MODELLING THE IMPACT OF INTRODUCING AN OVERDOSE PREVENTION CENTRE IN ENGLAND AND GLASGOW

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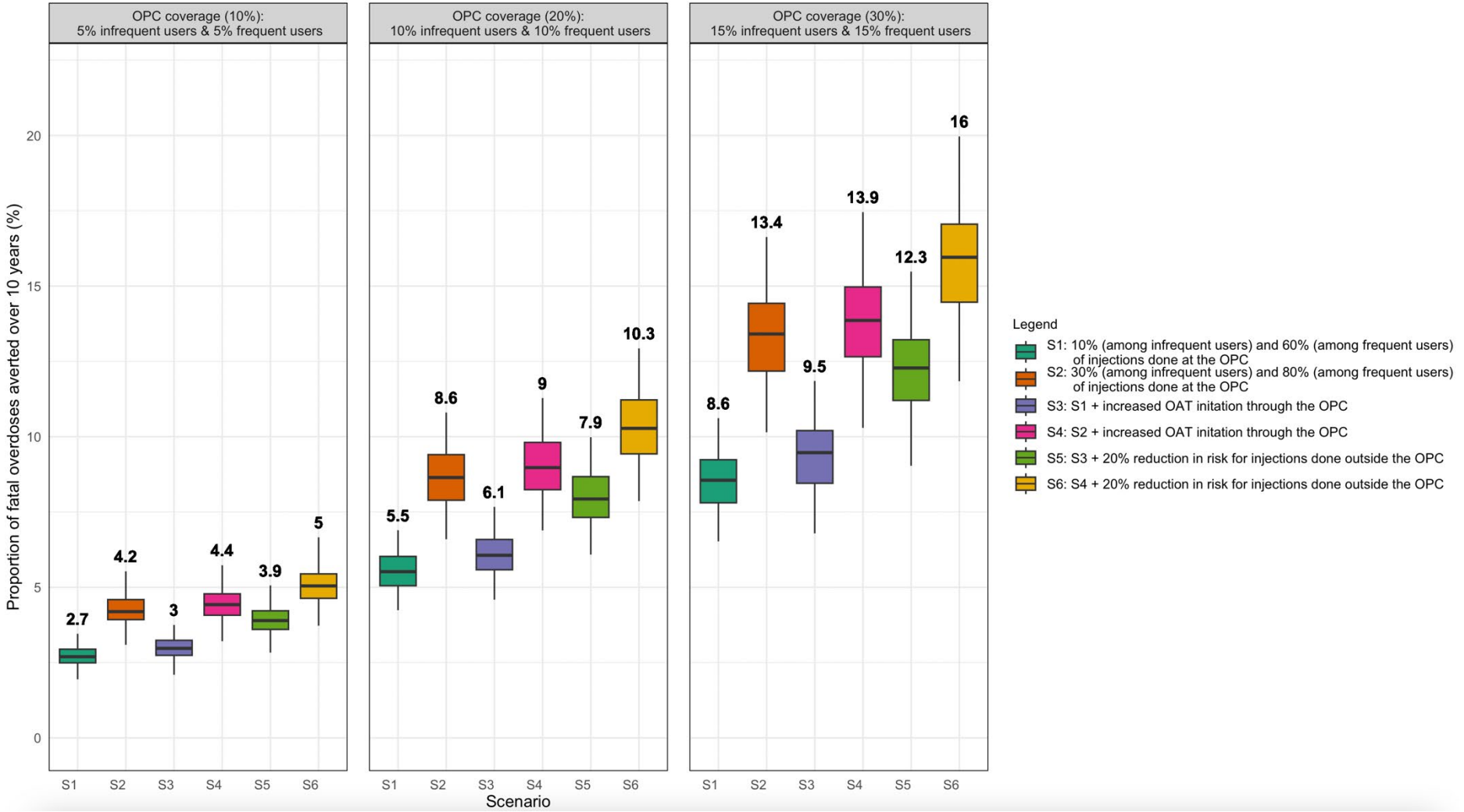
Background:
No overdose prevention centre (OPC) exists yet in the UK. We modeled the potential impact of introducing an OPC in England (any city) and Glasgow on fatal overdose, overdose-related ambulance call-outs, hepatitis C virus (HCV) infection and skin or soft tissue infections (SSTIs) requiring emergency care and hospitalization among people who inject drugs (PWID).

Methods:
We developed a setting-specific (England/Glasgow) dynamic model stratifying PWID by homelessness status (yes/no), opioid agonist treatment (OAT) receipt (yes/no), frequency of OPC use (none/infrequent/frequent, depending on the fraction of injections done inside) and HCV status (susceptible/chronically-infected). We assumed a population of 1500 PWID in each setting. The model was calibrated to setting-specific estimates of fatal/non-fatal overdose, chronic HCV prevalence—all higher in Glasgow than England—and SSTI—similar in Glasgow/England. All injections done inside the OPC were assumed to carry no risk of fatal overdose and HCV acquisition, and a reduced risk of SSTI and overdose-related ambulance call-outs. We modelled different scenarios, varying OPC coverage, frequency of use, and whether the OPC confers additional prevention benefits (increased OAT initiation; reduced risk for injections done outside the OPC).

Results:
In both England/Glasgow, 2.7-16% of fatal overdoses (figure), 2.9-17% of overdose-related ambulance call-outs, 5.2-27.3% incident HCV infections and 2.2-13.3% SSTIs requiring emergency care/hospitalization could be averted over 10-years if an OPC were introduced, depending on OPC coverage, frequency of use and provision of additional prevention benefits. More fatal overdoses (16-93 vs 3-16; scenario-dependent), overdose-related ambulance call-outs (261-1420 vs 97-553), and HCV infections (36-188 vs 19-100) would be averted in Glasgow than England, respectively (no difference for SSTIs: 62-347 emergency care visits and 48-266 hospitalizations averted in both settings).

Conclusion:
An OPC could have substantial impact on several drug-related harms among PWID in the UK, but impact depends highly on coverage, frequency of use and services offered.

Disclosure of Interest Statement:
The authors have no conflicts to disclose.


OPC coverage (10%):
5% infrequent users & 5% frequent users
OPC coverage (20%):
10% infrequent users & 10% frequent users
OPC coverage (30%):
15% infrequent users & 15% frequent users
Proportion of fatal overdoses averted over 10 years (%)
0
5
10
15
20
2.7
4.2
3
4.4
3.9
5
5.5
8.6
6.1
9
7.9
10.3
8.6
13.4
9.5
13.9
12.3
16
S1
S2
S3
S4
S5
S6
Scenario
Legend
S1: 10% (among infrequent users) and 60% (among frequent users) of injections done at the OPC
S2: 30% (among infrequent users) and 80% (among frequent users) of injections done at the OPC
S3: S1 + increased OAT initation through the OPC
S4: S2 + increased OAT initation through the OPC
S5: S3 + 20% reduction in risk for injections done outside the OPC
S6: S4 + 20% reduction in risk for injections done outside the OPC