



# Estimating the excess non-mental health hospital care costs associated with excess physical comorbidity burden of selected mental health disorders in Europe

Dennis Wienand<sup>1</sup> & Judit Simon<sup>1,2</sup>

<sup>1</sup> Department of Health Economics, Center for Public Health, Medical University of Vienna, Vienna, Austria

<sup>2</sup> Department of Psychiatry, University of Oxford, Warneford Hospital, Oxford, United Kingdom

✉ judit.simon@muv.ac.at

## Objective

- ❖ People with **mental health disorders** (MHDs) have a **higher physical comorbidity prevalence** than the general population.
- ❖ Patients with comorbid MHDs and physical health conditions further incur **higher costs per hospital care episode** than those without comorbid MHDs [1].
- ❖ The **objective** of this study was to estimate the **excess non-mental health hospital care costs** of excess **physical comorbidities** for patients with selected **mental health disorders** in Europe.

## Methods

- ❖ This **cost-of-illness assessment** considered **excess non-mental health hospital care costs** of **inpatient care (IP)** and **accident & emergency care (A&E) services** due to **excess prevalence** of physical comorbidities and due to **higher per episode costs** for patients with comorbid MHDs and PHCs.
- ❖ We assessed costs of **working-age patient cohorts** (20-64 years) with selected MHD diagnoses for all physical comorbidities: **depressive disorder (DD)**, **bipolar disorder (BD)**, **schizophrenia (SZ)**, and **alcohol use disorder (AUD)**.
- ❖ Included countries were **EU-27 member states**, plus **Iceland, Liechtenstein, Norway, Switzerland**, and the **United Kingdom**.
- ❖ The **excess prevalence** of **physical comorbidities** was retrieved from a purposefully built **epidemiological model** covering all physical diseases in the Global Burden of Disease 2019 study [2]. **Country-specific** non-mental health IP and A&E care utilisation data were obtained from EuroStat and supplemented by data from national health services. The **excess costs per hospital care episodes** were estimated based on **upscale factors** from a previous large scale **evidence synthesis** study [1].
- ❖ All costs were estimated separately by chapters of the International Classification of Diseases (ICD-10) and expressed in Eurostat **purchasing power standards (PPS)** for year 2019.

## Results

- ❖ **Total estimated excess non-mental health hospital care costs** were **27.6 billion PPS** for DD, **23.7 billion PPS** for AUD, **9.9 billion PPS** for BD, and **3.7 billion PPS** for SZ across all 32 countries.
- ❖ The largest proportion of excess cost was estimated for patients with **BD** at **62.4%**, followed by **58.9%** for **SZ**, **54.5%** for **AUD**, and **41.4%** for **DD**.
- ❖ Country-level comparisons indicated **substantial geographical variations** (Fig. 1) likely to be linked to health care system-related factors beyond epidemiological variations.
- ❖ Averaging the excess costs across the diagnosed European working-age patient cohort for each specific MHD revealed the largest **excess non-mental health hospital care cost per patient** of **€841** for **BD**, followed by **€729** for **SZ**, **€609** for **AUD**, and **€356** for **DD**.

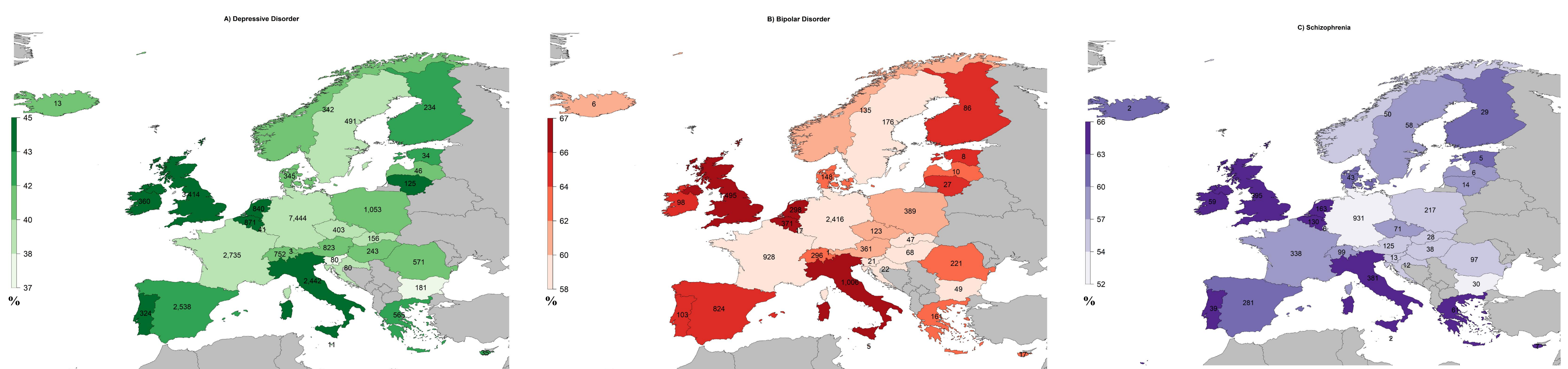


Figure. 1. Total hospital care costs (in million purchasing power standards) in 2019 and the proportions of costs across Europe which are potentially associated with excess physical comorbidities in patients with A) depressive disorder, B) bipolar disorder, C) schizophrenia, and D) alcohol use disorder

## Conclusions

- ❖ This is the **first comprehensive** and **comparable international estimation** of excess non-mental health hospital care costs potentially associated with excess physical comorbidity burden in individuals with selected MHDs in Europe.
- ❖ **Preliminary results** indicate **substantial excess economic burden** and were found in line with existing estimates of non-mental health hospital care costs from country-level cost-of-illness studies.
- ❖ Our results provide further evidence for the **potential value** of **reducing physical health disparities** with better **integrated care** and **prevention strategies** and more **integrated care funding and reimbursement schemes**.

