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The impact of co-occurring homelessness and substance misuse on secondary healthcare in Wales

Data Report

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Background

Homelessness is a growing problem in Wales. In 2023-24, 13,539 households in Wales were assessed as homeless and owed a duty to help secure accommodation under the Housing (Wales) Act 2014[1].

Homelessness is associated with poor physical and mental health. People with lived experience of homelessness are more likely to manage multiple long-term health conditions, interact more frequently with health services and rely more on emergency care services than the general population[2].

There is considerable overlap between substance misuse and homelessness[3]. Like homelessness, substance misuse is also associated with poor physical and mental health[4]. Co-occurring homelessness and substance misuse is associated with even greater health inequalities[5].

This Data Insight presents the findings of a study carried out as part of the BOLD Substance Misuse Pilot in Wales, which focuses on early intervention and prevention of the escalation of substance misuse. Read further information on the BOLD programme: Better Outcomes Through Linked Data (BOLD).

This study examined the relationship between co-occurring homelessness and substance misuse and the use of secondary healthcare in Wales. Secondary healthcare refers to medical care provided by specialists or hospitals after a referral from a primary healthcare provider, such as a general practitioner.

What we did

We identified a cohort of Welsh-residents who were in substance misuse treatment between 1 January 2014 and 31 December 2019 and with relevant housing information, by linking different health datasets. The full cohort consisted of 32,657 individuals.

This study used routinely collected administrative health data from the Secure Anonymised Information Linkage (SAIL) Databank[6]. Datasets used include primary care, hospital admissions, emergency department (ED) and specialist substance misuse treatment.

Table 1: Information contained in each dataset used

Dataset	Information
Substance Misuse Dataset	• Substance misuse treatment and dates • Problem substances • Occurrence of homelessness and insecure housing
Emergency Department Dataset	• Emergency department attendances and dates
Patient Episode Dataset Wales	• Hospital admissions and dates • Admission type • Diagnosis • Method of discharge
Welsh Demographic Service Dataset	• Demographic characteristics • Address history

The analysis investigated the relationship between co-occurring homelessness and substance misuse, and:

- the frequency of emergency department attendances
- the reasons for emergency hospital admissions
- the frequency of hospital admissions
- the length of hospital admissions.

We also looked at how experience of homelessness, types of substance misuse, and demographics interacted.

Experience of homelessness was defined as being insecurely housed or homeless at least once during substance misuse treatment, during the study period. This broad definition includes more than those sleeping on the streets only[7].

Problem substance type was categorised as opioids, cannabinoids, stimulants, other drugs (which included benzodiazapines, hallucinogens, solvents, steroids and prescribed drugs) or alcohol. Since some people received treatment for more than one substance, they could have multiple problem substance types recorded.

A description of the characteristics in the cohort can be found in Table 2.

Table 2: A description of characteristics in the cohort

Dataset	Category	Number
Sex	Male	21,850
	Female	10,807
Age group	11-17	1,423
	18-24	3,443
	25-34	8,672
	35-44	9,042
	45-54	6,415
	55-64	2,720
	65 +	941
Ethnicity	White	29,179
	Other[1]	550
	Unknown	2,885
Experience of homelessness	Yes	9,935
	No	22,721
Problem substance type	Alcohol	18,714
	Opioids	8,005
	Cannabinoids	4,095
	Stimulants	3,815
	Other drugs	2,141
	Unknown	1,246

[1] Due to low numbers, the following ethnicities were combined as "Other" to avoid the risk of disclosure: White and Black Caribbean, White and Black African , White and Asian, Any other mixed background, Indian, Pakistani, Bangladeshi, Any other Asian background, Caribbean, African, Any other Black background, Chinese, Any other ethnic group.

What we found

Frequency of emergency department attendances

Among the individuals in the cohort, 50% attended an emergency department in Wales at least once. The majority of those (30%) attended between 1 and 3 times. A small proportion of the overall cohort (6%) attended an emergency department 10 or more times during the time period.

Among people with experience of homelessness 50.8% attended an emergency department in Wales at least once, 0.8% more than the cohort as a whole. The proportion which attended an emergency department four or more times was higher for those with experience of homelessness than for those without.

Modelling the data, we found that people misusing opioids were 46% more likely to visit the emergency department at least once. Females with experience of homelessness were 13% more likely to visit the emergency department at least once.

Experience of homelessness, misuse of other drugs and alcohol misuse were associated with an increased likelihood of more emergency department attendances. Females with experience of homelessness and people with experience of homelessness who misuse alcohol were also more likely to attend the emergency department more frequently, as shown in Table 3.

Table 3: Characteristics associated with an increase in the expected count of emergency department attendances

Characteristic	Increase in expected count of ED attendances (%)[2]
Experience of homelessness	157
Misuse of other drugs	61
Misuse of alcohol	37
Experience of homelessness and misuse of alcohol	28
Experience of homelessness and female	20

Reasons for emergency hospital admissions

The most frequent diagnoses for emergency hospital admissions were injury or poisoning, mental and behavioural disorders, and unexplained symptoms. The proportion of admissions for injury or poisoning and mental and behavioural disorders were higher for people with experience of homelessness than for people without experience of homelessness.

[2] Expected count is a term used in statistics to describe the number of times we expect an event to occur based on a model or probability distribution.

Modelling the data revealed that several characteristics were associated with an increase in the likelihood of an emergency admission in comparison with a non-emergency admission, as shown in Table 4.

Table 4: Characteristics associated with an increase in the expected count of emergency department attendances

Characteristic	Increased likelihood (%)
Experience of homelessness	117
Misuse of opioids	136
Misuse of other drugs	77
Misuse of stimulants	72
Misuse of alcohol	42
Experience of homelessness and male	59

Experience of homelessness was associated with an increase in the likelihood of an emergency admission with three diagnoses. These diagnoses include the two most frequent diagnoses for emergency admissions overall, as shown in Table 5.

Table 5: Diagnoses where experience of homelessness is associated with an increased likelihood of an emergency hospital admission

Diagnosis	Increased likelihood (%)
Diseases of the skin	116
Injury or poisoning	49
Mental and behavioural disorders	13

Looking at detailed data on drug-related diagnoses, people with experience of homelessness were 112% more likely to have an emergency hospital admission with a diagnosis of drug poisoning.

Frequency of hospital admissions

Among the individuals in the cohort, 38% were admitted to a hospital in Wales at least once. Overall, the proportion of people with experience of homelessness admitted to hospital was the same as the cohort as a whole. However, a higher proportion of people with experience of homelessness were admitted two or more times than those without experience of homelessness.

Modelling the data, we found that people with experience of homelessness are expected to have 44% more hospital admissions than those without. People with experience of homelessness and cannabinoids misuse are expected to have 35% more hospital admissions than those without experience of homelessness and no cannabinoids misuse.

Length of hospital admissions

The majority (58%) of admissions in our cohort during the study were for one day or less. The admission durations were slightly longer for those with experience of homelessness.

Modelling the data revealed that people with experience of homelessness were 51% less likely to be discharged from the hospital at any given time compared to those without experience of homelessness. This translates to longer hospital stays for individuals with experience of homelessness.

Why it matters

Increased and prolonged usage of secondary healthcare can negatively impact individuals. Frequent emergency department attendances and hospital admissions can lead to increased stress and anxiety due to uncertainty in health and care that individuals will receive [8]. There is also a risk of dependency on emergency services for healthcare needs, preventing individuals from seeking more appropriate and continuous care [9]. Over time, this can lead to poorer health outcomes and a lower quality of life, as underlying health issues may not be properly addressed [10]. Longer hospital stays are related to poorer patient outcomes, including higher risks of complications and infections [11].

Increased usage of secondary healthcare places a financial burden on health services. The costs of emergency department attendances and hospital admissions vary, making this financial burden difficult to quantify. Co-occurring homelessness and substance misuse is also associated with longer hospital admissions, reducing available beds for other patients.

This is the first study that thoroughly investigated the impact of substance misuse and experience of homelessness on the secondary healthcare system in Wales. It provides insight into the level of increase in emergency departments attendance and admissions, reasons leading to hospital admission and increased length of stay.

Taken together, these results suggest the importance of early intervention which considers the variety of adverse experiences of the individual and could help health services to improve their support for those individuals. Early interventions might include Housing First programs which provide stable housing without preconditions, integrated care models which combine healthcare, mental health and substance misuse services in one setting, and mobile outreach teams which provide medical care, mental health support and substance misuse treatment to individuals in their communities.

This study also addresses Welsh Government priorities related to homelessness and substance misuse, aiming to reduce health disparities for people with both these co-occurring conditions.

What next?

Increased usage of secondary healthcare may be linked to an increased prevalence of health conditions, poor management of those health conditions, and difficulties accessing primary healthcare services. Future work should further explore the reasons behind this increased use of secondary health care services in this population. In future, it will be possible to link this, or more contemporary cohorts, with the Ministry of Justice data to investigate the impact of contact with the criminal justice system in terms of referral to treatment or as a subsequent substance-related event post-treatment. This will enable greater understanding of the longer-term impacts of treatment alongside existing the health services data utilised in this study.

Due to possible accessibility issues, fear of stigmatisation or a range of other factors [12], there is likely bias in the populations who seek referral to, or re-engage post-treatment non-completion, with specialist substance misuse services. Only health data has been used to investigate longer term outcomes of substance use events, which provides only a partial picture.

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