

Introduction:

- Drug Consumption Facilities (DCF): places where people can use illicit drugs in the presence of medically trained staff¹
- Aim: reduce risky injecting practices; reduce fatal overdose risk; improve engagement with health and social services¹

Background:

- The Advisory Council on the Misuse of Drugs (ACMD) recommends introducing DCF to reduce fatal overdoses in the UK, to date it is not possible to open them due to current legislation

Target population

- The number of drug related deaths in the UK is rising, deaths involving opiates have increased from 23.0 per million population to 38.7 pmp since 2012²
- There are around a half a million to one million drug injectors in the EU¹
- The main drug injected is heroin, but cocaine combined with heroin and benzodiazepines are also injected
- Reasons for drug injection are numerous, and vary widely depending on local norms and subsets of cultures³
- Heroin purity and prices can encourage users to inject, as it is more cost effective. Higher prices can cause injectors to use cheaper and consequently more dangerous substances³.
- It is important to have good insight into the particular patterns of an area to be able to effectively engage and reduce drug related harm.
- Being in treatment reduces overdose risk by half⁴

Risks:

- Drug related harm manifests in a variety of ways
- Levels of HIV and Hepatitis C infection are high³.
- Injecting drug users (IDU) also transmit blood borne viruses to the wider, non IDU population, posing an additional public health issue³.
- Mortality rate in people who inject opiates is twenty times higher than the general EU population¹, this is due to overdoses, suicide, homicide and drug injection related illnesses
- In England and Wales, drug related poisoning deaths account for 12% of all fatalities between 16 and 40 years of age²

Aim:

- To appraise evidence on whether DCFs reduce mortality rates and thus understand whether their introduction in the UK might reduce drug related deaths

Method:

- Critical review of existing literature, focusing on observational cohort studies with fatal overdose as the outcome
- Search string used to search PubMed was: ("supervised" or "safer") and ("injection" or "injecting" or "shooting" or "consumption") and ("facility" or "facilities" or "room" or "gallery" or "centre" or "site") and ("mortality" or "overdose" or "drug poisoning" or "drug related death")
- This gave 184 results, papers were rejected they did not meet inclusion criteria (direct observational cohort study on changes in mortality associated with DCFs). Two papers were found:
 - o "Reduction in Overdose Mortality After the Opening of North America's First Medically Supervised Safer Injecting Facility: A Retrospective Population-Based Study" (Marshall et al, 2011)⁵
 - o "Sydney Medically Supervised Injecting Centre Evaluation Report No. 4: Evaluation of service operation and overdose-related events" a report prepared the NSW Department of Health (NCHECR, 2007)⁶
- Used CASP (<https://casp-uk.net>) checklist to appraise studies (see Table⁷)

Table: CASP Analysis for papers included in the review

	Did the study address a clearly focused issue?	Was the cohort recruited in an acceptable way?	Was the exposure accurately measured to minimise bias?	Was the outcome accurately measured to minimise bias?	Have the authors identified all important confounding factors?	Have they taken account of the confounding factors in the design and/or analysis?	Was the follow up of subjects complete enough?	Was the follow up of subjects long enough?	Do you believe the results?	Do the results of this study fit with other available evidence?	Setting	Design	Findings	Study implications	Overall Assessment of quality
NCHECR, (2007)	YES	CAN'T TELL	CAN'T TELL	YES	NO	CAN'T TELL	YES	YES	YES	YES	Supervised consumption scheme in Sydney, Australia	Observational study of difference in differences in opioid related mortality rates in/outside the vicinity of supervised consumption scheme pre/post its introduction	Opioid related mortality rates in/outside vicinity of scheme decreased to 0.29 (95%CI 0.22-0.39) and 0.30 (95% CI 0.27-0.33) of pre-scheme levels, respectively. There was no statistically significant difference between locations in the change in opioid related mortality rates.	Not possible to conclude that the scheme had an effect on opioid related mortality.	Fair
Marshall et al (2011)	YES	CAN'T TELL	CAN'T TELL	YES	YES	YES	YES	YES	YES	YES	Supervised consumption facility in Vancouver Canada	Observational study of difference in differences in fatal overdose rates in/outside the vicinity of supervised consumption scheme pre/post its introduction	Pre/post fatal overdose rate differences per 100k person-years in/outside vicinity of scheme were 88.7 (1.6,-175.8; p=0.048) and 0.7 (-1.3,-2.7; p=0.490) respectively. Interaction for rate differences just reached statistical significance (p=0.049) but confidence intervals overlap and indicate high level of imprecision for within-vicinity estimate.	Not possible to conclude that the scheme had an effect on fatal overdose rates.	Good

Summary of findings:

- Neither study found a clear statistically significant association between the introduction of DCF and reductions in drug related mortality
- Difficult to draw firm conclusions due to design weakness, untestable assumptions and confounders
- Both studies have similar design: compare deaths in vicinity local to DCF to wider area to see if there is a difference before and after DCF introduction
- Don't know whether drug users in local vicinity were actually exposed to the DFC at a higher rate than those in wider area
- Neither recruited identified cohorts from the at risk population = limitation: level of underlying risk in the (general) populations compared may differ and/or change over time
- Difficult to study DCFs as a population level intervention, unable to do RCTs, have lots of variables and overall evidence on reducing mortality is weak
- Need more studies on mortality to create bigger evidence base

Looking to the future:

- Drug consumption facilities were initially created to help supervise injecting of drugs, particularly opioids¹.
- Research is beginning to suggest that rates of injecting drug use could be declining^{1,3}. It is important to view this trend with caution, but drug consumption facilities may need to adapt to the drug trends of their areas, such as smoking
- Women who use drugs face unique challenges such as having additional family responsibilities, being coerced into injecting drugs and being at a greater risk of intimate partner violence⁸ which impact their ability to access substance-use services, in the future, it would be good to see facilities develop a more gender responsive approach

However: even if the evidence for their effect in reducing mortality risk per se is not strong, DCFs arguably are an ethical, humane, and pragmatic response to the need to reduce the wide range of risks encountered by injecting drug users.

References:

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