abstract

Introduction

Wossenseged Birhane Jemberie^{1,2,3*}, **Jennifer Stewart Williams**^{4,5}, **Malin Eriksson**¹, **Ann-Sofie Grönlund**¹, **Nawi Ng**^{4,6}, **Marcus Blom Nilsson**¹, **Mojgan Padyab**^{1,2}, **Kelsey Caroline Priest**⁷, **Mikael Sandlund**⁸, **Fredrik Snellman**¹, **Dennis McCarty**⁹ and **Lena M. Lundgren**^{1,10}

¹Department of Social Work, Umeå University, Umeå, Sweden

²Centre for Demography and Ageing Research (CEDAR), Umeå University, Umeå, Sweden

³The Swedish National Graduate School for Competitive Science on Ageing and Health (SWEAH), Department of Health Sciences, Faculty of Medicine, Lund University, Lund, Sweden

⁴Department of Epidemiology and Global Health, Faculty of Medicine, Umeå University, Umeå, Sweden

⁵Research Centre for Generational Health and Ageing, Faculty of Health, University of Newcastle, Callaghan, NSW, Australia

⁶School of Public Health and Community Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

⁷MD/PhD Program, School of Medicine, Oregon Health & Science University, Portland, OR, United States

⁸Psychiatry Unit, Department of Clinical Science, Umeå University, Umeå, Sweden

⁹Oregon Health & Science University- Portland State University, School of Public Health, Portland, OR, United States

¹⁰Cross-National Behavioral Health Laboratory, Graduate School of Social Work, University of Denver, Denver, CO, United States

The Intersection of SUDs & COVID-19

- Drug and alcohol use are often communal



Source: Shutterstock

The Intersection of SUDs & COVID-19

- Limited financial resources
- Unstable housing
- Limited access to clean water and soap

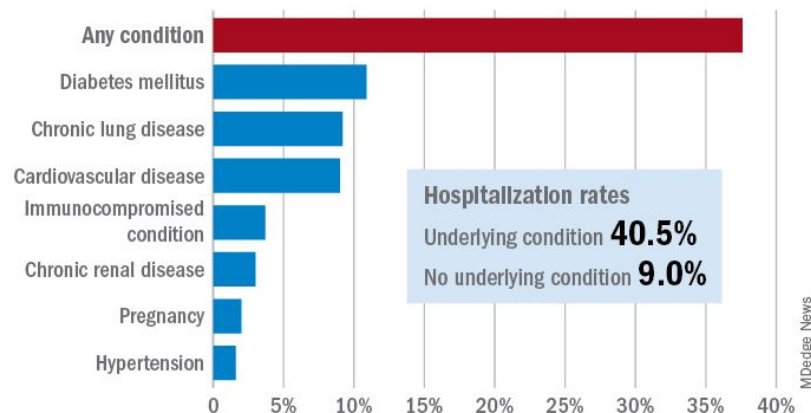
....

All of which increase risk of
COVID-19 infection



The Intersection of SUDs & COVID-19

Prevalence of underlying conditions in U.S. COVID-19 patients



Note: Data on underlying health conditions/risk factors were available for 7,162 (5.8%) of the 122,653 COVID-19 cases reported to the CDC as of March 28.

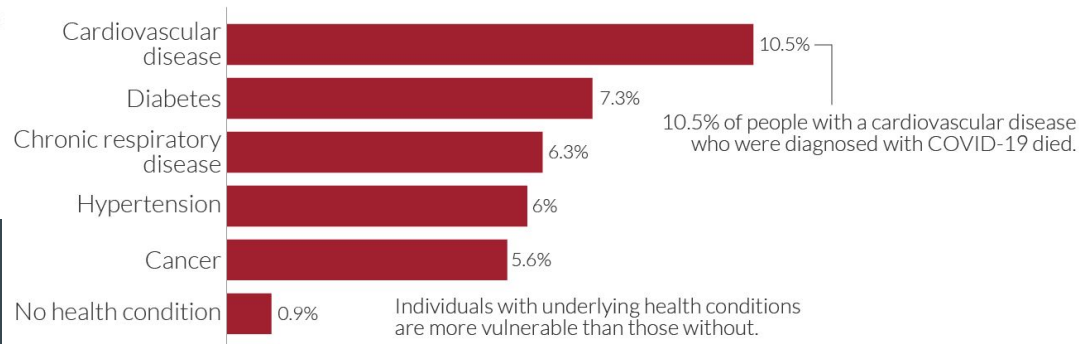
Source: MMWR. 2020 Mar 31;69[early release]:1-5

SUD comorbidities are associated with COVID-19 symptom severity and fatalities

Coronavirus: early-stage case fatality rates by underlying health condition in China

Case fatality rate (CFR) is calculated by dividing the total number of deaths from a disease by the number of confirmed cases. Data is based on early-stage analysis of the COVID-19 outbreak in China in the period up to February 11, 2020.

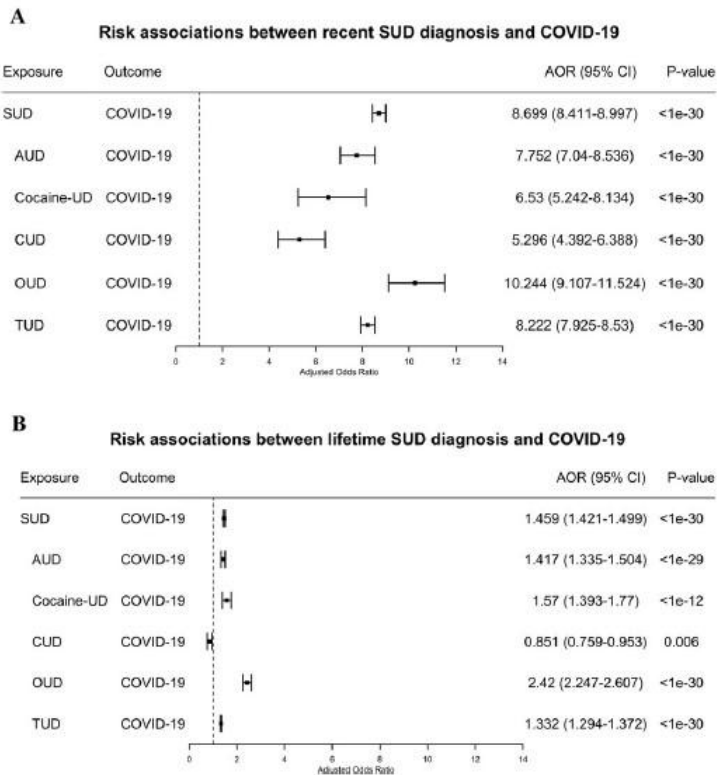
Our World in Data



Data source: Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. Vital surveillances: the epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19)—China, 2020. China CDC Weekly.

OurWorldinData.org – Research and data to make progress against the world's largest problems.

Licensed under CC-BY by the authors.



A **Death rates among COVID-19 patients with SUD**

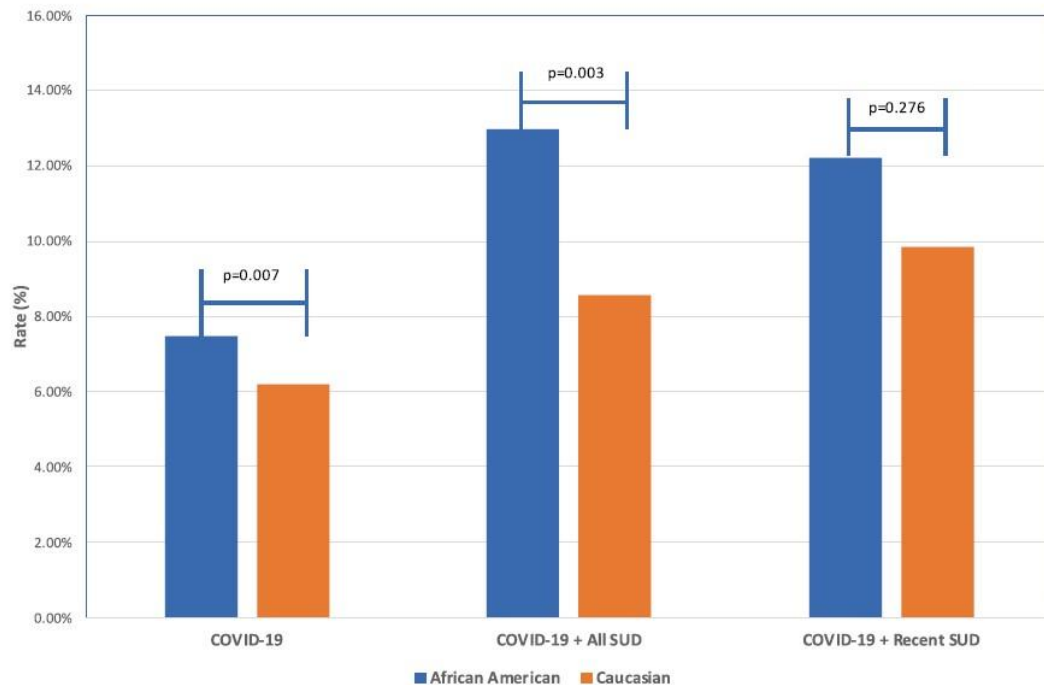


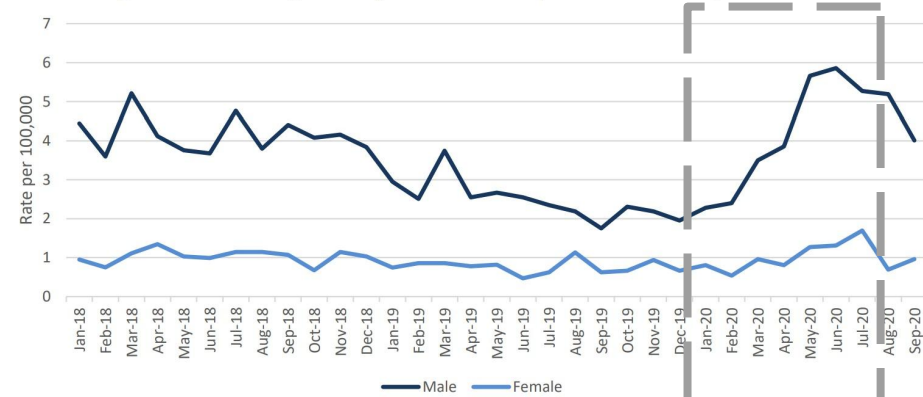
Fig. 1 a Risk associations of recent (diagnosis made in the last year) SUD diagnoses (and its subtypes) with COVID-19; **b** Risk associations of lifetime (diagnosed in the last year or prior) SUD diagnoses (and its subtypes) with COVID-19. SUD substance use disorder, AUD alcohol use disorder, Cocaine-UD cocaine use disorder, CUD cannabis use disorder, OUD opioid use disorder, TUD tobacco use disorder. Subtypes without sufficient sample sizes for COVID-19 cases are not shown.

Wang et al (2020). COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States

Public health mitigation measures

(i.e., physical distancing, quarantine and isolation)

Figure 4: Illicit Drug Toxicity Death Rates by Sex and Month, 2018-2020



COVID-19 deaths v. Overdose deaths in B.C. (2020)

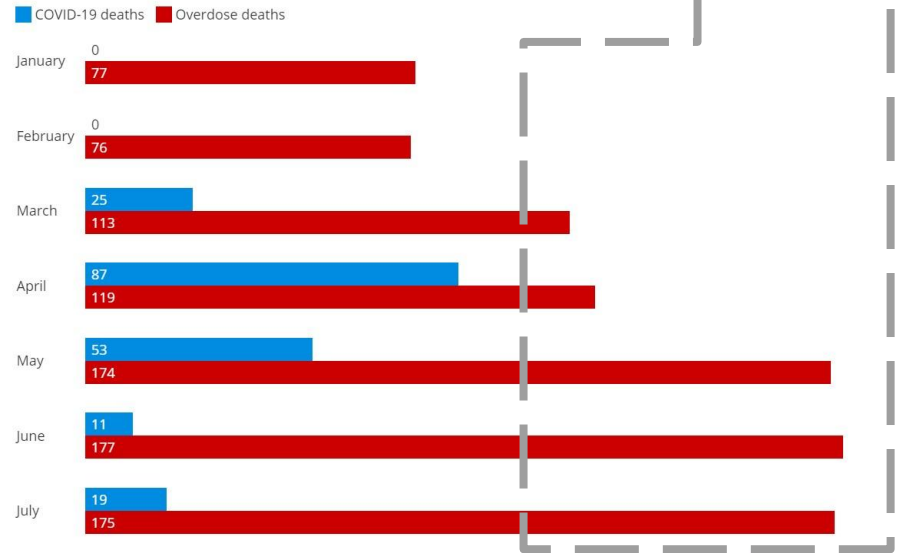
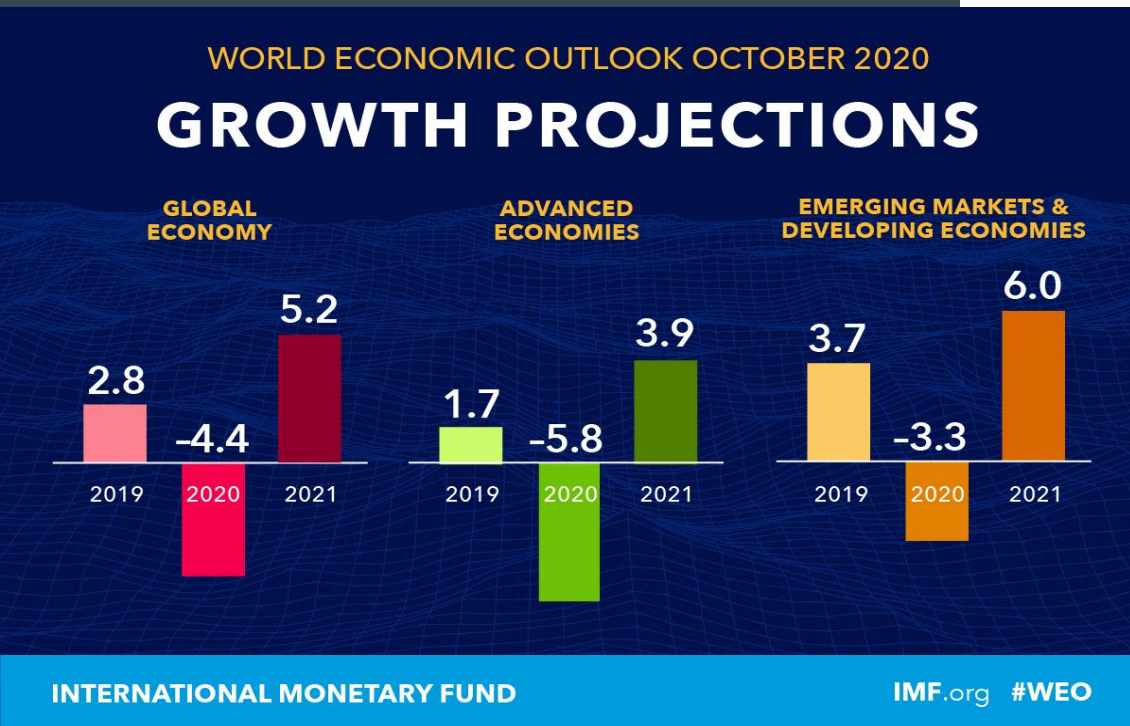


Chart: Justin McElroy • Source: B.C. Ministry of Health/BC Coroners Service

Public health and socio-economic impacts (1)



Unemployment & austerity

Previous systemic shocks had resulted higher SUD-related mortality and suicide.

Austerity leads to stress on public health infrastructure.

Poverty \Rightarrow informal economies

Public health and socio-economic impacts (2)

Unemployment & austerity

Previous systemic shocks had resulted higher SUD-related mortality and suicide.

Austerity leads to stress on public health infrastructure.

Poverty \Rightarrow informal economies

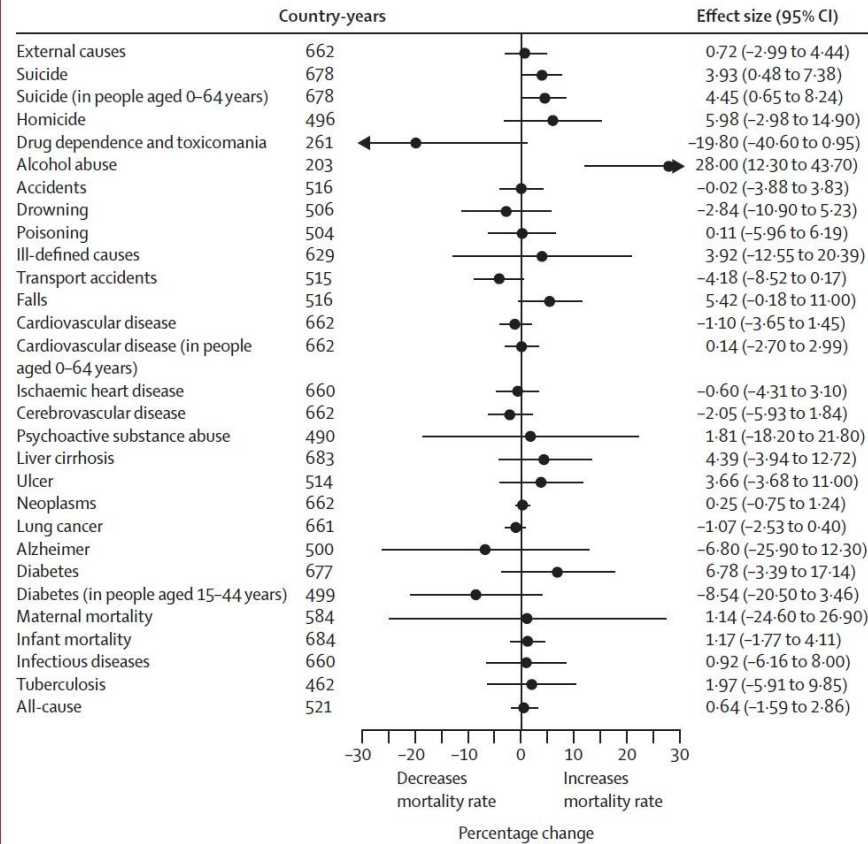


Figure 2: Associations of a mass rise (>3%) in unemployment with age-standardised mortality rates, by cause of death, in European Union countries, 1970–2007

Source: Stuckler et al (2009). The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis.

Public health and socio-economic impacts (3)

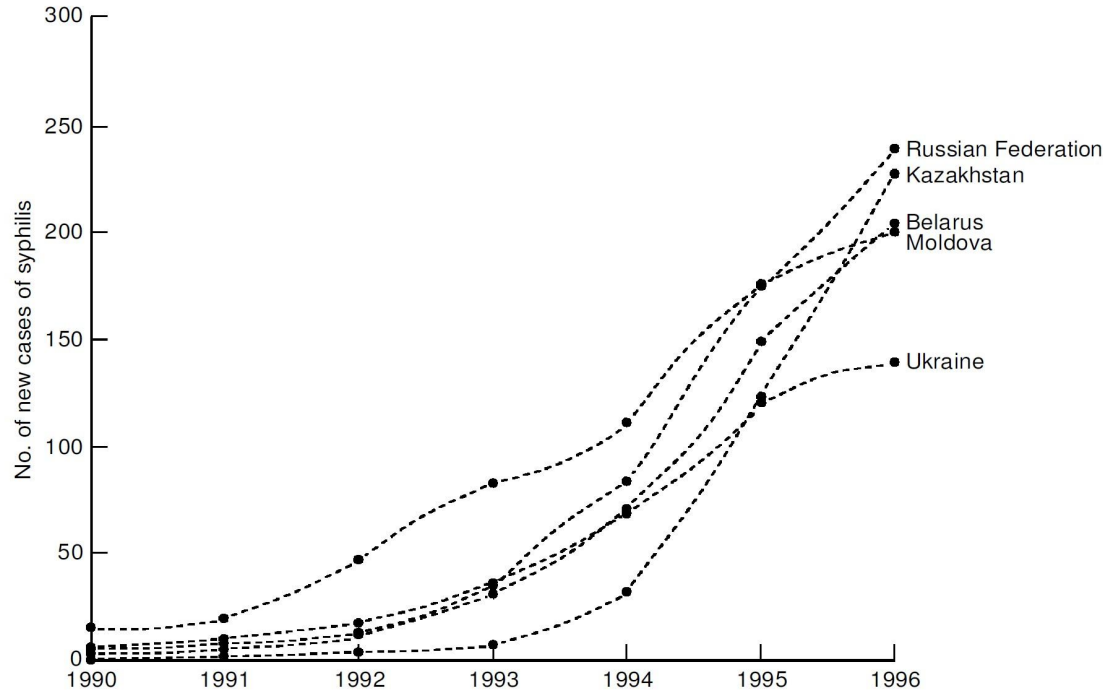


Figure 1. Notification of new cases of syphilis in NIS reporting rapid HIV spread. Source: Renton & Borisenko (1998).

Source: Rhodes et al (1999). HIV infection associated with drug injecting in the Newly Independent States, eastern Europe: the social and economic context of epidemics.

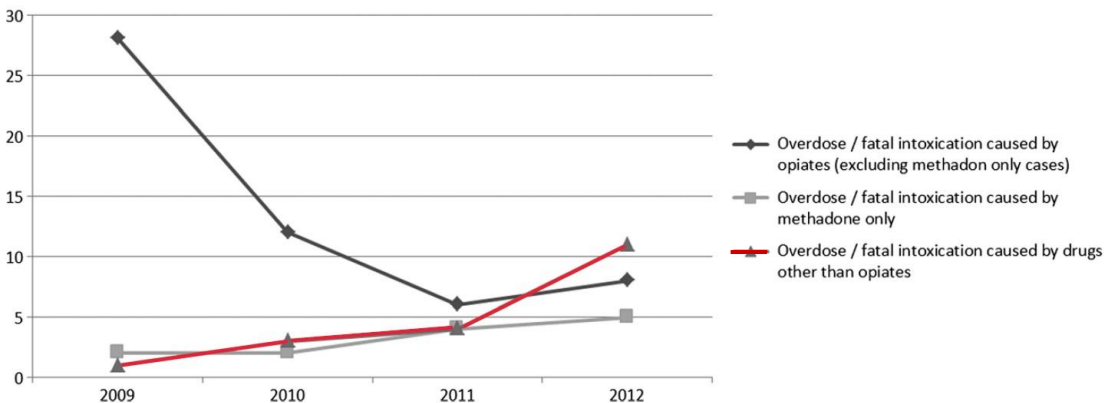
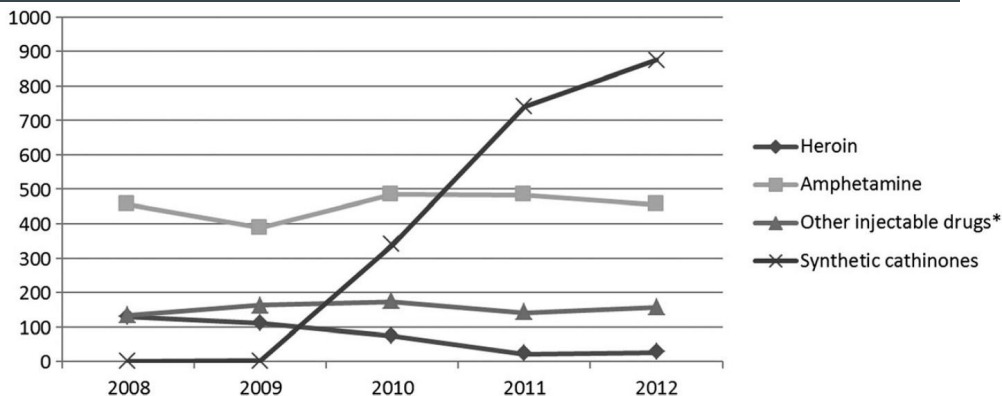
Unemployment & austerity

Previous systemic shocks had resulted higher SUD-related mortality and suicide.

Austerity leads to stress on public health infrastructure.

Poverty \Rightarrow informal economies

Public health and socio-economic impacts (4)



Source: Peterfi et al (2014). Changes in patterns of injecting drug use in Hungary: a shift to synthetic cathinones.

Change in Drug Use Patterns

Adulteration of drugs by suppliers

Introduction of novel psychoactive substances

Shift in drug use pattern

Change in illicit drug market



GLOBAL DRUG SURVEY

SPECIAL EDITION ON COVID-19

WWW.GLOBALDRUGSURVEY.COM/COVID19

CLOSES ON JUNE 20

THIS REPORT IS BASED ON DATA FROM > 40,000 PEOPLE WHO PARTICIPATED IN THE FIRST 3 WEEKS
PLEASE TAKE 15 MINUTES TO SHARE YOUR EXPERIENCES – ANONYMOUS & CONFIDENTIAL

SUGGESTED CITATION: GDS SPECIAL EDITION ON COVID-19 GLOBAL INTERIM REPORT 02/06/2020
WINSTOCK AR, DAVIES EL, GILCHRIST G, ZHUPARRIS A, FERRIS JA, MAIER LJ, BARRATT MJ

Effekter av Coronapandemin – alkoholanskaffning och konsumtion under mars och april 2020, jämfört med samma period 2019

Preliminära uppgifter

Björn Trolldal CAN, juni 2020

Sammanfattning

Preliminära beräkningar från CAN:s Monitormätningar visar att det inte skett någon ökad konsumtion av alkohol i Sverige under Coronapandemin.

Av beräkningarna framgår att den registrerade försäljningen i Sverige under mars och april i år låg på ungefär samma nivåer som under samma period 2019. Däremot sjönk den oregistrerade anskaffningen med 56 procent, räknat i centiliter ren alkohol per invånare 15 år och äldre. Det ger totalt sett en minskad anskaffning på 7 procent i mars och april i år jämfört med samma månader 2019.



Source: Complicated Grief (by Laura Mullen)

Public health and socio-economic impacts (5)

Bereavement and loneliness

Shrinking social network

Social isolation, loneliness

Complicated grief and prolonged
bereavement

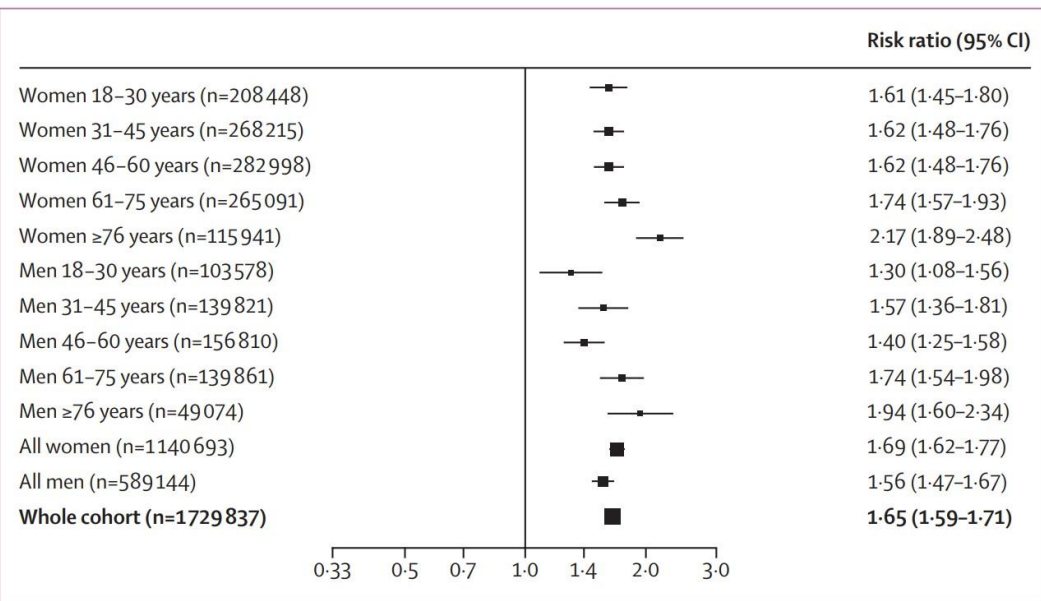
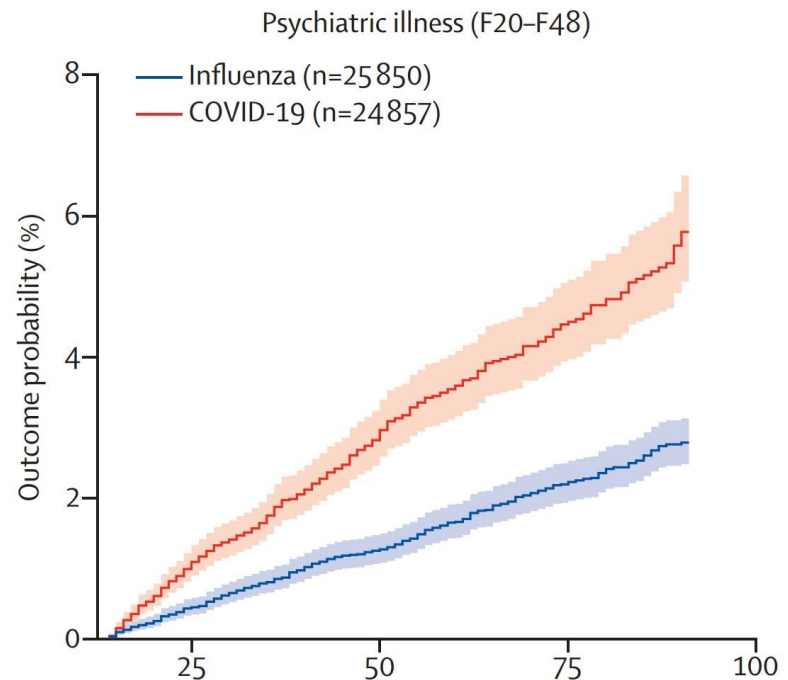


Figure 3: Relative risks of COVID-19 among patients with a psychiatric illness recorded in the past year compared with a matched cohort of patients with no history of psychiatric illness
RR=risk ratio.



Number at risk	30 days	45 days	60 days	75 days	90 days
COVID-19 group	7112	5265	3827	2602	1458
Control group	11174	10199	9371	8634	7800

Taquet et al (2020). Bidirectional associations between COVID-19 and psychiatric disorder: retrospective cohort studies of 62354 COVID-19 cases in the USA

Proposed mitigation strategies

Protective social policies
and community social
capital

- Employment support & welfare systems
- community social capital is an important resource in disaster management

Alcohol disorders and re-employment in a 5-year follow-up of long-term unemployed

BJØRGULF CLAUSSEN

Institute of General Practice and Community Medicine, University of Oslo, Norway

Abstract

Aims. To establish whether the high prevalence of alcohol abuse among unemployed people is explained by alcohol abuse causing unemployment, or vice versa. **Design.** A 5-year postal follow-up survey of a community sample of unemployed from Grenland, southern Norway. **Participants.** Two hundred and twenty-eight unemployed people, registered for more than 12 weeks, aged 16 to 63 years. Response rate 74%. **Measurements.** The Alcohol Use Disorder Identification Test (AUDIT) and DSM-III diagnoses of alcohol disorders in medical examinations. **Findings.** At the 5-year follow up, 23% of those still unemployed and 12% of those re-employed scored higher than the AUDIT cut-point of 10. Re-employment reduced the chance of scoring positive on the AUDIT to 34% of the chance for those still unemployed. Significant selection to long-term unemployment according to AUDIT score was not demonstrated. None of the 7% who had a DSM-III diagnosis of an alcohol disorder had a job 5 years later, however, suggesting that alcohol-related selection to unemployment does occur. **Conclusion.** The high prevalence of harmful drinking among Norwegian unemployed is explained mainly by unemployment causing alcohol abuse rather than vice versa. Reducing unemployment should contribute to reduced alcohol problems in Norway.

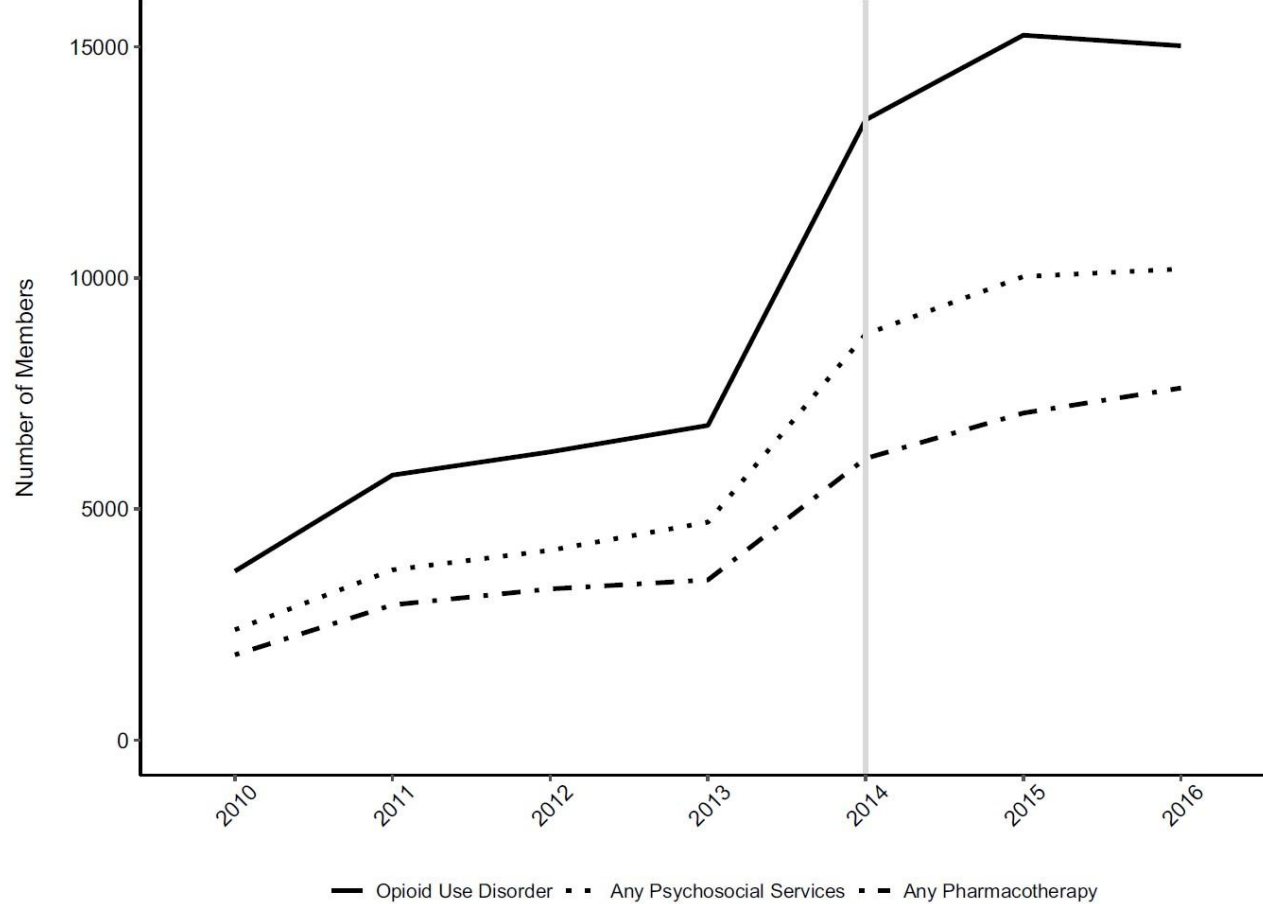


Fig. 1 Change in numbers with an opioid use disorder, receiving psychosocial services and/or medications for opioid use disorders (2010 to 2016)

McCarty et al (2019). Medicaid expansion and treatment for opioid use disorders in Oregon: an interrupted time-series analysis.

Proposed mitigation strategies (2)

Protective social policies
and community social
capital

- Employment support & welfare systems
- community social capital is an important resource in disaster management

Integrated care for SUDs, mental and physical health

Understanding SUDs as biopsychosocial problem instead of moral or behavioral issue

Reducing the burden of multiple care coordination from the patient.

Intake/Assessment

Understanding the Dimensions of Change

Assessment, Placement/ Planning Tools

Interventions based on individualized needs and agreed-upon goals

Service Planning Resources for targeting identified needs

Dimension 1: Acute Intoxication/ Withdrawal Potential

Dimension 2: Biomedical Conditions/Complications

Dimension 3: Emotional/ Behavioral/Cognitive Conditions and Complications

Dimension 4: Readiness to Change

Dimension 5: Relapse/Continued Use/Continued Problem Potential

Dimension 6: Recovery Environment

Ongoing goal setting and service planning tools

Outcomes

Treatment Outcomes

Continuing Care Resources

Source: American Society of Addiction Medicine (2013). Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions

ASI Grund

ASI Grund är en standardintervju för kartläggning och bedömning av problem och resurser för personer med missbruks- och beroendeproblem. Intervjun innehåller huvudsakligen frågor om sju livsområden: fysisk hälsa, arbete och försörjning, alkohol- och narkotikaanvändning, rättsliga problem, familj och umgänge samt psykisk hälsa. I intervjun ställs frågor om både tidigare erfarenheter och den nuvarande situationen. Dessutom finns skattningsfrågor om problem och hjälpbehov.

Efter varje ASI Grund bör den intervjuade ges tillfälle att ta del av och ge sin syn på vad som kommit fram. Återkopplingssamtalen är alltid viktiga när ASI Grund används som bedömningsmetod. För att stämma av och följa upp insatser används ASI Uppföljning.

Instruktioner till intervjuaren

1. Informera om intervjuens syfte och innehåll samt avtala tid för att ge återkoppling om intervjuresultatet till den intervjuade.
2. Informera om uppföljningsintervjun.
3. Alkohol- och narkotikaproblem bör om möjligt inte påverka skattningar inom övriga områden, påminn därför den intervjuade om detta.
4. Lämna inga tomma svarsrutor. När frågan är obesvarad (personen vet inte eller vill inte svara) koda X. När frågan inte är relevant koda N.
5. Frågenummer som är understruken är frågor av särskild vikt, så kallade kritiska frågor. Se manualen.
6. Efter varje frågeområde finns utrymme för kommentarer.

Klientens skattningsskalor

- 0 Inget problem eller behov av hjälp.
1 Litet problem eller behov av hjälp.
2 Måttligt problem eller behov av hjälp.
3 Påtagligt problem eller behov av hjälp.
4 Mycket stort problem eller behov av hjälp.

Intervjuarens skattningskala

- 0 – 1 Inget problem. Hjälp krävs inte.
2 – 3 Litet problem. Hjälp krävs troligen inte.
4 – 5 Måttligt problem. Viss hjälp krävs.
6 – 7 Påtagligt problem. Hjälp krävs.
8 – 9 Mycket stort problem. Hjälp krävs absolut.

Allmän information (1 av 1)

A1 Namn		A6 Huvudman eller verksamhet	<input type="checkbox"/>
A2 Personnummer	<input type="text"/>	1 – Statens institutionsstyrelse	
A3 Ålder	<input type="text"/>	2 – Kriminalvård	
A4 Kön	<input type="text"/>	3 – Landsting	
A5 Initiativtagare till kontakten	<input type="text"/>	4 – Kommun	
1 – Klienten		5 – Privat	
2 – Familj eller vänner		6 – Annan	
3 – Myndighet			
4 – Annan			
Specificera		Specificera	
		A7 Inskrivningsdatum	<input type="text"/>
		ÅÅMMDD	
		A8 Datum för intervju	<input type="text"/>
		ÅÅMMDD	
		A9 Intervjuarkod	<input type="text"/>
		A10 Enhetskod	<input type="text"/>

Source: National Board of Health and Welfare (Socialstyrelsen)

Integrated care for SUDs, mental and physical health

Understanding SUDs as biopsychosocial problem instead of moral or behavioral issue

Reducing the burden of multiple care coordination from the patient.

Intake/Assessment

Understanding the Dimensions of Change

Assessment, Placement/ Planning Tools

Interventions based on individualized needs and agreed-upon goals

Service Planning Resources for targeting identified needs

Dimension 1: Acute Intoxication/ Withdrawal Potential

Dimension 2: Biomedical Conditions/Complications

Dimension 3: Emotional/ Behavioral/Cognitive Conditions and Complications

Dimension 4: Readiness to Change

Dimension 5: Relapse/Continued Use/Continued Problem Potential

Dimension 6: Recovery Environment

Ongoing goal setting and service planning tools

Outcomes

Treatment Outcomes

Continuing Care Resources

ASI Grund

ASI Grund är en standardintervju för kartläggning och bedömning av problem och resurser för personer med missbruks- och beroendeproblem. Intervjun innehåller huvudsakligen frågor om sju livsområden: fysisk hälsa, arbete och försörjning, alkohol- och narkotikaanvändning, rättsliga problem, familj och umgänge samt psykisk hälsa. I intervjun ställs frågor om både tidigare erfarenheter och den nuvarande situationen. Dessutom finns skattningsfrågor om problem och hjälpbehov.

Efter varje ASI Grund bör den intervjuade ges tillfälle att ta del av och ge sin syn på vad som kommit fram. Återkopplingssamtalen är alltid viktiga när ASI Grund används som bedömningsmetod. För att stämma av och följa upp insatser används ASI Uppföljning.

Instruktioner till intervjuaren

1. Informera om intervjuens syfte och innehåll samt avtala tid för att ge återkoppling om intervjuresultatet till den intervjuade.
2. Informera om uppföljningsintervjun.
3. Alkohol- och narkotikaproblem bör om möjligt inte påverka skattningar inom övriga områden, påminn därför den intervjuade om detta.
4. Lämna inga tomma svarsrutor. När frågan är obesvarad (personen vet inte eller vill inte svara) koda X. När frågan inte är relevant koda N.
5. Frågenummer som är understruken är frågor av särskild vikt, så kallade kritiska frågor. Se manualen.
6. Efter varje frågeområde finns utrymme för kommentarer.

Klientens skattningsskalor

- 0 Inget problem eller behov av hjälp.
1 Litet problem eller behov av hjälp.
2 Måttligt problem eller behov av hjälp.
3 Påtagligt problem eller behov av hjälp.
4 Mycket stort problem eller behov av hjälp.

Intervjuarens skattningsskala

- 0 – 1 Inget problem. Hjälp krävs inte.
2 – 3 Litet problem. Hjälp krävs troligen inte.
4 – 5 Måttligt problem. Viss hjälp krävs.
6 – 7 Påtagligt problem. Hjälp krävs.
8 – 9 Mycket stort problem. Hjälp krävs absolut.

Allmän information (1 av 1)

A1 Namn	<input type="text"/>	A6 Huvudman eller verksamhet	<input type="checkbox"/>
A2 Personnummer	<input type="text"/>	1 – Statens institutionsstyrelse	
		2 – Kriminalvård	
		3 – Landsting	
		4 – Kommun	
		5 – Privat	
		6 – Annan	
A3 Ålder	<input type="text"/>	Specifika	
A4 Kön	<input type="checkbox"/>	A7 Inskrivningsdatum	<input type="text"/>
1 – Man		ÅÅMMDD	
2 – Kvinna		A8 Datum för intervju	<input type="text"/>
3 – Annan		ÅÅMMDD	
A5 Initiativtagare till kontakten	<input type="checkbox"/>	A9 Intervjuarkod	<input type="text"/>
1 – Klienten			
2 – Familj eller vänner		A10 Enhetskod	<input type="text"/>
3 – Myndighet			
4 – Annan			
Specifika			

Source: American Society of Addiction Medicine (2013). Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions

Source: National Board of Health and Welfare (Socialstyrelsen)

Proposed mitigation strategies (3)

Embedding prof.
Education about SUDs
and comorbidities

- Given the likely effects of COVID-19 and other diseases on SUD populations, it is even more critical that physician, nursing, psychology and social work education programs include addiction and SUD content in their core-curriculum.

Modernization of
addiction health
services

- Internet of things for monitoring treatment adherence and vitality
- Telehealth treatment to maintain access of treatment
- Evidence based harm reduction efforts

