Healthcare Resource Use of People who use Illicit Opioids in England: A Retrospective Cohort Study Using Clinical Practice Research Datalink (CPRD) and Hospital Episode Statistics (HES)

POSB122

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OBJECTIVES

To investigate the healthcare resource use (HCRU) of illicit opioid users relative to a matched population of non-users.

BACKGROUND

- Patients who use illicit opioids have higher mortality and morbidity compared to the general population.[1]
- Qualitative research suggests this population faces barriers to accessing healthcare, related to stigma, bureaucracy, and other competing priorities.[2] Despite this, limited quantitative research has investigated how this population engages with the healthcare system, particularly with regards to planned and primary care.[3]

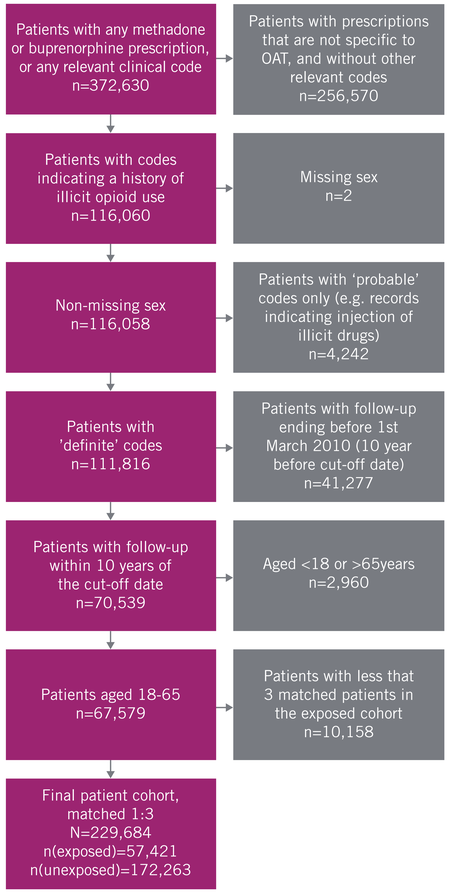
METHODS

- This retrospective, observational cohort study used Clinical Practice Research Datalink and Hospital Episode Statistics data to understand the HCRU of patients who use illicit opioids.
- Patients were identified through prescriptions of opioid agonist therapy or clinical observations indicating illicit opioid use (e.g. heroin dependence).[4] Patients were matched on age, sex and primary care practice to those without records of illicit opioid use **(Figure 1)**.
- Outcomes were counts of primary care, planned and emergency admitted patient care (APC), outpatient and accident and emergency (A&E) visits, over a maximum of 10 years.
- Negative binomial regression analyses compared HCRU between cohorts, adjusting for age, sex and comorbidity.

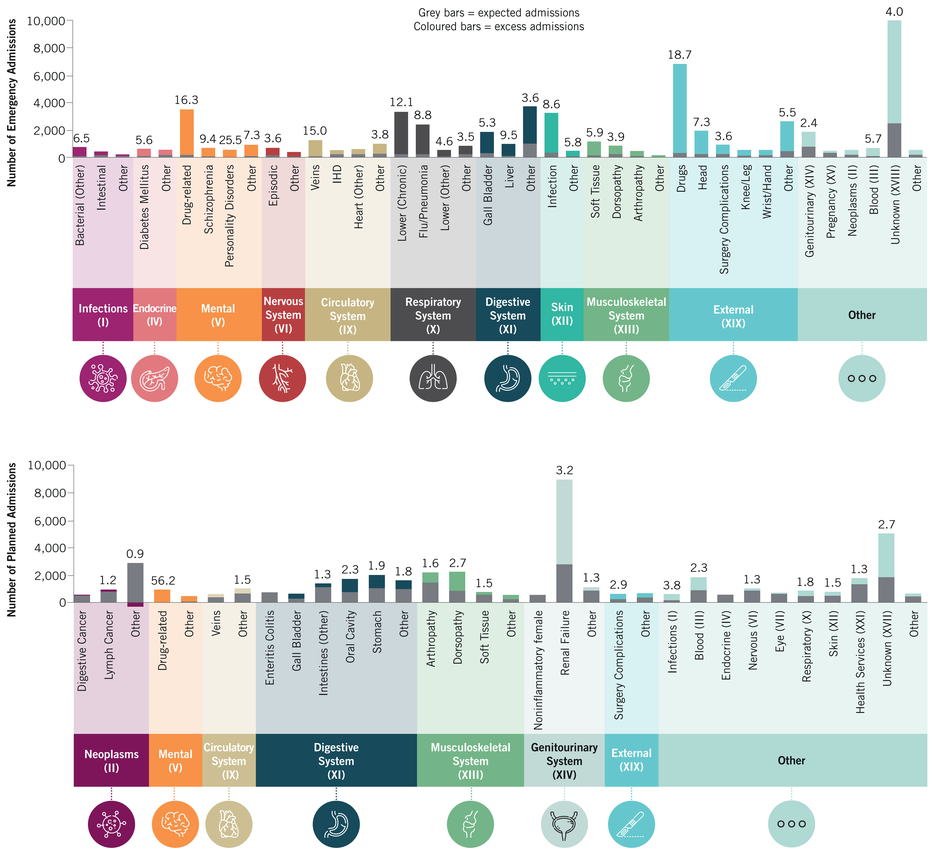
RESULTS

- 57,421 patients with a history of illicit opioid use and 172,263 matched non-users were studied. Most patients were white, male and the median age was 38 years.
- Incident rate ratios (IRRs) were higher for emergency (emergency APCs=3.60, 95% confidence interval (CI) 3.52–3.69; A&E visits=2.25, 95% CI 2.21–2.29) than planned care (planned APCs=1.11, 95% CI 1.09–1.14 and outpatient visits=1.65, 95% CIs 1.62–1.68). Illicit opioid use was also associated with higher rates of primary care (IRR=2.29, 95% CIs 2.26–2.31) **(Table 1)**. Drug-related conditions represented a minority of all planned and emergency admissions (1% and 13% respectively).
- Post-hoc analyses by ICD-10 chapter illustrated a difference between diseases with the highest relative versus absolute risk for APCs (planned and emergency) **(Figure 2)**.

1 Patient cohort derivation



2 Expected and excess emergency and planned admissions with standardised admission ratios



Expected and excess admissions are calculated based on 218,545 person-years of follow-up from 57,421 exposed patients, relative to the matched cohort of 172,263 unexposed patients, with 831,928 person-years of follow-up. Data labels represent standardised admissions ratios (SARs). As per the grouping in ICD-10 subchapters, "drug-related" and "drugs" include alcohol and tobacco use. Negative excess admissions indicate that fewer events were observed than expected.

Abbreviations: APC: admitted patient care; A&E: Accident & Emergency; OAT: opioid agonist therapy; OP: outpatient.

1 Results from negative binomial regression

Incident rate ratios (IRRs) and 95% confidence intervals from negative binomial regression

Covariate	Primary Care	OP	A&E	Planned APC	Emergency APC
Exposed	2.29 (2.26–2.31)	1.65 (1.62–1.68)	2.25 (2.21–2.29)	1.11 (1.09–1.14)	3.60 (3.52–3.69)
Female	1.72 (1.70–1.73)	1.75 (1.72–1.78)	0.95 (0.93–0.96)	1.36 (1.33–1.39)	1.05 (1.03–1.08)
Age	1.02 (1.02–1.02)	1.01 (1.01–1.01)	0.98 (0.98–0.98)	1.03 (1.03–1.03)	1.00 (1.00–1.00)
Comorbidity (ICD count)	1.25 (1.25–1.25)	1.35 (1.34–1.36)	1.37 (1.36–1.38)	1.50 (1.49–1.51)	1.52 (1.51–1.53)

CONCLUSIONS

This study is the first step in understanding how illicit opioid users engage with the healthcare system. Given the cohort definition, it is expected that these findings are generalisable to patients with opioid dependence, and not all people who might use illicit opioids.

The skew towards emergency care, as seen with the high IRRs for A&E and emergency APCs, indicates there might be barriers to accessing healthcare or poor management of chronic health conditions.

Illicit opioid use was associated with higher HCRU after adjusting for comorbidity, possibly suggesting that the comorbidity measure was not reflective of the "true" healthcare needs of this population.

These findings can contribute to research and policy discussion into the appropriateness and quality of care provided to these patients, with the objective of improving access and health outcomes.

Footnote

Results have changed since abstract acceptance due to changes in the cohort definition. However, the impact is minimal and conclusions remain unaffected.

References

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