

# Mortality and cause of death among patients with opioid use disorder receiving opioid agonist treatment: a national register study

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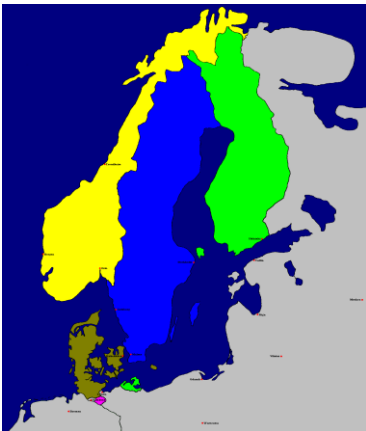
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# A. Bech et al, 2019; BMC HSR

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BMC Health Services Research

RESEARCH ARTICLE

Open Access

## Mortality and causes of death among patients with opioid use disorder receiving opioid agonist treatment: a national register study



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### Abstract

**Background:** Mortality rates and causes of death among individuals in opioid agonist treatment (OAT) vary according to several factors such as geographical region, age, gender, subpopulations, drug culture and OAT status. Patients in OAT are ageing due to effective OAT as well as demographic changes, which has implications for morbidity and mortality. Norway has one of the oldest OAT populations in Europe. Because of the varying mortality rates and causes of death in different subgroups and countries, research gaps still exist. The aims of this study were to describe the causes of death among OAT patients in Norway, to estimate all-cause and cause-specific crude mortality rates (CMR) during OAT and to explore characteristics associated with drug-induced cause of death.

# OMT in Norway

✓ National, public treatment programme since 1998. National guidelines

➤ 7900 patients per 31.12.19

➤ Mean age 46 years in 2019

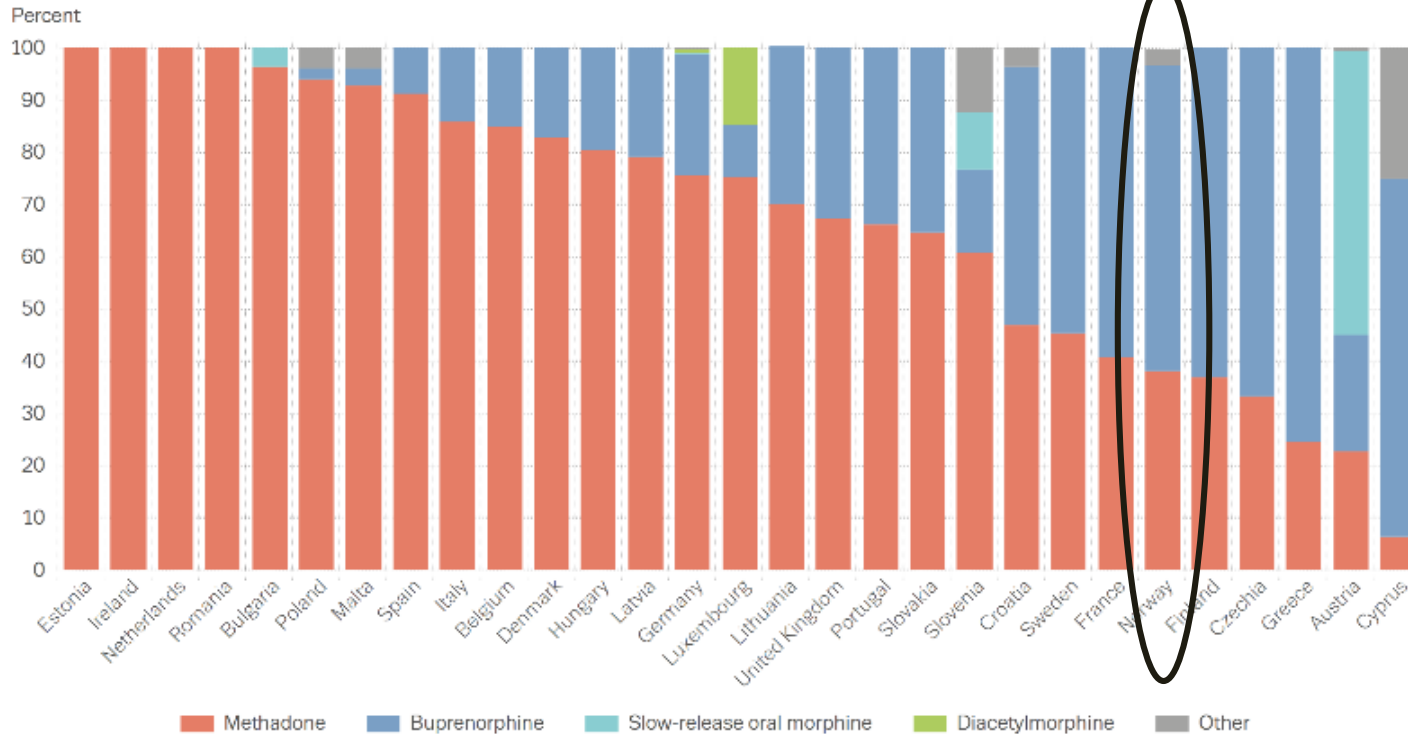
➤ 30 % women

1. Annual OMT status report, 2019



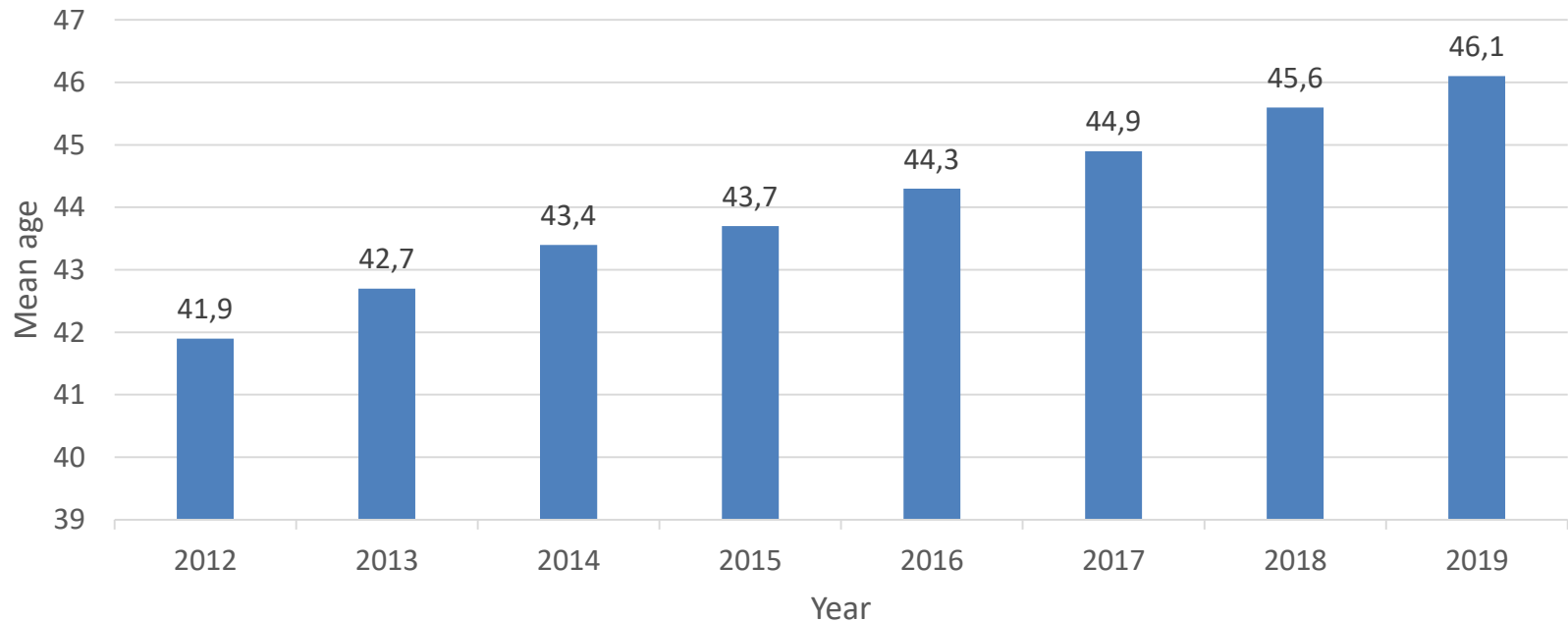
# OMT medication

Proportion of clients receiving different types of prescribed opioid substitution medication in European countries



Infographic EMCDDA  
2019

# Norwegian OMT patients among the oldest in Europe



**More than 1/3; 50 years or older**

Source: National OMT status report 2020

# Cohort studies



- ✓ **Identify a population at risk (n=?)**
  - Example; OMT population (national or local?)
- ✓ **Define a time period**
  - I.e during 2014-2015
- ✓ **Link data on mortality (number of deaths)**
  - Overall and specific cause of death
- **Cohorts may be defined from national registries**

# Aims

1. To describe the causes of death among OMT patients in Norway
2. To estimate all-cause and cause-specific crude mortality rates (CMRs) during OMT
3. To explore characteristics associated with drug-induced cause of death compared with other causes of death during OMT

# Methods

- ✓ National, observational study
- ✓ Inclusion period; 2014-15
- ✓ Mortality data from GMR
- ✓ Death during ongoing OMT



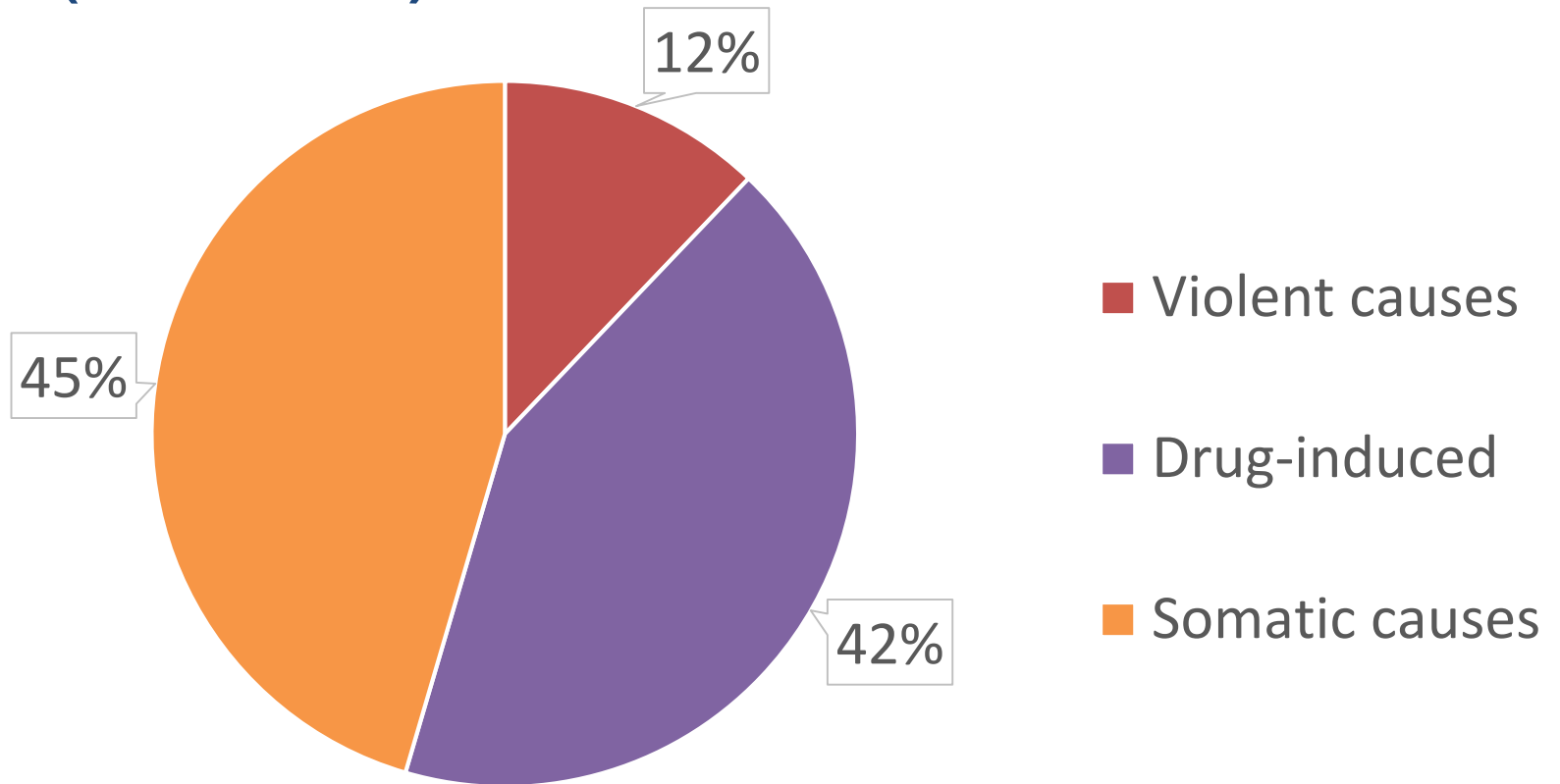
# Results

- ✓ 200 patients died during OMT in 2014/2015  
-> All-cause CMR 1.4/100 person-years (PY), during OMT
- ✓ Mean 49 years at time of death; 74% men
- ✓ 55% methadone, 41% buprenorphine (4% other)
- ✓ 80%+ had been more than 4 years in OMT

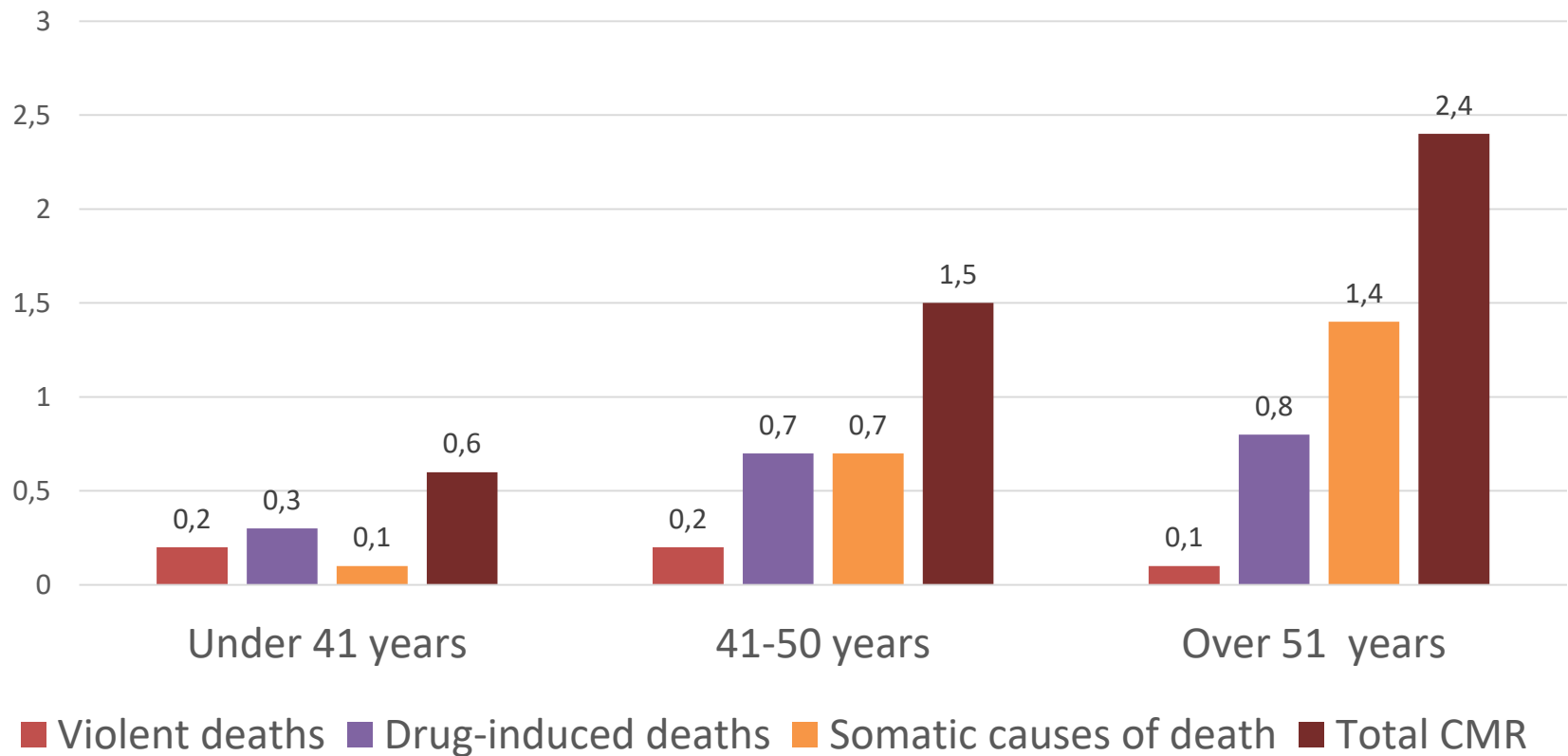
# Comorbidity among deceased

- ✓ High levels of somatic comorbidity in OMT
  - Liver disease 62%, cardiovascular disease 19%, COPD 19%
- ✓ Past 5 years:
  - Psychiatric admissions 28%
  - Non-fatal overdoses 30%
- ✓ Past year:
  - Prescribed BZD/z-hypnotics 43%
  - Prescribed psychotropic medication 28%

# Causes of death, % (n=198)



# Increasing mortality rates with increasing age (CMR/100 PY)



# Take-home message

- ✓ CMRs in OMT increase with age
- ✓ Both somatic and drug-induced deaths were common

**-> Need for improved treatment and follow-up of chronic diseases**

# Additional paper from 2020

ADDICTION

RESEARCH REPORT

SSA SOCIETY FOR THE  
STUDY OF  
ADDICTION

doi:10.1111/add.15211

## Postmortem toxicological analyses of blood samples from 107 patients receiving opioid agonist treatment: substances detected and pooled opioid and benzodiazepine concentrations

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