



Drug Deaths in Scotland: an increasingly medical problem





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Foreword

On 15 December 2020, the National Records of Scotland reported that the number of drug-related deaths recorded in Scotland was 1,264 during 2019, a rise of 6% on 2018, when 1,187 drug related deaths were recorded¹. The 6% increase was no surprise to many experts, some of whom had previously warned of an expected rise in drug-related deaths for 2019². However, more significantly, the figures for 2018 – released in July 2019 – were 27% higher than the previous year (2017), and the highest at the time since records began in 1996³.

Calls were immediately made, in July 2019, for a cross-party approach in response to the alarming figure. Opposition parties in the Scottish Parliament called for nationally coordinated action involving local authorities, police and health boards. The Drug Deaths Taskforce, Chaired by Professor Catriona Matheson, was established by the Scottish Government Minister for Public Health and Sport at the time, Joe FitzPatrick MSP, *“to co-ordinate and drive action to improve the health outcomes for people who use drugs, reducing the risk of harm and death”*⁴. Mr FitzPatrick ceased his role as Minister for Public Health and Sport on 18 December 2020 after the 6% increase in drug-related deaths announced on 15 December. A new ministerial post for Drugs Policy was created, held by Angela Constance MSP at the time of writing⁵.

Meanwhile, the cross-party Scottish Affairs Committee in the UK Parliament carried out an intensive consultation exercise to identify where Scotland was going wrong, and how it could be put right. The Committee called on the UK Government to declare Scotland's drugs deaths a public emergency, to decriminalise the possession of small amounts of drugs, to make drugs misuse a health rather than a criminal justice issue, and to pilot a safe drugs consumption room (which had previously been ruled out as a breach of the Misuse of Drugs Act 1971)⁶. These proposals were rejected by the Home Office and it appears that an impasse has been reached in that regard, highlighting divergence in drug policy aspirations between Westminster and Holyrood.

The political debate on Scotland's drug deaths problem has been at times, unhelpful, in resolving this impasse. The Scottish Government and the UK Government – and the political parties of all colours – must work together to build a consensus and a

clear strategy to stop people dying from drug-related harms. Primarily, they must see drug-related deaths as a public health issue – not a political issue. Care must be taken to develop political decisions after meaningful consultation with clinical stakeholders and other interested parties. Clinicians must also take a more active role in promoting change based on sound research and practical experience.

The Royal College of Physicians of Edinburgh believes that Scotland can only tackle the drugs deaths crisis through a “whole systems approach” involving all relevant stakeholders and services – and clinicians will be an important component of that. The College has, therefore, been working to promote the clinical voice on this issue since autumn 2019, with an initial meeting in 2019 to investigate the reasons behind the National Records of Scotland figures on drug-related deaths.

More recently, in October 2020 the College organised a follow-up conference with expert speakers. This was conducted remotely due to the restrictions on “mass gatherings” during the COVID-19 pandemic. We were pleased to welcome a range of experts including Professor Catriona Matheson (Chair, Drug Deaths Taskforce), Dr Ahmed Khan (former Chair of the Addictions Faculty and consultant psychiatrist at NHS Lanarkshire) and Dr Arvind Veiriah (consultant clinical toxicologist, National Poisons Information Service, Edinburgh). They each provided a research paper in advance too (as did Dr Michael Kehoe and Naomi Honhold from NHS Lothian), and they joined a panel which included Professor Sir John Strang (King's College London) and Professor Michael Eddlestone (University of Edinburgh). The College is grateful to them each for their significant contributions.

One of the outcomes of the conference was the suggestion that the College produce a position paper, drawing on the contributions of expert speakers, the research papers submitted in advance, and the debate had during the event. This paper would consider medical education and the steps that policy makers can take to improve the guidance given to physicians and their healthcare colleagues who treat and care for people who use drugs. The College's work in this area complements the work of the Drug Deaths Taskforce and Public Health Scotland, and we are grateful for the support of its Chair, Professor Catriona Matheson.

The Royal College of Physicians of Edinburgh has proposed

5 key recommendations

1

The College is committed to supporting educational initiatives to maximise the involvement of all sectors of medicine in managing problems related to drug and alcohol dependency. The College will undertake significant work in this area in 2021, including the publication of an article in our Journal. In addition, we will support – when published – a national stigma charter for Scotland which would highlight and seek to address the stigma that people who use drugs face. We are encouraging all political parties and health organisations (where relevant) to support the charter when it is published.

2

The College wants to see serious, evidence-based consideration given to the issue of the decriminalisation of drug use. We recommend the introduction of a drugs consumption room and a heroin assisted treatment programme in all major centres in Scotland, and we support the targeted harm reduction measures including the administration of Naloxone, which is advocated by the Drug Deaths Taskforce.

3

The College believes that the Scottish Government and UK Government must work together, to improve the socio-economic factors associated with drug use such as employment and income, social security, education, public health, support services and housing – as well as the physical and psychological factors. This is particularly vital in the midst of the COVID-19 pandemic, which evidence shows is disproportionately affecting people in areas of higher deprivation.

4

The College is calling on the UK Government, the Scottish Government, and all political parties to listen carefully to the views of front line clinicians and researchers, and to be aware of the public and academic conversations on drug-related deaths.

5

The College believes that continued and increasing cross-party and cross-discipline engagement is required to effectively manage drug-related deaths and deliver real and measurable change. We note that cross-discipline collaboration is already under way through the Drug Deaths Taskforce, which is a positive and necessary step.

Setting the scene

Political debate

A high profile public debate on drug deaths in Scotland has been ongoing, since it was announced in July 2019 that Scotland had the highest drug-related deaths per capita in the European Union⁷. These figures highlight a continuing upward trajectory over several years. Much of the public debate – mainly played out through traditional and social media channels - has centred on the conflict between the Scottish Government and the UK Government, and their diverging approaches to tackling Scotland's drug deaths crisis. The governments have clashed on a range of policy interventions including decriminalisation, a drugs consumption room pilot, and whether to declare the crisis a public emergency – the latter of which would implore the health and education sectors, as well as the police and the courts, to provide joint solutions⁸. So far, a lack of progress has been made on these issues despite being recommended by the cross-party Scottish Affairs Committee at the House of Commons. It is the College's view that these policies should be seriously considered, and that representations must continue to be made by the Scottish Government and others (including the Medical Royal Colleges) to the UK Government, which has "reserved powers" responsibility for decision-making in these policy areas.

Drug-related deaths in 2019: a 6% increase

As highlighted in the *foreword* to this report, drug-related deaths in Scotland rose by 6% in 2019, compared with 2018 – with 1,264 people losing their lives in 2019 (an increase from 1,187 people in 2018). Worryingly, the National Records of Scotland (NRS) revealed on 15 December 2020 that "Scotland's drug-death rate was higher than those reported for all the EU countries, and was approximately 3½ times that of the UK as a whole"⁹. This is a stark reminder of the scale of the drug deaths epidemic Scotland is facing. Significantly, also, NRS revealed that most people who died from drug-related harms were men (7 out of 10), over two thirds of people who died were between the ages of 35 and 54, and that over half of all recorded deaths (51%) implicated Heroin and morphine misuse – higher than any previous year¹⁰. And the College notes that the number of drug-related deaths of people who took more than one substance

was 94% in 2019 – a trend which was highlighted in research by Dr Michael Kehoe and Naomi Honhold (see section on addressing drug use behaviour). Poly-drug use is considered a complicated pattern, rendering treatment more challenging. Other worrying trends are the increasing number of opiate related deaths in older people, indicating a vulnerability to the effects of opiates, including methadone, as people age and the increase in the average number of drug-related deaths under age 25 years, which doubled between 2016–17 (37 deaths) and 2018–19 (70 deaths). This last observation is of particular concern as it may indicate a new vulnerability due to changing patterns of drug use.

All of these trends must be examined closely to determine what action can be taken to arrange targeted treatment for people who use drugs.

The Drug Deaths Taskforce

The College is encouraged that the Scottish Government quickly established the Drug Deaths Taskforce (DDTF) – indicating a new commitment to engage in a major review of Scottish drug policy - in July 2019. Work is currently under way to "co-ordinate and drive action to improve the health outcomes for people who use drugs, reducing the risk of harm and death"¹¹. This includes identifying the areas of action that can make a sustainable impact against the challenge of drug-related deaths in Scotland and save lives. The DDTF's Chair, Professor Catriona Matheson, has acknowledged that Scotland faces a "public health emergency" on drug deaths and that there are a number of "compounding factors" that prove a unique challenge to tackling the issues of drug deaths and drug-related harms in Scotland. Through research in its first year of operation, DDTF has outlined six strategies (see Appendix 1 for further information) to inform its work:

- Targeted Distribution of Naloxone
- Immediate Response Pathway for Non-Fatal Overdose
- Optimising the Use of Medication-Assisted Treatment
- Targeting the People Most at Risk
- Optimising Public Health Surveillance
- Supporting Those in the Justice System

The College believes that clinicians play a major role in implementing many of these ambitions. Importantly those in clinical contact with people who fall into the risk group for drug-related deaths provide the single most important opportunity for reducing this harm.

The DDTF has also launched a website “...to inform stakeholders, service providers, people who use drugs and their families on their work...” and has undertaken work on a new strategy to tackle stigma, aiming to “...encourage a more informed and compassionate approach towards people who use drugs and their families”¹². The DDTF has received Scottish Government funding for research and front-line services to help tackle drug-related deaths including: £1 million for 10 research projects examining different approaches to tackling the crisis; and £3 million for Scotland’s Alcohol and Drug Partnerships (ADPs) to deliver on the six evidence-based strategies set out above to reduce drug deaths and drug harms¹³.

COVID-19

The impact of COVID-19 on drug-related deaths is of course a new and emerging topic, given the novel nature of the disease. However, it would be remiss of any report on drug-related deaths not to refer to COVID-19 and what its early impact might be. According to Dr Michael Kehoe (Clinical Director NHS Lothian Substance Use Services) and Naomi Honhold (Drug Related Death Review Co-ordinator, NHS Lothian) it is not entirely known as yet what the overall impact of COVID-19 will be on drug use and any impact on drug related death numbers is even more uncertain. As routine drug screening has dropped dramatically in the pandemic (due to local lab infection control measures and changes in the way services have adapted to offer follow-up reviews), the ability of clinicians to know what drugs are being taken has been adversely affected. Clinical consultations with people using drugs suggest an ongoing mixed economy of drugs is still available.

However, early feedback has indicated some COVID-19 related behaviour change in people who use drugs (PWUD). The Scottish drug-related harm reduction charity “Crew” conducted a study which reported that 52% of responders were taking drugs more often and that 52% were taking larger quantities since restriction came into place. Stress, boredom, lack of support, and not getting the same effect were cited as reasons for this¹⁴. This study emphasises that engagement with those with active experience is key. Co-production of strategies which aim to reduce drug-related deaths by drawing on this experiential knowledge is vital and will help avoid devising solutions that are unlikely to help treat patients. This is inherent in the approach of the Drug Deaths Taskforce.

Another important impact of COVID-19 is on the ability of public health experts across Scotland to timeously analyse patterns and to respond to emerging trends. The timely receipt of the final pathology and toxicology reports is vital, so that local review processes can analyse the circumstances and work to share any learning. However, at present the lab capacity for processing is reduced and so reports for 2019 deaths were greatly delayed. The clinical usefulness of these reports is undoubtedly going to be diluted by the long-time lag, according to Dr Mike Kehoe and Naomi Honhold. The time from a suspected drug-related death to the receipt of the final report, under normal circumstances, was usually around 12 weeks before the pandemic.

Finally, it is important to note that the health impact of COVID-19 on low income households is already emerging. Research by the National Records of Scotland revealed that people from the most deprived parts of Scotland are more than twice as likely to die from COVID-19 as those from affluent communities¹⁵. Given that deprivation plays a significant role in drug-related deaths, as discussed in the next section, work must also be undertaken to ensure that this causal link is rigorously examined and addressed.

Societal factors in drug-related deaths

Deprivation

A major factor in drug-related deaths is the higher levels of relative deprivation in Scotland compared to other parts of the UK. Recent Public Health Scotland data shows that in 2018/19, “...approximately half of the patients with a drug-related general acute or psychiatric hospital stay lived in the 20% of most deprived areas in Scotland”¹⁶. Deprivation is multifactorial incorporating a range of areas including (but not limited to) employment and income, social security and the welfare state, education, public health, support services and housing¹⁷. Deprivation is often associated with high levels of trauma and adverse childhood experiences, both recognised risk factors for problematic drug use according to Professor Catriona Matheson. While some of these policy areas are reserved to Westminster, others are devolved to the Scottish Parliament. The College believes that the Scottish Government and the UK Government must work together improve the socio-economic factors associated with problem drug such as employment and income, social security, education, public health, support services and housing – as well as the physical, psychological and legal factors.

An ageing population of people who use, or have used drugs in the past

It must also be noted that some of those experiencing the highest levels of drug deaths and drug-related harms grew up in the post-industrial 1980s, when unemployment levels were high and the heroin market expanded into these deprived communities, thereby taking advantage of some of the most vulnerable people in society¹⁸. This group are now in their fifth or even sixth decades and usually suffer multiple, complex disadvantages including poor physical and mental health, unemployment, unstable housing arrangements, involvement with the criminal justice system, and family breakdown. This may be partly borne out by available data, as the median age of drug-related deaths has increased from 28 to 42 over the last 20 years¹⁹. Professor Matheson indicated that over the last 12 years, austerity has played a significant role in the continued deprivation of this vulnerable group.

People who experience regular drug use are disproportionately affected by a range of health conditions, multi-morbidity and premature ageing, with complex implications for health and social support services. It is estimated that older people who use drugs suffer from conditions normally found among people 15 years older than their chronological age²⁰. However, there is evidence that this group may be unwilling to seek healthcare, e.g. attend general practice, due to poor health literacy, negative experiences, perceived stigmatisation and general apathy²¹. It is possible that the current construction and attitude of frontline services inhibits rather than encourages engagement. Consequently, health problems may not be addressed until they become an emergency, with implications for NHS and care services. Professor Matheson indicated that in Scotland, a working group modelled future hospital admissions for people who use drugs (PWUD) and projected significant rises in admissions from liver disease, cardiovascular and respiratory conditions, with associated resource implications.

Stigma

The College notes – and is concerned – that people who use drugs are currently, often, stigmatised by institutions and general society. Through its research, the Drug Deaths Taskforce (DDTF) found that people who use drugs are often reduced to a ‘drug problem’ when they attempt to seek healthcare, employment or support. The College agrees with the DDTF that this stigmatisation must end in order to increase the quality of life of those who use drugs. A person-led care system is required, where the multiple complex needs that people who use drugs face are not divided and categorised. Evidence demonstrates that many people who could benefit from treatment can be discouraged from doing so by language, attitudes, and behaviours that appear judgmental, even if these are displayed unwittingly. Friends and families of those at risk can often feel the effects of stigma by association at a time when they too deserve support. Furthermore, stigma can negatively impact the morale of those providing support services who, by association with this complex problem are marginalised in professional and economic support. The DDTF recognises that tackling stigma could make a significant contribution to reducing drug-related deaths in Scotland and has published a strategy paper²² supporting this and

highlighting a new way forward. In light of this strategy paper, the DDTF has proposed a national stigma charter (currently in preparation from lived experience members of the DDTF) which is discussed in more detail in Chapter 5.

Clinical factors in drug-related deaths

The high risk patterns of drug use

In the 2018 National Records of Scotland report, the average number of drugs identified in toxicology reports has increased from four in 2008 to six, representing the high risk patterns of multiple drug use in Scotland. These drugs include opioids such as heroin and methadone, benzodiazepines (diazepam but also atypical ones such as alprazolam and etizolam) cocaine and gabapentinoids, and, of course, alcohol. The combined toxicity of opioids, cocaine, benzodiazepines and alcohol is particularly lethal. Indeed, Prof Matheson remarked during her talk that there have been very few deaths from single drugs alone. Further information and data capture is evidently required in this area, however, NRS data released in December 2020²³ revealed that there were 75 deaths for which only one drug (and, perhaps, alcohol) was found to be present in the body – meaning that 94% of all drug-related deaths in 2019 were as a result of more than one drug.

Indeed, case studies of post-mortem profiles by NHS Lothian have consistently shown for many years that most drug-related deaths involve predominantly older males with poly-substance mixtures of several drugs, all with cumulative toxic effect. Within this, the most common combinations are of opioid combined with benzodiazepine and gabapentinoids, plus cocaine. This complicated pattern of drug use makes treatment more complex, particularly as it is difficult to unpick the mix of multiple drugs. People who use drugs frequently take multiple drugs at different times, indicated by many toxicology reports from drug related deaths, according to Dr Arvind Veiraiiah (consultant clinical toxicologist, National Poisons Information Service, Edinburgh). Often, the deceased have had co-morbid mental health problems (depression, anxiety, past trauma, psychosis) and a sedative psychotropic drug has also been present, either as a prescribed or illicitly taken medication. Furthermore, NRS figures over several years indicate a moving target in drug use and availability. Heroin and alcohol remain a constant feature but new drugs, including some prescription drugs and other drugs available from

illegal sources, emerge year by year as co-factors in drug-related deaths.

Risky behaviours, injecting cocaine and HIV in Glasgow

Increases in cocaine use in Western Europe have been driven by supply, as people who use drugs react to growing supply and the attendant falling prices by increasing their consumption of cocaine. The United Kingdom is no different, having observed an upward trend of cocaine use since 2015. In 2019, Scotland recorded 365 cocaine deaths, more than in any previous year²⁴. Casual cocaine use is often associated with non-fatal harms, including substance dependence, non-fatal overdose and poisoning, skin and soft tissue infections, as well as blood borne viruses and sexually transmitted infections including Hepatitis C and HIV. However, the regular use of cocaine is associated with adverse health effects, predominantly cardiovascular (arrhythmias, myocardial infarction, strokes) and psychiatric (depression, psychotic episodes, suicidal ideation). Furthermore, there are health risks depending on the route of administration of cocaine, including respiratory problems from smoking crack-cocaine, nasal ulceration from snorting powder cocaine, and blood-borne virus transmission from injecting the drug. There may be a higher risk of dependence for people who use crack-cocaine, compared to those using powdered cocaine.

Cocaine is associated with non-compliance to treatments and risky injecting or sexual behaviours. In Scotland, experts have examined the re-emergence of HIV related to injecting drugs – including cocaine – despite a comprehensive harm reduction environment. In 2015, an outbreak of HIV was identified among people who inject drugs in the Greater Glasgow and Clyde (GGC) health area of Scotland, where over 1,000,000 clean needles and syringes are distributed per year. This was the largest HIV outbreak in the UK for thirty years. Over the same period, the prevalence of Cocaine injecting in all individuals in GGC in the sample rose from 16% to 50% overall, and from 37% to 77% in Glasgow City Centre. Glasgow has experienced a rapid rise in the prevalence of HIV amongst its PWUD population, associated with homelessness, incarceration, and a major shift to the injection of cocaine.

Benzodiazepine and risky behaviours

Dr Michael Kehoe and Naomi Honhold have examined the trends in benzodiazepine through the prism of the Lothian experience. They advised that so far, it looks as though the findings of novel benzodiazepines may have fallen proportionally in the routine drug screens of those attending treatment in 2020²⁵. However, Lothian Oral Fluid Testing only checks for some benzodiazepines, whereas post-mortem reports also include some drugs implicated in deaths in the rest of Scotland (flualprazolam and flubromazolam). It is possible these are being taken instead of etizolam, but are not detected locally in standard drug screens²⁶.

Regarding street benzodiazepine use, this remains popular and these illegally sourced benzodiazepines can be cheap, often being sourced over the internet in large quantities. In 2019, street benzodiazepines were implicated in 814 deaths, more than in any previous year²⁷. Anecdotally, service users have informed NHS Lothian Substance Use Services that there has been a change in the pattern of use of novel benzodiazepines. Perhaps due to word of mouth and drug-education regarding the more serious overdose risk they pose, illicit benzodiazepines are not now being taken in large

quantities as they were previously. Analysis of the tablets sold shows they are often a combination of benzodiazepines in varying quantities within batches²⁸. There is no doubt that taking pills with uncertain pharmacology, in uncertain quantity in combination with prescribed medications like methadone and gabapentin, is an extremely high-risk activity.

Staff under-confidence

Anecdotal experience also points to under confidence among staff managing patients with recreational drug toxicity, partly because of lack of familiarity with the names of the drug(s) involved. This is especially true when patients or their friends provide a lot of complicated information and opinions about the drug(s). The IONA study in Edinburgh²⁹ showed that patients who had presented with a history of recreational drug use have a wide array of substances in their serum and urine. Results have yet to be formally published, but patients have been exposed to various benzodiazepines, stimulant/serotonergic drugs, cannabinoids, dissociative drugs, opiates including fentanyl, GHB and pregabalin, among other drugs and medicines.

Clinical approaches

Drugs consumption rooms and heroin assisted treatment programmes

Decriminalisation, drugs consumption rooms and heroin assisted treatment programmes are all interventions which have been debated at various levels nationally and internationally. However, as this paper referred to earlier, reform on these interventions has not been possible and they remain unavailable to policy makers. The College believes, however, that each intervention could help in reducing drug-related harms and that they must seriously be considered by government. Currently, however, drug policy is reserved to the UK Government and there has, thus far, been a lack of willingness to consider decriminalisation, or to introduce drugs consumption rooms and heroin assisted treatment programmes.

Drug consumption rooms

An intervention which should be seriously considered for Scotland is drug consumption rooms. However, as with the issue of decriminalisation (see page 13), progress is hard to come by on drug consumption rooms, partly due to a lack of willingness. Safe drug consumption rooms have been operating in Europe for around three decades and offer opportunities to reduce "...the acute risks of disease transmission through unhygienic injecting, prevent drug-related overdose deaths and connect high-risk drug users with addiction treatment and other health and social services"³⁰. Evidence highlights that such facilities also help to reduce both drug use in public places, and the prevalence of discarded needles³¹. Drug consumption rooms provide people who use drugs with a safe environment including "...sterile injecting equipment; counselling services before, during and after drug consumption; emergency care in the event of overdose; and primary medical care and referral to appropriate social healthcare and addiction treatment services"³². Drug consumption rooms have proved effective in a range of countries including Australia, Canada, Spain, Switzerland, The Netherlands and others – and the evidence indicates that such facilities do not increase drug use, nor do they increase the frequency of injecting³³. The College would, therefore, recommend that drug consumption rooms can, if implemented well, provide PWUD in Scotland with an

environment to take drugs using safe equipment, with expertly trained staff to support their emotional and physical health needs.

A nationwide heroin assisted treatment programme

Often considered alongside safe drug consumption rooms is the idea of heroin assisted treatment. Supervised heroin assisted treatment, administered under strict medical supervision, was developed and initially introduced in Switzerland during the 1990s, and then in other European countries thereafter. For those patients whom the benefit of heroin assisted treatment has been observed, there are major benefits for both themselves and their families and society – such as a sharp reduction in illicit 'addictive behaviour', improved health status and social functioning, community safety and protection against diversion of supplies to the illicit market³⁴. Scotland has already made progress in heroin assisted treatment, as the country's first dedicated service, allowed to operate by the Home Office, was launched in Glasgow city centre in 2019 – and there's one further centre in Middlesbrough. Glasgow's Enhanced Drug Treatment Service (EDTR) "...provides diamorphine to patients with heroin addiction who have not responded to other forms of treatment"³⁵ and service users have access to medical-grade heroin which they inject in a safe, clean environment twice a day with medical supervision. The Scottish Drugs Forum (SDF), funded by the Scottish Government, has already highlighted "impressive" early results of the programme³⁶ and the College believes that EDTRs could be considered for other parts of Scotland which could benefit from targeted support for people who use heroin.

Addressing drug use behaviour

As stated previously many of those dying of drug toxicity have had co-morbid mental health problems (depression, anxiety, past trauma, psychosis) and a sedative psychotropic drug has also been present, either as a prescribed or illicitly taken medication. Strategies have therefore been established to address this and these have brought some success thus far, according to Dr Michael Kehoe and Naomi Honhold. In primary care, there have been efforts to tackle poly-pharmacy and in secondary care, there have been initiatives from pain specialists urging caution

when prescribing gabapentinoids with methadone. Furthermore, in psychiatry, steps have been taken to avoid the use of QTc prolongating psychotropics with methadone and the introduction of depot buprenorphine may show to be an important initiative in managing longer term opiate agonist treatment. Early trials are encouraging. However, because the poly-drug use has continued, alongside co-morbid mental and physical health issues, the overall trend for drug-related deaths is likely not changing in the near future.

The physical health challenges

The problems associated with the increasing age of people who use drugs requires focussed consideration. The cumulative effects of drug use, together with increased risks of non-fatal overdose, hepatitis C and HIV infection, can accelerate, exacerbate and complicate the effects of ageing³⁷. PWUDs encounter the same age-related conditions as their non-drug using peers, such as degenerative diseases, cardiovascular and respiratory conditions, but at greater frequency^{38,39}. Additionally, they may tend to have more severe pain and may self-medicate, while simultaneously being more vulnerable to adverse effects of prescribed medications, due to age and morbidity-impacted pharmacokinetics⁴⁰. The DDTF Chair, Professor Catriona Matheson, proposed the following options for managing the physical health challenges of patients:

- Having clear and open conversations with people about their physiological condition and the increased risk of overdose.
- Considering extra measures when discharging those considered high risk from hospital e.g. supply of naloxone.
- Consideration of appropriate patient centred end of life care if necessary.

Treatment options for people who use cocaine

According to Dr Ahmed Khan, approximately 30% of people who use cocaine reside in the United States and only 20% of people with a cocaine use disorder received treatment. In Europe, there is a similar low uptake. Treatment is primarily non pharmacological and there is no clear evidence for the use of alternative medications, according to Dr Khan. Psychological methods including promoting motivation through motivational interviewing, the recognition of a loss of control, overcoming denial, an admission of the consequences of cocaine use disorders and complete abstinence are all recommended where clinically appropriate. Brief interventions, referral to treatment programmes or harm reduction services can be offered and contingency management approaches have been known to improve outcomes and retention rates, according to Dr Khan. Dr Khan also highlighted opportunities when people who use cocaine seek help at emergency departments for problems related

to intoxication or high dose use. Psychosocial treatments, too, may decrease the frequency of use and increase length of abstinence but the longer-term impacts post treatment are less clear.

Antidepressants have been the mostly widely studied drug class for the treatment of cocaine disorders. However, findings from three separate systematic reviews consistently showed that antidepressants had negligible effects on cocaine use disorders except for a potential monoamine augmentation of contingency management treatment, desipramine in combination with contingency management and citalopram combined with behavioural therapies. An anti-cocaine vaccine utilises an immunological mechanism of action which increases the production of antibodies that target the cocaine molecule. The antibodies bind to cocaine in the blood and because the antigen antibody complexes are too large to cross the blood brain barrier, they prevent cocaine from entering the brain. However, it should be noted that the results from clinical trials have been inconsistent.

Finally, Dr Khan highlighted that secondary interventions that can address mortality risk pathways including the prevalence of HIV and HCV are important. Strategies to prevent transmission including provision of sterile needles and smoking pipes, free condoms and pre-exposure prophylaxis for HIV and sexually transmitted infections are known interventions.

Benzodiazepine and opiate replacement therapy

According to Dr Michael Kehoe and Naomi Honhold, it is likely that benzodiazepine use in Scotland will not cease anytime soon, and so clinicians who are aware of the impacts must try to deal with the consequences. There have been many discussions on this subject including the wider use of flumazenil, as well as how to intervene in a preventative manner (for example with non-fatal overdose survivors to promote their route into treatment and counselling). There has also begun a national conversation about diazepam prescribing within drug treatment services (as a harm reduction measure for those using street benzodiazepines alongside opiates). Overwhelming research evidence demonstrates the protective benefit from overdose mortality of being on and staying in opiate replacement therapy for anyone with an opiate dependency. Those in opiate replacement treatment taking novel street benzodiazepines often miss doses of opiate substitute treatment or drop out of treatment altogether for various reasons. This increases the risk of opiate drug relapse and all associated harms, giving rise to a clinical rationale to co-prescribing benzodiazepines as a preventative measure.

However, co-prescribing benzodiazepines and opiate replacement therapy is a clinical conundrum; the evidence from large studies shows that engagement with services may increase when benzodiazepines are prescribed to those taking them dependently, but

large UK and US cohort studies conclude that “... co-prescription of benzodiazepine was specifically associated with increased risk of drug related poisoning mortality in opioid dependent individuals. It was associated with increased duration of methadone treatment. Conclusion; clinicians should be cautious about prescribing benzodiazepines to opioid-dependent individuals”⁴¹ and “...benzodiazepine receipt appears to be associated with both increased risk of opioid overdose and all-cause mortality and decreased risk of buprenorphine discontinuation among people receiving buprenorphine”⁴². It is likely that risks need to be assessed and quantified on a case by case basis to make the best prescribing decisions in these situations, particularly for patients who present to acute care with non-fatal overdose or repeated intoxication. The College believes it is a positive step that the Scotland Government has now has funded research to examine the issue of benzodiazepine prescribing alongside Opiate Replacement Therapy in more depth.

Syndrome-based approach

In the clinical environment the management of harmful recreational drug toxicity is mostly symptomatic. It is therefore best, according to Dr Arvind Veiraiah (consultant clinical toxicologist, National Poisons

Information Service, Edinburgh) that patients with recreational drug toxicity should be managed based upon the particular set of clinical features that they have, which can indicate the involvement of certain pathogenic mechanisms (e.g. serotonergic stimulation), and some effective treatments. Toxidromes (clusters of toxicological features related to a particular type of poison) associated with recreational drugs are summarised in the table below (please see TOXBASE for details).

Key urgent treatments

Of the treatments mentioned in the table below, some are either not often used outside the poisoning treatment services (e.g. dantrolene, naloxone, serotonin antagonists), or are used in doses that are rarely used in other settings (e.g. bicarbonate, sedatives). Early mistakes by staff who are unfamiliar with these medicines may lead to rapid deterioration of these high-risk patients. Some treatments, for example methylene blue, can wait until healthcare staff can access specialist advice (e.g. through the National Poisons Information Service (NPIS) telephone enquiry service), but others are either needed urgently (e.g. naloxone), or are often not considered by staff because they fail to appreciate its value in poisoned patients (e.g. bicarbonate). Through his work, expert

Toxidrome	Clinical features	Key treatments
Stimulant (e.g. amphetamine)	Tachycardia, hypertension, dilated pupils, sweating, convulsions and agitation.	Benzodiazepines, cooling, bicarbonate, rarely serotonin antagonists, antihypertensives.
Serotonergic (e.g. MDMA)	Clonus, increased muscle tone, confusion, agitation, autonomic dysfunction, convulsions, marked hyperthermia.	Benzodiazepines, cooling, sometimes serotonin antagonists.
Cannabinoid (e.g. Spice)	Drowsiness or agitation, confusion, paranoia, metabolic and/or respiratory acidosis, tachycardia or bradycardia, less commonly convulsions and renal impairment.	Benzodiazepines, antipsychotics, bicarbonate.
Sedative (e.g. heroin, diazepam)	Decreased consciousness, coma, hypoventilation, possible bradycardia, hypothermia, miosis (opioid).	Airway management, naloxone, sometimes flumazenil.
Hallucinogenic (e.g. DMT)	Hallucinations: visual, auditory or tactile. Agitation or confusion. Mild-moderate stimulant features may occur.	Benzodiazepines, cooling, bicarbonate, rarely serotonin antagonists, antihypertensives.
Dissociative (e.g. ketamine)	Neuropsychiatric features including ‘out of body’ experiences and agitation. Analgesia, drowsiness, nystagmus, ataxia, coma and convulsions may occur. Typically mild stimulant features present.	Benzodiazepines, cooling, dantrolene, antihypertensives.
Inhalant abuse (e.g. toluene)	Chemical smell, slurred speech, drowsiness, tremor, breathlessness, weakness, convulsions or coma. Syncope, palpitations and arrhythmia, ECG abnormalities, ventricular fibrillation and cardiac arrest may occur.	Supportive treatment only.
Poppers (e.g. amyl nitrite)	Hypotension, vasodilation, methaemoglobinaemia (apparent cyanosis), in severe cases convulsions, coma or cardiovascular collapse.	Oxygen, methylene blue.

speaker Dr Arvind Veiraiah advised that following appear to be the key urgent treatments that could be improved in patients with recreational drug toxicity:

- In sedative toxicity, early and appropriate use of antidotes:
 - a. Naloxone – avoiding withdrawal reactions by not giving it just for “low Glasgow Coma Scale (GCS)”, and treating with adequate doses when used to avoid ventilation.
 - b. Flumazenil – to avoid ventilation in appropriate patients with severe benzodiazepine toxicity.
- For patients with severe agitation, early control and adequate and appropriate maintenance sedation.
- For patients with broad complex cardiac rhythms, early and adequate treatment with concentrated sodium bicarbonate.
- For patients with convulsions, avoiding phenytoin due to risk of interaction with sodium channel blockers, and resultant cardiac toxicity.
- For hyperthermia, early treatment with benzodiazepines as well as physical cooling measures (the latter is usually done well when available). Treatment with serotonin antagonists may also be needed.

Proposals for improvement

The care of these complicated patients can be made much easier with help of Toxbase and the NPIS telephone enquiry service. According to Dr Veiraiah, facilities, training and encouragement for reliable use of these resources should be provided for staff as far upstream as possible, starting with on-site healthcare staff, including paramedics. Paramedics should be provided with the right medicines and checklists for use with these patients, ideally in a tray earmarked for “poisoning emergencies”. A specific checklist for managing these patients should be developed, tested and used consistently across Scotland. Complicated situations and conundrums should be presented at appropriate clinical forums and conferences, with participation from all stakeholders, including the NPIS.

Next steps: who can help, and how?

During the conference on 14 October, it was established that the Royal College of Physicians of Edinburgh is well-positioned to represent the voice of physicians on drug-related deaths, and to promote medical education. The College will seek to fulfil this by adopting work in a variety of areas.

How can the College support physicians in tackling drug-related deaths

The College will encourage its Fellows and Members to consider the impact of multiple complex needs in treatment and in discharge planning from hospital. It has been established that a complicated pattern of drug use – which is seen in Scotland – can make treatment more complex. This is combined with a range of societal factors (such as deprivation and stigma), physical factors (such as a range of health conditions, multi-morbidity and premature ageing), and psychological factors (including co-morbid mental health problems (depression, anxiety, past trauma, psychosis)).

Mental health problems and poor physical health makes people more vulnerable, and people who are experiencing homelessness are also at higher risk of health problems and drug-related harm. People may need psychological support to help manage trauma or anxiety, and they may also need advice on welfare and housing. The College believes it is vital, therefore, that person centred care is at the heart of tackling drug-related deaths in Scotland – and we will be encouraging our Fellows and Members to consider this.

It is vital, too, that physicians are able to have clear and open conversations with people about their physiological condition and the increased risk of overdose, alongside the consideration of appropriate patient centred end of life care if necessary.

And we believe that physicians must sometimes consider extra measures when discharging those considered high-risk from hospital, for example, regarding the supply of naloxone. Naloxone is an opioid antagonist that can quickly and safely reverse the potentially fatal effects of an opioid overdose. The College supports naloxone being available to

individuals who are most likely to encounter or witness an overdose – especially people who use drugs, family members, first responders and care providers.

All of these considerations and measures should be underpinned by integration between primary care and secondary care, in terms of treating people then getting them support when they are back in the community. Too often, physicians find that getting people into treatment and maintaining them in a treatment programme is challenging. Within primary care, there are challenges in getting services to people with drug addictions. The College would like to see the Scottish Government and health boards work together to address this problem – and we are in a position to support this work, while communicating it to our Fellows and Members in Scotland.

Education

As a Medical Royal College, the Royal College of Physicians of Edinburgh has a significant educational role. The College delivers over 100 events on average each year, accessed by over 13,000 of our Fellows and Members. There is, in that regard, a role that the College can play in educating our own Fellows and Members – and by extension, the wider medical community in Scotland – about drug-related deaths. We propose to undertake significant work in this area during 2021 and beyond, which will have an educational focus. This will include a journal article, which will be published in the Journal of the Royal College of Physicians of Edinburgh. The College is committed to supporting educational initiatives to maximise the involvement of all sectors of medicine in managing problems related to drug and alcohol dependency.

Supporting decriminalisation

It is the College's view that decriminalising drug use should be considered in Scotland, and we would call on the UK Government in particular to consider changing its approach in that regard. Evidence from Portugal indicates that since the personal possession of all drugs was decriminalised in 2001, the country's drug crisis has improved. It is no longer a criminal offence to possess drugs for personal use in Portugal, however it is still an administrative violation, punishable by penalties such as fines or community service. In particular, Portugal saw HIV infections and drug-related deaths

decrease since decriminalisation. The move towards decriminalisation was complimented by the allocation of greater resources towards expanding and improving prevention, treatment, harm reduction and social reintegration programmes⁴³.

The benefits of Portugal's approach was no major increases in drug use, reduced problematic and adolescent drug use, fewer arrests and prosecutions for drugs, reduced social costs of drug misuse and most significantly - the number of deaths caused by drug overdose decreased to just 16 in 2012, from approximately 80 in 2001⁴⁴. Furthermore, evidence from Australia (South Australia) indicates that the decriminalisation of cannabis use has kept more people out of the criminal justice system, and has saved the state government money and resources that would usually be spent on enforcement⁴⁵. The precise number of countries with formal decriminalisation policies is not entirely clear, however it is likely above 30 depending on which definitions are used⁴⁶. It should also be noted that the context within which decriminalisation occurred in Portugal is very different to Scotland. Portugal had very little in the way of measures to reduce drug-related deaths before decriminalisation. The College supports consideration being given to the policy of decriminalisation based on our view that drug-related deaths should be treated as a public health problem, rather than a criminal justice problem, from the perspective of intervening with people who use drugs.

Supporting a Charter to Address Stigma

The College supports the principle of a national stigma charter for Scotland, which has been proposed by the DDTF as a way to tackle the stigmatisation of people affected by drug use. Inspired by the ASH Scotland Charter⁴⁷, officials plan to develop a similar charter based on the contents of the DDTF Stigma Strategy. According to Professor Catriona Matheson, the Charter will be a formal statement of the rights of people who use drugs, their families and affected communities, agreed by the Scottish Government and the organisations which sign it. It would set out the aims and responsibilities of the Charter's signatories. The DDTF hopes that the Charter will secure the support of stakeholders, service providers, organisations, and others in working to eradicate the stigma that accompanies drug use, those in recovery,

and the use of treatment and support services. The Charter, which is being developed by the DDTF lived experience members, would pose benefits including:

- Reassuring people engaging with services that they will not face stigmatising behaviour if that service has signed the Charter.
- The services and organisations who have signed the Charter are accountable for upholding high standards regarding the eradication of stigma.

Meanwhile, the Scottish Drugs Forum has established workforce training on stigma to allow self-reflection and raise awareness of the issues for PWUD⁴⁸. As part of the training, participants will develop a "...distinct set of knowledge and skills to help them understand and address drug-related stigma". The training is targeted towards "...staff and management working with problem drug users, drug workers, housing/homelessness workers, social workers, GPs, nurses and mental health workers". The College therefore supports current efforts to reduce stigma towards people who use drugs and we will seek to sign a charter to address stigma in Scotland, when it is made available.

Conclusion

Drug-related deaths in Scotland is an increasingly medical problem. The Royal College of Physicians of Edinburgh believes that Scotland can only tackle the drug deaths crisis through a "whole systems approach" involving all relevant stakeholders and services – and clinicians will be an important component of that. The College is looking forward to working with its Fellows and Members, other Medical Royal Colleges, the Drug Deaths Taskforce, the NHS and addiction services, governments, elected politicians and other stakeholders to help address drug-related deaths and drug-related harms. We will continue have the difficult conversations about what more we can do as a society, and we want to do so while working in partnership with organisations and individuals concerned about the scale of the problem. Our report has outlined our understanding of the problems, and we have presented potential solutions proposed by expert clinicians. We hope that we have contributed to Scotland's conversation on drug-related deaths and harms in a positive manner.

Appendix 1

The Work of the Drug Deaths Taskforce

The Drug Deaths Taskforce is a collective leadership never before possible of people who will work with the Scottish Government to shape and deliver change. Since its inception, the DDTF has worked urgently to identify the areas of action that can make a sustainable impact against the challenge of drug-related deaths in Scotland and save lives.

The evidence has led the DDTF towards six key strategies list below⁴⁹. This is not a closed list, and other initiatives and areas will be considered as the DDTF progresses its mission.

1. Targeted Distribution of Naloxone

Naloxone is an opioid antagonist that can quickly and safely reverse the potentially fatal effects of an opioid overdose, and the DDTF's strategy is concerned with making naloxone available to all those who might need it. It is important to ensure naloxone is available to individuals who are most likely to encounter or witness an overdose – especially people who use drugs, first responders and care providers. The DDTF supports relevant training and provides kits to a range of people including UK-leading provision through Police Scotland and the Scottish Ambulance Service. Work is also underway to make sure naloxone is available in night shelters, hostels, and community pharmacies. The DDTF are working with partners at Scottish Drugs Forum to further develop distribution networks.

2. Immediate Response Pathway for Non-Fatal Overdose

There is strong evidence to show that fatal overdoses often follow non-fatal ones. Intervention and support as quickly as possible after a non-fatal overdose is therefore a clear way to avoid or reduce the risk of a fatal overdose. The DDTF has identified that bringing a greater consistency and focus on how this at-risk group can be best treated can help reduce drug-related deaths in Scotland. The DDTF continues to promote collaboration and information-sharing protocols between multiple agencies when reviewing non-fatal overdose cases. In hospital settings a key goal is to ensure a drug liaison service or response pathway is put in place quickly following discharge of a patient.

3. Optimising the Use of Medication-Assisted Treatment

Medication-Assisted Treatment (MAT) is a proven treatment for opioid use disorder. It involves the use of licensed drugs such as methadone and buprenorphine to prevent painful opioid withdrawal symptoms, and is effective in reducing the use and sourcing of illicit drugs. The new standards of MAT will ensure the necessary range of support is available, wherever you live in Scotland. To reduce harm and promote recovery the DDTF has identified that it is a priority to get more people onto MAT in a timely manner, and to support them in treatment for as long as they need.

4. Targeting the People Most at Risk

Many of those at high risk are impacted by a number of inter-related characteristics and have multiple complex needs. Mental health problems and poor physical health makes people more vulnerable. People experiencing homelessness are also at higher risk of health problems and drug related harm. Person centred care is crucial. People may need psychological support to help manage trauma or anxiety. People might also need advice on welfare and housing.

5. Optimising Public Health Surveillance

The DDTF aims to set out a clear statement of what is needed for a Public Health Surveillance System (PHSS) in Scotland, how it can be established, and how it will function to support whole system. The aim is to create the intelligence to enable early detection of emerging harms or trends, and therefore better deployment of resources against them. Public Health Surveillances enables effective early interventions that will save lives.

6. Supporting Those in the Justice System

The high prevalence of problem drug use amongst those in contact with the criminal justice system provides an opportunity to detect, intervene or signpost those at known risk into treatment and support. A specific example of this is the evidence of elevated risk at the time of release from custody, especially if release takes place at a time when support services and care – such as on a Friday going into a weekend – are not available.

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