Multimorbidity of physical health conditions and associations with co-occurring mental health and alcohol problems

Dr Laura Goodwin *@Laura_Goodwin_*

Senior Lecturer in the Epidemiology of Mental Health and Addiction

Co-investigators:

Dr Katalin Ujhelyi-Gomez, Prof Colin Drummond, Mr Colin Angus, Dr Kate Fleming, Dr Emmert Roberts. Dr Laura Bonnett, Prof Iain Buchan, Dr Kim Donoghue, Dr Katherine Keyes, Dr Orla McBride, Prof Ian Gilmore

Conflicts of interest

There are no conflicts of interest to report.

Are there existing health inequalities for people with mental health or alcohol problems?

1

Nine times more deaths in younger/ middle-aged people with an alcohol problem

2

Greater alcohol harms for people of lower socioeconomic status even with the same clustering of unhealthy behaviours
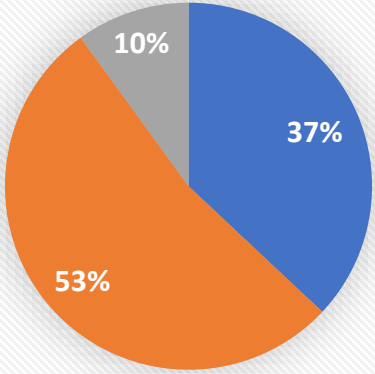
3

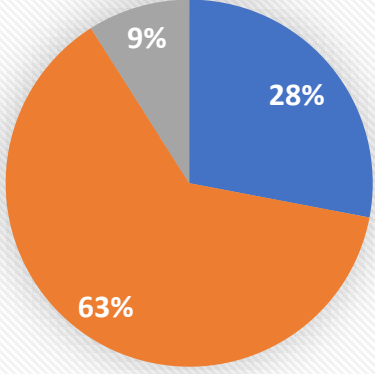**Ten year reduced life expectancy** in individuals with a common mental disorder or a severe mental illness

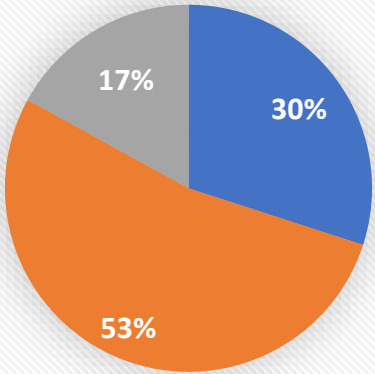# How commonly do mental health and alcohol problems co-occur?

Depression
- Abstention: 37%
- Low risk/hazardous drinking: 53%
- Harmful/dependent drinking: 10%

Anxiety
- Abstention: 28%
- Low risk/hazardous drinking: 63%
- Harmful/dependent drinking: 9%

Bipolar disorder
- Abstention: 30%
- Low risk/hazardous drinking: 53%
- Harmful/dependent drinking: 17%

Probable psychosis
- Abstention: 52%
- Low risk/hazardous drinking: 40%
- Harmful/dependent drinking: 8%
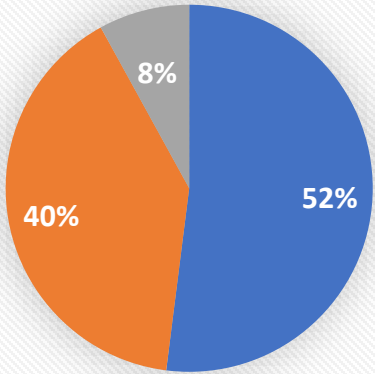
Puddephatt J-A, Jones A, Gage SH, Fear NT, Field M, McManus S, et al. Associations of alcohol use, mental health and socioeconomic status in England: Findings from a representative population survey. Drug and alcohol dependence. 2021;219:108463.

Why might physical health inequalities be greater for people with co-occurring problems?

Common risk factors for mental health, alcohol use and physical health problems, e.g. trauma exposure, lower socioeconomic status, poor housing

Alcohol use as a barrier to mental health treatment

Poor integration of mental health and alcohol treatment services can mean that people may be more likely to relapse when there is a gap between services

Our PPI work has shown that people may not get the support they need for their alcohol problem until they develop physical consequences of their drinking

Rationale and study aims

Rationale: Mental health and alcohol problems commonly co-occur, but existing multimorbidity research has tended to focus on associations with either mental health or alcohol use alone.

1 To investigate the associations between the physical health conditions and the mental health/alcohol use co-occurrence groups

2 To identify clusters of physical multimorbidity

3 To determine the associations between the clusters of multimorbidity with the mental health/alcohol use co-occurrence groups

Methods

Data

- Secondary data analysis of 2014 Adult Psychiatric Morbidity Survey – recruited a representative sample from private households in England

- Final sample of 7546 (57% response rate)

- Study pre-registered on OSF and sampling and household clustering weights were applied

Measures

- Assessment of alcohol use using the Alcohol Use Disorders Identification Test (AUDIT) - 8+ categorised as hazardous use

- Mental health assessed using a range of validated measures (e.g. Clinical Interview Schedule-Revised) for common mental disorders (e.g. depression) and severe mental illness (e.g. bipolar disorder)

- Self-reported demographic and sociodemographic measures

How did we define multimorbidity?

Physical health conditions

- Self-reports of physical health conditions were assessed in the APMS

- 12 conditions selected for the current study which were i) non-communicable diseases and ii) likely to be chronic physical health conditions

- *Included:* cancer, diabetes, epilepsy/fits, stroke, heart attack/angina, hypertension, bronchitis/emphysema, asthma, stomach ulcer/digestive problems, liver problem, bowel/colon problems, and arthritis

Assessment of multimorbidity

- Academy of Medical Sciences (2018) definition: "co-existence of two or more chronic conditions"

- We used latent class analysis, which identifies how individuals are clustered based upon their data/responses

- The aim was to identify groups of people with similar health profiles

  - We hypothesised that some groups would be more healthy and others would meet criteria for multimorbidity

Overview of the mental health and alcohol use groups

Mental health (MH) assessed as meeting criteria for CMD/SMI and hazardous drinking (HD) as scoring 8+ on the AUDIT			
No MH/No HD	**MH/No HD**	**No MH/HD**	**MH and HD**
(n= 4517)	**(n= 1341)**	**(n= 817)**	**(n= 435)**
61% female	69% female	39% female	47% female
49% <55 years	65% <55 years	61% <55 years	76% <55 years
91% White ethnicity	88% White ethnicity	97% White ethnicity	94% White ethnicity
33% Degree level attainment	28% Degree level attainment	39% Degree level attainment	31% Degree level attainment
24% Managerial/professional occupations	20% Managerial/professional occupations	36% Managerial/professional occupations	29% Managerial/professional occupations
44% Never worked or not worked in past year	47% Never worked or not worked in past year	26% Never worked or not worked in past year	32% Never worked or not worked in past year
71% Owner occupiers	51% Owner occupiers	69% Owner occupiers	50% Owner occupiers

Associations of mental health and alcohol use co-occurrence groups with the physical health conditions
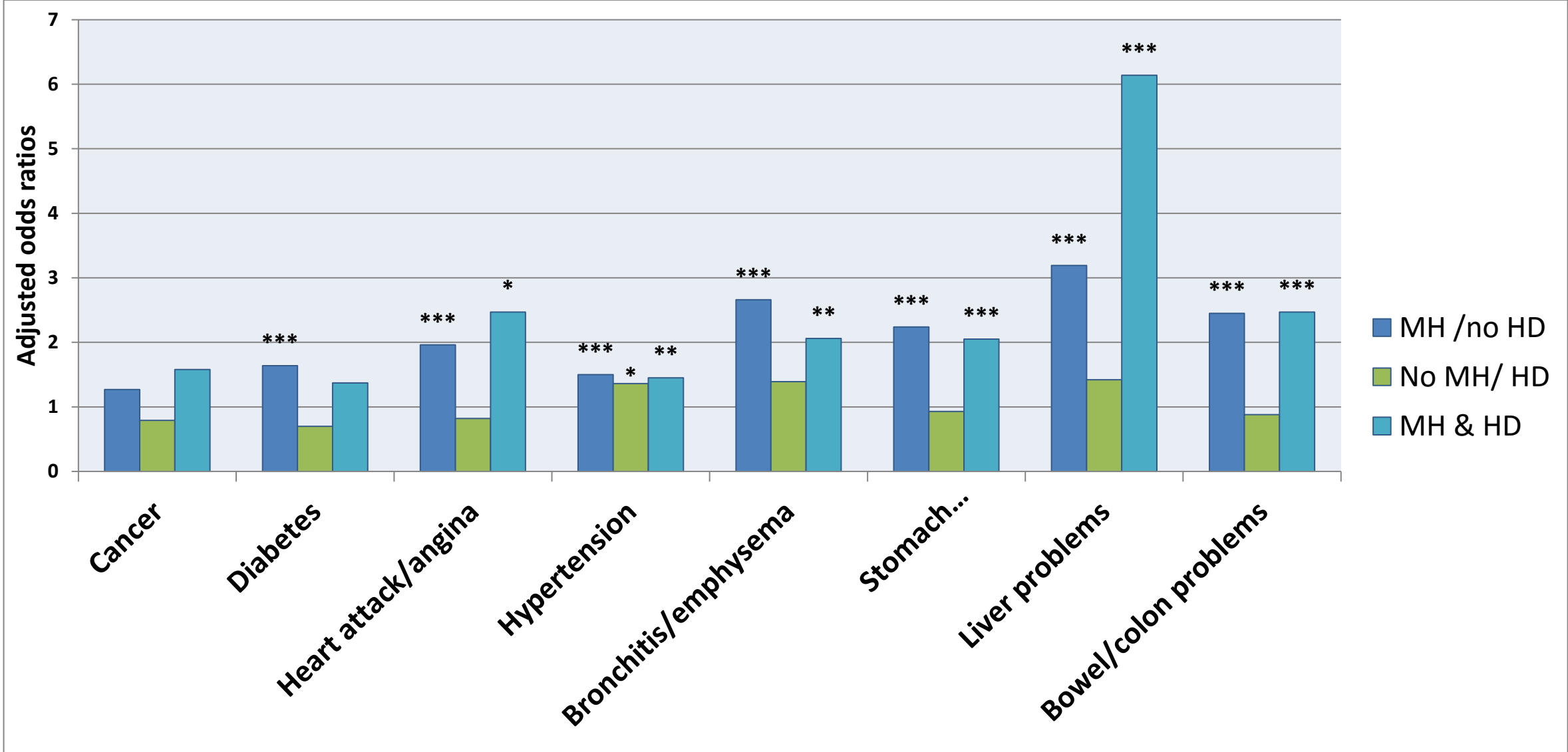
What do the clusters of multimorbidity look like?

Physically healthy (76.6%)

- Low probability of all conditions

- 51% female
- 70% < 55 years
- 28% managerial professional occupations
- 32% never worked/ not worked in past year

Predominantly hypertension (14.3%)

- 65% probability hypertension, 39% probability arthritis, 20% probability diabetes

- 48% female
- 44% < 55 years
- 19% managerial professional occupations
- 53% never worked/ not worked in past year

Digestive and bowel problems (3.2%)

55% probability stomach ulcer/digestive problems, 48% bowel problems, 26% probability arthritis

60% female

58% < 55 years

25% managerial professional occupations

43% never worked/ not worked in past year

Low level of respiratory conditions (3.1%)

- 35% probability bronchitis/emphysema, 32% probability asthma, 25% probability arthritis

- 53% female
- 62% < 55 years
- 24% managerial professional occupations
- 39% never worked/ not worked in past year

Complex multimorbidity (2.8%)

- 72% probability arthritis, 65% probability hypertension, 47% probability bronchitis/emphysema, 43% stomach ulcer/digestive problems

- 61% female
- 45% < 55 years
- 15% managerial professional occupations
- 58% never worked/ not worked in past year

Which groups were more likely to experience multimorbidity?
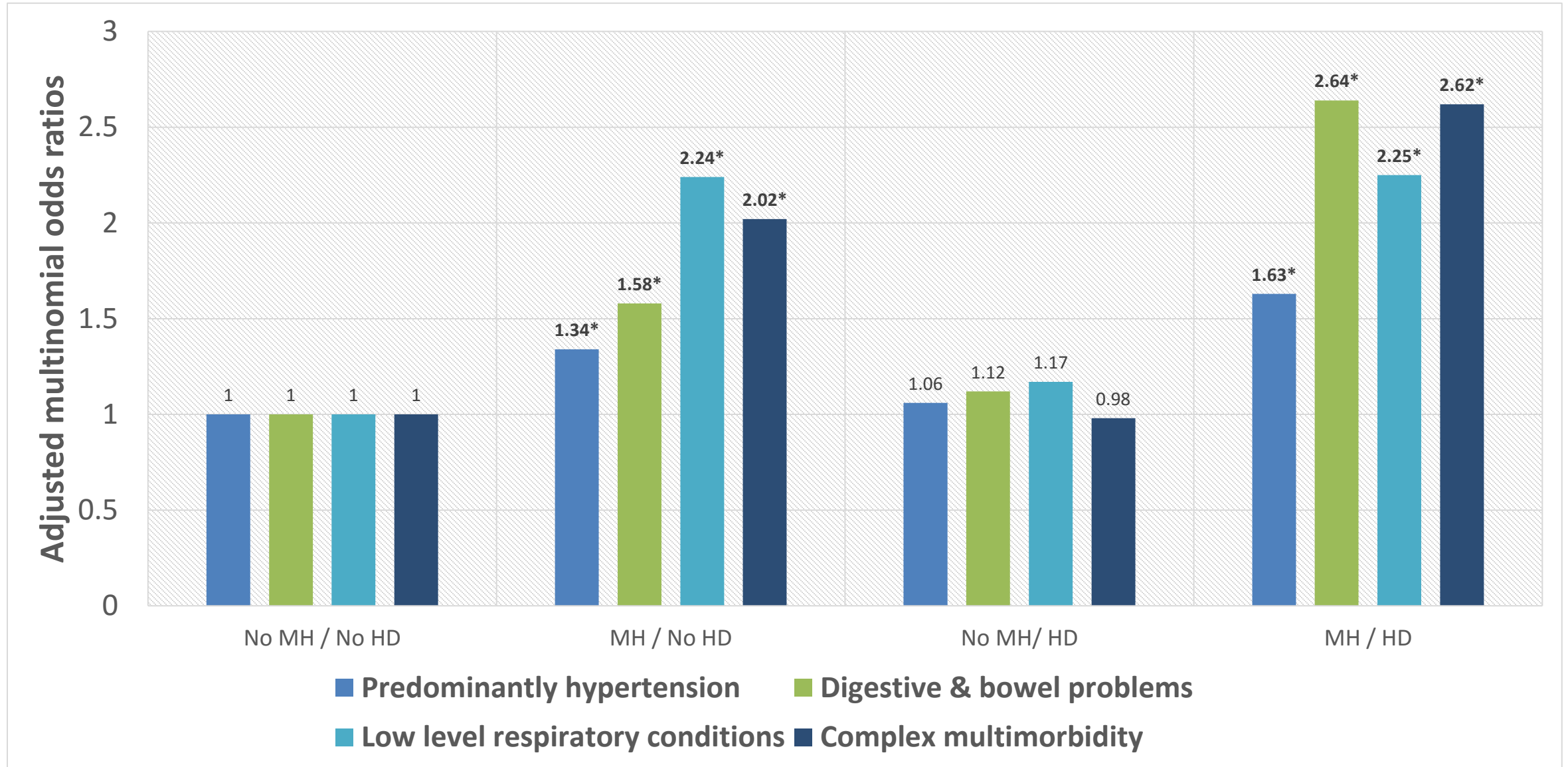
Key findings

1 Individuals with mental health problems only or co-occurring mental health problems and hazardous drinking had increased odds of multimorbidity.

2 The odds were greater for those with co-occurring problems, compared to those with mental health problems only, for the Digestive and bowel problems and Complex multimorbidity clusters, but the difference in effect sizes was not statistically significant.

3 Individuals who were hazardous drinkers, but with no mental health problem, did not have increased odds of multimorbidity. This may relate to the characteristics of this group.

4 These findings should be viewed in the context of the data being cross-sectional, people may reduce their drinking after developing physical health problems.

Recommendations

01 Future research should investigate these associations longitudinally and determine if the ordering of the mental health and alcohol problem is important.

02 This research highlights the need for mental health and alcohol services to be better integrated.

03 Interventions are required which take a preventative approach to reduce the risk of multimorbidity in people with co-occurring mental health and alcohol problems.