

Realist review of factors which impact the use of community-based drug checking services among people who use drugs

What is drug checking and why is it needed in Scotland?

Drug checking is a service where people can hand in a small sample of drugs for testing, so that they can receive information about what it contains. Services are confidential and discreet and as well as providing information about what is in a drug sample, trained staff can offer harm reduction support around things such as poly-drug use, safer dosage, and how drugs interact with medications. People who use drugs currently have very little reliable information about the strength and content of what they are taking, which puts them at risk of harm. Drugs can have very different contents and are often 'mis-sold' (meaning that the purchased drugs do not contain the desired substance). Scotland currently has the highest level of drug related deaths in Europe and there is a need for such services to help keep people safer. Although drug checking services are set up in Europe, the USA, Canada, England and elsewhere, there aren't any in Scotland.

What was the aim of the research?

As part of a wider research project looking to explore the potential of setting up drug checking services in Scotland, we reviewed the literature to find out what factors are related to service use. Drug checking services have been growing in number around the world and the number of countries offering such services is expanding. Services can differ in terms of where and how they operate. For example, some services offer drug checking to people attending festivals and night-time events (known as 'festival drug checking') and others operate in cities and towns on a more permanent basis (community-based drug checking). Our review focused on community-based drug checking services, as these are the kind that are being proposed and worked towards in Scotland (in Aberdeen, Dundee and Glasgow). Community-based drug checking services have the potential to reach a wide range of people, including those at highest risk of experiencing drug related harm. We reviewed the literature to better understand the factors which can increase, or act as barrier to, use of community-based drug checking service amongst people who use drugs. This is important as we need to understand how to design services in Scotland that people will use and which meet their needs.

What is a 'realist' literature review?

A 'realist' review is slightly different from other types of literature review. Instead of just asking 'does a service work?', it takes a deeper look at why something works the way it does and how this is shaped by context. It asks: 'what works, for whom, and in what circumstances?'. This approach is useful when looking at drug checking services, which work very differently across countries for a number of reasons. Therefore, rather than just asking whether drug checking services have high levels of engagement among people who use drugs – a realist review asks questions like: what factors lead to increased use of drug checking services and how might this differ across and within countries? To do this, realist reviews use a tool called 'Context-Mechanism-Outcome' configurations (CMOC):

Context: Refers to the backdrop in which a service (such as drug checking) exists. So, if we take drug checking as an example, ‘context’ could include factors like available funding, laws and policy, public opinion, and level of drug related harms. Contexts are social, environmental, inter-personal and political factors which have an impact on the service being delivered.

Mechanism: Things present in the service being delivered (though often not directly observable) which can be ‘triggered’ by particular contexts and lead to an outcome. So, for example, establishing drug checking in well-known community settings (*context*) may encourage increased confidence among community members, triggering the *mechanism* of trust, leading to the *outcome* of more people using the service.

Outcomes: Are things which happen when a service is provided to someone. Outcomes are important because they can tell us how well as service is working and whether it’s doing what we thought it would. The outcome we focused on was increased engagement in drug checking. We wanted to know what contexts and mechanisms could lead to greater engagement in drug checking, particularly amongst those at highest risk of experiencing drug related harms, such as overdose.

When contexts, mechanisms and outcomes are considered together, they give us an idea of how we think a service will work, informing approaches to service design and delivery, which can then be tested through further research. These ideas about which contexts and mechanisms will lead to particular outcomes are called ‘programme theories’ (theories about how a service works a certain way and why). We developed seven programme theories based on the literature which can impact the levels of engagement in community drug-checking services (described below).

What steps were involved in the review?

STEP ONE: DEVELOPING INITIAL PROGRAMME THEORIES

We did some scoping of the literature and developed ‘initial programme theories’. This means contexts and mechanisms which we thought would be important to engagement in drug checking services.

STEP TWO: SEARCHING FOR EVIDENCE

We searched 13 electronic databases using particular search terms to source research and articles about drug checking. We also asked experts to identify important sources. We included a wide range of documents including academic articles, news articles and organisational reports.

STEP THREE: REVIEWING THE LITERATURE AND DEVELOPING EVIDENCE

We included 133 sources in our final review. From these sources we looked at the evidence about what factors influenced engagement in community-based drug checking services. We refined our initial ideas developed in step one into seven ‘programme theories’ which influence engagement in drug checking, outlining the contexts and mechanism important to each theory.

What factors did we find that influenced levels of use of drug checking services?

Programme theory one: Legislation and regulation



Legislation, regulation and policies around drug checking can impact engagement in community-based drug checking. Drug checking exists in a legal grey area, in that drug possession is still a criminal offence in many countries. Countries have different levels of legal protections for staff and people using the service. Having clear legislation and policy around drug checking services provides assurances for all those involved that they are safe from being charged or arrested. This reduces fear and increases willingness to use the service. It is also important to have a supportive local police force who understand the importance of harm reduction and who see the need for drug checking.

Programme theory two: Drug market and drug harms



The level of drug related harms, or concern over new or emerging risks in the drug market, was an important factor behind the increase in number of drug checking services. The level of harms from drug use is increasing globally, partly because the drug market is becoming more complex, dangerous and placing people at higher risk. We found evidence that this leads to growing concern and action amongst people who use drugs, public health, policy actors and services. The rising levels of drug related harms creates opportunities for harm reduction services like drug checking to be set up.

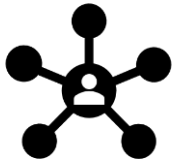
Programme theory three: Integrating drug checking into an existing service



Integration into an existing harm reduction service can improve uptake of drug checking. As individuals are already attending such services for other supports and have existing relationships with staff, they will be more likely to engage in drug checking. However, this may vary depending on the characteristics of the individual in question. Settings offering injecting equipment, naloxone, and support with housing and mental health may be most appropriate for those who use dependently and are at highest risk of experiencing drug related harm.

Delivering drug checking in a harm reduction setting allows individuals accessing the service to be provided with other supports and services which can support their health and wellbeing. Additionally, staff will have knowledge of services and supports available in the local area and will be able to signpost individuals. Staff in such settings are generally supportive of the implementation of drug checking, as they see the potential for being able to better support service users. Drug checking can help engage people not currently accessing the service and strengthen connections with existing service users. However, we found that it is important that services have the capacity (in terms of time, space and resources) to be able to provide drug checking without it negatively impacting existing services.

Programme theory four: Lived/living experience ('peer') involvement at all levels



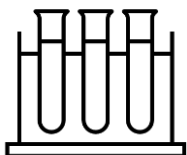
Having those with lived/living experience centrally involved in planning, running and delivering drug checking is important for providing a service better meets the needs of people who use drugs. However, sometimes opportunities for those with lived/living experience ('peers') to be involved in harm reduction services can be limited. Expertise of peer workers is sometimes undervalued, with few opportunities for skill development and career progression. Also, meaningful involvement of peers in service design and key decision making is sometimes lacking. Drug checking services may face challenges in ensuring peer workers and service users are meaningfully involved and engaged. For example, concerns over risk and legal liability among stakeholders such as government and insurance companies may limit opportunities for peers to build skills in the drug checking process itself (using the equipment to test drug samples). If drug checking services centrally involve those with lived/living experience services will be more inclusive and responsive.

Programme theory five: Accessibility



For drug checking services to have high levels of engagement, they need to be accessible to those who wish to use them. Therefore, it is important that drug checking services are located in places near where people buy and use drugs, and near other harm reduction services. However, it is difficult for one drug checking site to be accessible to all people who might wish to use it. People may live far away from services, have mobility or transport issues, or be reluctant to access services. Using outreach (such as a mobile drug checking van), allowing people to send in samples by post, or having a number of sample-drop-off points throughout a city are potential ways of increasing access amongst wider groups of people. Such approaches can face legal challenges. For example, in the UK drug checking services require a Home Office license to operate legally, and such licenses would be hard to obtain for outreach drug checking. There are a few examples of services internationally using such methods to expand access, but there is a need for more research on this area to explore the impact on levels of engagement with drug checking.

Programme theory six: Testing process



Drug checking services use a wide range of equipment and methods to test drug samples and provide information to people using the service. This equipment varies in terms of the type, detail and accuracy of information it can provide. There is often a level of uncertainty around drug checking results, which needs to be carefully considered and communicated to those using the service. The literature shows that services have to consider trade-offs in relation to cost, speed of testing and comprehensiveness of result. More technologically advanced equipment may carry a substantial cost, meaning that services have to rely on more limited equipment and methods. For drug checking services which face these limitations,

drawing on existing drug checking services and partnerships with universities may be a way of improving testing methods and providing more accurate and useful information to service users.

A further key issue for services is the expertise required to operate the drug checking equipment and interpret results. Having individuals with expertise in chemistry or drug checking is beneficial for interpreting drug checking results accurately. However, this may not be affordable for drug checking services operating with more limited budgets. Where this is the case, staff require training from those with high levels of expertise, including existing drug checking services.

Given the challenges described above, it is important for drug checking services to clearly communicate the limitations of testing – including explaining any uncertainty around results. An important limitation for many drug checking services is that they are not able to offer quantitative results within a short timeframe. Quantitative results provide information about the concentration of particular substances in a sample, which is important information when considering how to use drugs more safely. Some services may be able to send a sample to a lab to find out such information, but this can take a much longer period of time – which might present a barrier to engagement for some

Literature suggests that framing results as part of a wider harm reduction discussion about risk and safer drug consumption aiming to increase people's knowledge about the risks of drug use may be a means of overcoming some of these limitations.

Programme theory seven: Service users previous experiences



There is some evidence that those who have experienced an adverse drug event (such as an overdose) or who have received overdose awareness training are more willing to use drug checking services. Such experiences heighten awareness of the risks of drug use. However, there was also evidence which contradicts this. Some people who are using dependently, and who face a lot of health and social challenges and discrimination may be 'ambivalent' to risk (meaning that they are less concerned about experiencing drug related harm or feel that there is little they can do to protect against such risks). Additionally, those who have been using drugs for longer periods of time may feel that they have enough knowledge to avoid such experiences – meaning that they may see less value in using drug checking services. The issue of how people understand and respond to risk is complicated and is shaped by a range of personal and social factors. More research is needed on how previous experiences of drug related harm shape willingness to use drug checking services.

What can we learn from the findings?

- **Enabling legislation** which allows drug checking services to operate with a legal framework and provides protection for people accessing the service is important for increasing engagement. However, many services will continue to operate in contexts where this is not the case. Therefore, there is a need for continued work to understand how services operate within existing legal structures and how police on the ground respond to drug checking services.
- **Support and funding from central or local government** allows services to operate more securely and afford staffing and equipment costs. Having good equipment and testing methods may help drug checking services better meet people's needs for information about what is in their drugs, which can increase engagement.
- **Governments and public health bodies should facilitate the development of equipment and methods** which are low cost, easy to use and suitable for use in harm reduction settings. An example of this is the 'Drug Checking Technology Challenge' in Canada, where Health Canada has provided funding for the best innovations in drug checking technology.
- **New services can draw on universities and more established drug checking services** to help them develop their drug checking methods. This is particularly important for services operating with limited funding and expertise.
- **There is a need for expanded models of drug checking** which use outreach, sample collection, postal and other innovations to increase the accessibility of drug checking. Drug checking offered at one location is unlikely to be accessible to all who might wish to use the service. Such methods might be cost-effective ways of increasing engagement. However, current legislative and regulatory frameworks in many places make such approaches challenging.
- **Those with lived/living experience should be centrally involved in all aspects of drug checking** including service design, delivery and evaluation. This may be challenging for drug checking services due to governance and insurance issues. However, services should make an explicit commitment to achieving this goal and take clear steps to work towards it.

If you would like to read the full review, scan the QR code below

