Public Health Scotland

Rapid evidence review on interventions to reduce drug-related harm during transitions of care

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Contents

Executive summary

The aim of this review was to describe the types of interventions used to reduce risk of drug harms, including death, among adults during transition of care and between services.

Methods

- Four databases (MEDLINE, Embase, Cochrane, Pubmed)
- July to August 2022
- Critical appraisal and thematic synthesis

Results

- Five studies included (174 records screened, 15 full text reviewed)

Settings

- Accident and Emergency / Ambulance (2)
- Maternity (1)
- Discharge from residential rehabilitation (1)
- Unspecified (1)

Findings

- Very limited evidence base, with most studies from USA. Outcomes excluded perceptions of service providers and no studies looked at patient survival or other individual outcome measures.
- Evidence of effectiveness of in-person and digital methods for establishing trust and contact.
- Stable housing and employment, practical assistance and funding to address basic needs, can decrease gaps in care and address support needs.
- Including a variety of these models and having more than one model in operation appears to improve service delivery.
- The unmet needs of the population group are substantial and, in some studies, acted as a barrier to engagement of the intervention being offered.

Recommendations

- Design in-staff autonomy and devolved budget responsibilities to allow staff to understand and address individual needs of people at risk of harm.
- Given the scale of unmet need, assess the outcome of ‘referral’ to other services.
- Evaluation of interventions for acceptability and effectiveness.

Introduction

Scotland recorded 1,330 drug-related deaths in 2021.[1] This is the second-highest annual total on record. Most of the people who died were between the ages of 35 and 54, and more than two-thirds (70%) were men.

In 2018, 30% of people who had a drug-related death (DRD) had been discharged from a general acute hospital in the six months prior to death (2017: 32%). In 2017, 26% of people who had a DRD were in police custody six months prior to death. In 2018, 13% of people who had a DRD had been in prison in the six months prior to death (2017: 14%). These data published in the National Drug Related Deaths Database report demonstrate that recent hospital discharge and prison release are risk factors associated with DRD.[2] This contact across the system offers an opportunity to intervene and prevent harm.

The Scottish Government has recognised drug-related deaths as a public health emergency, and in May 2021 published new standards of care for people experiencing problems with their drug use. The Medication Assisted Treatment (MAT) standards[3] are evidence-based standards to enable the consistent delivery of safe, acceptable, accessible, high-quality drug treatment across Scotland. These are relevant to people and families accessing or in need of services, and health and social care staff responsible for delivery of recovery-oriented systems of care. The purpose of the ten MAT standards is to improve access, choice and support.

MAT Standard 3 focuses on assertive outreach and anticipatory care to ensure people at high risk of drug-related harm are proactively identified and offered support to commence or continue MAT. If a person is thought to be at high risk because of their drug use, then workers from substance use services will contact the person and offer support, including MAT.

People who use opioids are more likely to suffer harm if their care and treatment are interrupted or discontinued. When people return to opioid use after detoxification, release from jail or discharge from treatment (planned or unplanned), their tolerance to

opioids is greatly reduced, which increases their risk of overdose. The aim of this standard is to identify people who are at high risk of severe drug-related harm, and to provide them with rapid support for engagement or re-engagement with holistic care, including MAT. The purpose of this evidence review was to identify available literature and describe common themes that should be considered when developing service pathways for continuity of care between settings and services.

Methods

The objective of this rapid review was to assess the current evidence base on models of service provision, care and support or intervention to reduce harm and/or to reduce the risk of drug-related harms in the short term at known points of transition (police custody, hospital discharge, detox and prison release).

The search strategy included keywords like ‘care’, ’service’, ’support’, ’harm reduction’ and ‘transition’. The search strategy is included in the appendix. Four databases (Medline, Embase, Cochrane and PubMed) were searched to identify published systemic reviews, qualitative studies and further articles providing and strengthening evidence of current practices in harm reduction at points of transition. Articles published until date of search (‘20 June 2022’) were included.

Titles and abstracts were screened based on the inclusion and exclusion criteria, with further exclusion of articles at full-text screening.

Evidence and conclusions from five articles are included in this review. Quality was appraised using CASP Systemic Review Checklist and Qualitative Study Checklist.[4] Data extraction was completed to summarise the evidence. A thematic synthesis of findings is presented below.

Inclusion criteria

Population of interest: Adults at high risk of drug-related harm. People who inject; people who have recently experienced a non-fatal/near-fatal overdose; people who use multiple substances/polysubstance use/polypharmacy; people in contact with the justice system/leaving prison or custody; people leaving hospital; people in unstable housing or experiencing homelessness.

People who experience problems with their drug use: Social, psychological, physical, medical or legal problems experienced because of drug use.

Setting: Primary and secondary care, third sector, emergency departments, ambulance service, public health, community pharmacy, housing and homelessness services, custody settings and specialist drug, alcohol and mental health services.

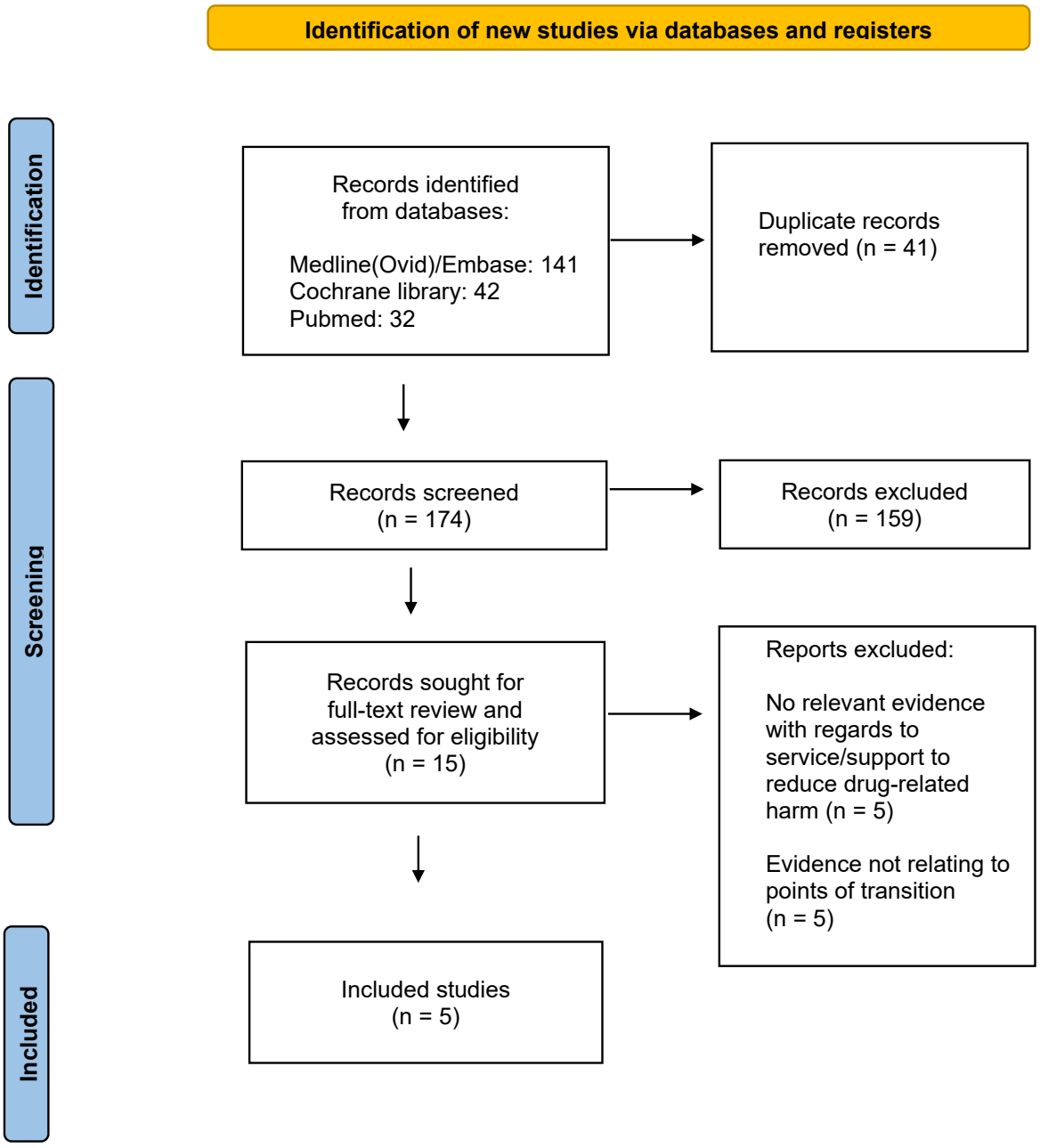
Study design: Review of reviews, systemic reviews and qualitative studies reporting on evidence of models of care, service provision, support or intervention to reduce harm and/or to reduce the risk of drug-related harms in the short term at known points of transition (police custody, hospital discharge, detox and prison release).

Study outcome: Improvements in health and wellbeing, access to services, improvements in circumstances, engagement and retention in services, social connectedness.

Exclusion criteria

Pre-clinical and biological studies, case reports, editorials, letters, studies that do not report relevant evidence on models of care, service provision, support or intervention to reduce harm. Non-English language reports are also excluded.

Figure 1: PRISMA flow chart



Findings

1. Care and support attendance

Study setting: Telephone enhancement of long-term engagement in services (Hubbard et al, 2007[5])

Place: United States of America (study conducted in 2006)

Evidence summary: This study tested the feasibility and effectiveness of a telephone-based intervention – the Telephone Enhancement of Long-term Engagement (TELE). A series of calls is made to patients after discharge to encourage attendance at community-based outpatient treatment, to support substance use treatment participation, and to motivate continued engagement with care plans. The primary objective was to encourage engagement in aftercare following discharge from short-term inpatient and residential treatment programmes. The study was of fair quality.

Although the telephone care group showed no increase in self-reported programme attendance at outpatient counselling session compared to standard care, there was an effect when attendance was documented independently in programme records. For participants with documented data available, significantly more people in the telephone care group attended at least one counselling session. The authors then explored the relationship between intervention outcome and gender. The result was not significant but there was a greater tendency to attend at least one counselling session among women.

Preliminary analysis of other outcomes including living environment, days of self-reported drug use, medical/physical functioning, employment, legal involvement, social/family functioning, mental health, and HIV/AIDS risk behaviour do not indicate major differences between the two groups.

Study setting: Emergency department (Regan et al, 2022[6])

Place: Massachusetts, Boston (study conducted in 2019)

Evidence summary: This good-quality study addressed opioid use disorder (OUD) in the Emergency Department (ED) through buprenorphine initiation and referral to follow-up care (including pharmacotherapy, group and individual counselling, recovery coaching, resource support, harm reduction services and psychiatric care for co-occurring mental illness).

This evaluation study found that addressing opioid use disorder at emergency department visit (via buprenorphine initiation, or at-home induction kit, or assertive referral to follow-up care) was associated with greater likelihood of subsequent engagement in treatment. The authors also assessed the impact of ethnicity. Black and Hispanic/Latinx patients had lower rates of having their OUD addressed at ED visits and were referred less often.

Treatment engagement was defined from Healthcare Effectiveness Data and Information Set (HEDIS): an initial encounter within 14 days of discharge, and either two subsequent encounters or a subsequent buprenorphine prescription within 34 days of the initial encounter.

2. Unmet support needs

Study setting: Acute care services (Kosteniuk et al, 2022[7])

Place: Western Canada (study conducted between 2016 & 2017)

Evidence summary: This study provided analysis on unmet need for services and barriers to care for vulnerable populations. This study was of fair quality. Almost half (46%) of participants reported a high level of unmet service need (reporting this for three to seven different services), despite seeking services during the past year.

Participants reporting recent criminal activity, adverse childhood experiences, transitory sleeping, having no community support worker, and meeting screening criteria for depression were more likely to report a high level of unmet service needs. Structural barriers to care (57%) (organisational and system barriers to access and choice) were more commonly reported than motivational barriers (43%) (lack of knowledge, lack of time and motivation).

Participants were on average 39 years old, with 40% identifying as women and 39% as indigenous. Over three-quarters reported Adverse Childhood Experiences (ACEs) and living in poverty. Many were neither connected to community support workers (70%) or primary care (40%). Most common substances used were stimulants (84%) and opioids (64%).

Study setting: Maternal health services (Choi et al, 2021[8])

Place: Boston and New York, United States of America (Study conducted between 2015 to 2018)

Evidence summary: This study explored whether motherhood increases women's use of health and social services, and presents opportunities to identify and refer women with substance use disorder (SUD) to treatment. Motherhood status showed no difference in outpatient visits but was associated with emergency department (ED) visits, hospitalisations and higher likelihood of using social services. Greater use of emergency department and social services had a slightly stronger association for mothers with SUD, however this difference was inverted for hospitalisations. For mental health services, mothers who had SUD were more likely to use them.

Women who had SUD had similar patterns of overall health service use, but mothers who had SUD were more likely to use the emergency department and be admitted to hospital. In addition, SUD was more likely to determine involvement with the criminal justice system, and mothers with SUD had slightly elevated involvement.

Mothers also had higher treatment engagement. Service use characteristics that were associated with SUD treatment among mothers were mental health treatment, and criminal justice system involvement.

Study setting: Post-discharge services (Manuel et al, 2016[9])

Place: New York, United States of America (study conducted between 2015 & 2016)

Evidence summary: This qualitative study explored barriers and facilitators during the transition from long-term residential treatment. Participants were on average 41 years old and self-identified as Black (44%), Hispanic (34%) and White (13%) or other. Just over half had treatment mandated. Participants had complex needs, with high rates of experiencing homelessness, mental and physical health needs, unemployment and involvement with the criminal justice system. The most frequently reported substances prior to entering treatment were crack/cocaine (44%) and alcohol (41%).

The study used a socio-ecological model and identified barriers and facilitators across multiple themes: individual, interpersonal, organisational, community and policy levels. Participants reported the majority of barriers at the individual and interpersonal level. Individual barriers related to basic unmet needs of money and housing, with the latter delaying discharge from treatment for some. Housing was also noted as a driver for entering residential treatment for a few. Just over half of participants reported difficulty in making a change. Interpersonal barriers to transitioning back to the community centred on having limited or no support network, difficulties in relationships, and family and friends who use drugs. This linked to a barrier at the community level about the risk of returning to a stressful neighbourhood environment. In policy, the lack of available housing and the need for more resources for people with co-occurring mental or other health issues were identified.

Organisational barriers included limited availability of staff time to support discharge planning due to heavy caseloads. Participants expressed interest in having more

individual focused time (whether one-to-one or in group work) with their worker to discuss key issues like housing or employment. A few female participants reflected concerns that treatment was not suited to address the needs of women (experiences of trauma, domestic violence and childcare) and the likely impact of meeting their goals while managing family demands.

Facilitators very much mirrored these findings, with nearly all participants naming a job and housing stability as key to successful transition from residential treatment. Having these basic needs met supported their recovery, giving purpose and motivation not to relapse. Other factors included being ready for change, good coping skills and being a role model for peers. At the interpersonal level also, facilitators were in response to barriers. The most frequently identified was the role of family and friends in providing emotional and practical support. Another important facilitator described by participants was self-help and recovery groups to keep them focused on their recovery, as well as avoiding negative relationships and situations.

Person-centred care and discharge planning were both identified as key organisational facilitators. Being empowered, having choice across a range of issues and needs, with enough information to discuss and decide their discharge plan were key to this process. A desire for post-discharge support was also identified. Access to community resources and stable housing were described as facilitators at the community and policy level.

Limitations and gaps

- The review was done by a single reviewer within a short timeframe.
- There was limited data available on SUD service usage based on age, gender and ethnicity.
- The population analysed is a subpopulation which often experiences a lot of stigma and discrimination. The findings should therefore be considered with caution.
- Although the review suggests evidence for improvements in addressing the unmet needs of the individuals looking for SUD treatments, more research is needed to understand the needs of people who do not seek medical care/support.
- More details on use and cost-effectiveness of these services would have been beneficial to stakeholders and policymakers.
- The evidence collected was mostly based on the perceptions from individuals with SUD and lacks consideration of the staff and policymakers who would have different perception of barriers and facilitators of transition.

Conclusion

There is a lack of published good-quality evidence. Most of the studies were conducted in the United States of America. There appears to be scope for a variety of models. Telephone and digital services can be used as follow-up initiatives. Stable housing and employment, transitional assistance and funding to address basic needs can decrease gaps in care and address support needs. Including a variety of these models and having more than one model in operation appears to improve service delivery. The unmet

needs of the population group are substantial and, in some studies, acted as a barrier to engagement of the intervention being offered.

Recommendations

1. Interventions should be evaluated in order to assess acceptability and effectiveness.

2. Consideration should be given to promoting flexible approaches and staff autonomy to address the individual barriers faced by people with multiple complex and unmet needs.

3. Given the scale of unmet need and links to structural barriers, the outcome of ‘referrals’ to other services should be tracked rather than referral as a proxy end point.

4. Assessment of unmet needs among people at risk of drug-related harm who are not in contact with treatment services should be considered.

References

[1] National Records of Scotland (2022) Drug-related deaths in Scotland in 2021. Available at: **www.nrscotland.gov.uk/files/statistics/drug-related-deaths/21/drug-related-deaths-21-report.pdf/**

[2] Public Health Scotland 2022. The National Drug-Related Deaths Database (Scotland) Report. Analysis of deaths occurring in 2017 and 2018. Available at: **https://publichealthscotland.scot/publications/national-drug-related-death-database-scotland/the-national-drug-related-deaths-database-scotland-report-analysis-of-deaths-occurring-in-2017-and-2018**

[3] **Medication Assisted Treatment (MAT) standards: access, choice, support (www.gov.scot)**

[4] CASP: Critical Appraisal Skills Programme. **www.casp-uk.net**

[5] Hubbard RL, Leimberger, JD, Haynes L, et al. Telephone enhancement of long-term engagement (TELE) in continuing care for substance abuse treatment: A NIDA Clinical Trials Network (CTN) Study. The American Journal on Addictions, 16:495–502, 2007.DOI: 10.1080/10550490701641678

[6] Regan S, Howard S, Powell E et al. Emergency department-initiated buprenorphine and referral to follow-up addiction care: A program description. American Society of Addiction Medicine. Volume 16, Number 2, March/April 2022

[7] Kosteniuk B, Salvalaggio G, Wild C et al. Perceived unmet substance use and mental health care needs of acute care patients who use drugs: A cross-sectional analysis using the Behavioral Model for Vulnerable Populations. Drug and Alcohol Review (May 2022), 41, 830–840. DOI: 10.1111/dar.13417

[8] Choi S, Stein MD, Raifman J et al. Motherhood, pregnancy and gateways to intervene in substance use disorder. Health Soc Care Community. 2022;30:e1268–e1277. DOI: 10.1111/hsc.13534

[9] Manuel JI, Yuan Y, Herman D et al. Barriers and facilitators to successful transition from long-term residential substance abuse treatment. J Subst Abuse Treat. 2017 March; 74: 16–22. Doi: 10.1016/j.jsat.2016.12.001

Appendix 1: Search strategy

Databases searched

Embase <1974 to 2022 Week 22>

Ovid MEDLINE(R) and Epub ahead of print, in-process, in-data-review and other non-indexed citations, daily and versions <1946 to June 20, 2022>

Database search terms

1. (care adj4 model).tw (40,093)
2. (service adj4 model).tw (8,405)
3. (support adj4 model).tw (33,641)
4. (service adj4 provision).tw (12,128)
5. (service adj4 respond).tw (3,742)
6. outreach.tw (20,535)
7. liaison.mp. (13,769)
8. case conference.mp. (756)
9. multidisciplin.tw (147,572)
10. respone.tw (5,339,849)
11. intervene.tw (1,572,451)
12. (harm adj4 reduce).tw (12,490)
13. exp crisis intervention/ (6,118)
14. exp multidisciplinary team/ (9,847)
15. harm reduction/ (6,675)
16. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 (6,843,287)

17. exp drug overdose/ (29,258)
18. exp illicit drug/ (15,804)
19. illegal drug.tw (3,173)
20. illicit drug.tw (23,421)
21. overdose.mp. (43,753)
22. 17 or 18 or 19 or 20 or 21 (25,105)
23. hospital discharge.tw
24. (detox adj3 transition).tw
25. detox.tw
26. (prison release adj3 transition).tw
27. prison release.tw
28. (ambulance service adj3 transition).tw
29. ambulance service.tw
30. (prison adj3 transition).tw
31. (hospital adj3 transition).tw
32. prison.tw
33. hospital.tw
34. 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33
35. 16 and 22 and 34
36. limit 35 to (English language and yr='2018-Current')