Written evidence from Dr Richard Stevenson

As an Emergency Medicine Consultant working in the Glasgow Royal Infirmary, it is my responsibility to treat and care for some of the most socially deprived communities within the UK. To avoid any confusion my observations and opinions are personal, rather than that of the NHS.

Over the past 18 years of my career, the topic of substance use has featured regularly; as medicine continues to evolve and both the practice and delivery of healthcare changes, drug use continues to be an ever-present feature. National statistics regarding drug deaths evoke particular concern amongst the general population; the expectation that ‘something’ must be done to reverse the trend, countered by the negative perception of individuals ‘parked’ on methadone for years without a definitive endpoint, exemplifies the difficulties faced by public health – and government.

Radical changes in governmental policy, proposed upon the basis of purported successes in other countries, require considerable evaluation prior to implementation; differing countries have different legislative boundaries regarding drugs and naturally very different social support networks, reporting structures and healthcare systems, the effects of which cannot be readily quantified.

**Drug Deaths**

There has been a sudden rise in drug deaths within Scotland over the past few years; the rates for England and Wales have stabilised for one year but do not show the dramatic changes seen within Scotland. As with any statistic, interpretation of drug deaths must be taken with a note of caution; the circumstances, toxicology and patient characteristics of opiate-related deaths are very different from those resulting from stimulant use such as cocaine or ecstasy.

Deaths attributed to fatal overdose (predominantly heroin), predominate but not from the use of heroin alone; heroin plus benzodiazepines (diazepam-like drugs) are commonly reported, with the variable presence of opiate-substitution medications (methadone & buprenorphine). Alcohol and prescription medications (often misused rather than prescribed) feature in many deaths. Due to significant differences in the coronial and procurator fiscal post mortem and toxicology testing, the difference in toxicology results between the legal jurisdictions may result from a difference in testing practices.

Concerns regarding the sharp rise in deaths for persons who use drugs aged around 50 must be considered in the context of lifestyle and background socio-demographic features. It is naïve to expect a lifespan comparable to a non-drug user when substance use is known to have a deleterious effect on health in both the short and long term; the pathological changes associated with drug use that will reduce life expectancy include cirrhosis (from hepatitis C and B, and alcohol misuse), emphysema (chronic obstructive airways disease secondary to heavy tobacco smoking and smoking heroin and/or crack cocaine), sepsis (depressed immune systems from HIV infection, hepatitis infection), malnutrition (poor balanced intake, vitamin and mineral deficiency, diets solely based on carbohydrate), reduced bone mineralisation (vitamin D deficiency, calcium and magnesium deficiency) resulting in long bone fracture, stroke and cardiovascular disease (particularly with cocaine) and thrombotic disease (deep vein thrombosis, embolism, raised blood pressure in the lung circulation). Any one of these conditions may be responsible for considerable morbidity in those
considered to be without illness; in those who use drugs in the long term such illnesses are co-existent. Couple these life-limiting complications with geographical areas associated with social deprivation and it is hardly surprising that even when an individual has stabilised with respect their drug use, premature mortality is notable.

**Drug Overdoses**

The issue of drug overdose traditionally regarded by medics as a relatively simple presentation, is probably under-appreciated in both underlying precipitant cause and prevention. Comparison to other countries such as North America has low applicability to the UK; drug-use profiles within the UK demonstrates geographical variation and is under constant evolution. This is exemplified with the established use of crystal meth (met-amphetamine) by the men who have sex with men population in London for a number of years, slowly spreading north towards Scotland.

Non-fatal or near-fatal drug overdose within the context of substance use (as opposed to intentional self-harm) results from poly-drug consumption with or without a change in tolerance to a particular substance (for example after hospitalisation or time spent in prison). Assumption that the cause for an overdose is opiate-related is common; response to the antidote naloxone (‘narcan’) often leads to a diagnosis of heroin overdose, when another substance such as diazepam, or gabapentin is the cause (the naloxone reverses prescribed methadone and hence the patient wakes up).

Treating those who have overdosed can be challenging; drug users will often deny having taken anything to avoid being given naloxone. The management of a drug overdose is changing – rather than abruptly reversing any opiate with large doses of naloxone, much smaller doses are titrated and attention to airway and oxygen levels are prioritised.

Community naloxone initiatives (established in North America) report success, however their substance use profiles are very different to the UK; predominantly heroin, fentanyl and prescribed analgesics predominate compared to the poly-substance use in the UK. Analysis of naloxone distribution projects again requires cautious interpretation – success attributed to provision of naloxone is not directly measured and from personal experience I have not seen or heard from persons attending for review following administration of naloxone (however there are anecdotal reports of peer to peer administrations). It would be my opinion that there is more to the management of any overdose than naloxone and any overdose should be regarded as an indicator that the sufferer is at considerable risk of repeat overdose or death. The majority of deaths secondary to overdose are found solo-injecting, or the person they have consumed drugs with is not able to administer naloxone until they have recovered themselves. There is no current ‘rapid communication’ with addiction teams (and in some cases no communication at all) to highlight the overdose episode; with electronic means of communication and data capture within the health service, this is unacceptable. Drug users who overdose in the community may be attended to by paramedics and decline to attend hospital; again, these events are rarely communicated to addiction teams.

Frequently persons who overdose are on opiate substitution programmes; either methadone or buprenorphine (Subutex, Suboxone) are utilised as the most common medications. These treatments have an established evidence base to reduce the transmission of hepatitis C (reduction of injecting heroin) and overdose deaths – but only when a dose threshold is achieved. Patients attending A&Es with overdoses are often on sub-therapeutic doses of methadone (under 60 mls per day, with 120 mls per day being optimum for most patients); the dose is often limited by the patient not the addiction worker – this is to allow a background dose of methadone to avoid any withdrawal symptoms, whilst still obtaining a ‘hit’ or ‘high’ from heroin consumed.
Chaotic Substance Users

‘Chaotic’ attenders at Emergency Departments are a minority of substance users who present in ‘bursts’ with a variety of issues. It is not unusual for an individual to attend several times in 24 hours or daily for 3 to 4 days secondary to drug overdose, often coming to the attention of multiple agencies (police, ambulance, drug outreach workers); the cycle is often terminated by detention in custody due to accumulation of minor offences, warrants issued, or hospitalisation for a complication of the overdose.

These patients are at high risk of death secondary to overdose but are also found to succumb to other issues such as violence, or accidental traumatic death (falls, head injury). They often consume any and all substances without regard for their own safety, sharing needles and utilising public areas for drug use; adherence to opiate substitution programmes and addiction team appointments is poor at best. In addition to drug use, homelessness, criminal behaviour (ranging from petty theft to robbery and violence), and disregard for their own welfare feature.

It must be noted that such patients are almost never discharged or removed from hospitals due to their substance use issues or for “being a junkie,” but rather their conduct and behaviour whilst in departments. Theft of hospital, staff and patient property, consumption of drugs in hospital grounds and building, dealing of drugs, and abuse directed towards staff (verbal and physical) are vastly under-reported; it is not the issue of being a substance user, rather the impact on other patients and staff that is reason for removal from hospital. Attendance at outpatient appointments and radiological investigations is poor, arguments that inappropriate clinic times, communications delivered to wrong addresses and so forth can be applied to all non-attenders, rather than specifically to drug users.

Objective evidence on the management of acute pain for those with a history of substance use within NHS Greater Glasgow & Clyde found the overwhelming majority of patients to be optimally managed. The management of substance withdrawal is a complex matter, however validated scoring systems to provide guidance to medical and nursing staff on medication provision to alleviate symptoms are available; unfortunately, patient expectation for chaotic substance users is often very different and frequent accusations of under-dosing and withholding medication for punishment purposes are made. It must be remembered that the purpose of treating withdrawal is to stop symptoms and not to induce an intoxicated state. This often leads to conflict with staff and abrupt discharge against medical advice from hospital units, only for the patient to attempt to return hours or days later demanding re-admission.

It is incredible at times that chaotic substance users survive illness with only partial treatment; I have personally had to readmit individuals who were infected with anthrax through injecting contaminated heroin. After initial treatment consisting of anti-toxin, antibiotics and surgery to remove a pus-filled aneurysm in the groin, one patient discharged himself as soon as he was able, only to be readmitted with an overdose several hours later.

Several outbreaks of botulism poisoning in the injecting drug population often affected the chaotic users, secondary to muscle injections of heroin (when intravenous use is impossible).
Current Drugs of Concern

Working in Emergency Medicine, I see both the acute and complications of long-term drug use. The substance using population is an ageing cohort – people who use drugs are living longer due to better access to healthcare and increasing recognition of the harms.

Without question the general societal attitude towards drug use is changing; heroin is still regarded as having substantial stigma attached “for junkies.” Cannabis and cocaine are viewed as being ‘part of the night out’ without harms or consequence; ecstasy use at music events continues to feature – the introduction of front-of-house testing coupled with harm reduction advice as a method of reducing deaths and ‘harm’ at such events is currently being promoted. Without rigorous demonstration of efficacy, no peer-reviewed publication of evidence, and no follow up or formal study data I cannot personally recommend this approach to be adopted; several police constabularies have openly supported organisations to provide onsite testing at various large scale music festivals – whilst this may be seen as embracing a harm reduction, rather than a criminalisation of the end-user approach, there is no governance, or accountability to the organisation and any negative outcome will fall upon the police.

Cannabis

The concentration of THC (the psychoactive component of cannabis) is increasing through selective cultivation of plants; home-cultivation and products such as ‘shatter’ result in greater consumption. Cannabis is associated with an increase in mental illness (psychosis, paranoia, anxiety) in those predisposed to psychiatric illness and yet is played down by patients as having no effect on their mental wellbeing, or a used to medicate themselves; there has been a massive increase in the presentation of ‘cannabis hyperemesis syndrome’ – patients usually under the age of 30 with severe vomiting that is resistant to any anti-sickness drugs and may result in hospitalisation for IV fluids and replacement of electrolytes. Patients often represent to departments as they continue to smoke cannabis daily.

Ecstasy

The ecstasy presentations continue to be an issue; increasing concentrations of the active component MDMA result in a dose-response toxicity. When I first started in Emergency Medicine in 2003 I never saw and rarely heard of MDMA toxicity patients; now these are frequent occurrences; A&E departments are now more familiar and confident in recognising MDMA toxicity – and providing treatment.

Cocaine

Cocaine use is rising; self-reporting via the use of questionnaires is unreliable for comparative statistics between countries. The age brackets for people using cocaine are widening, with younger people (under 16) and older persons (over 50) using the drug. Patients are presenting regularly to A&Es at the weekends secondary to the effects of cocaine (palpitations, anxiety, chest pain), however they are also presenting throughout the week (Monday morning with ongoing palpitations, concern over physical health after bingeing over the weekend) and with conditions that may not be associated with cocaine use, but on health screening are found to be regular users.
There is a recognised risk of stroke illness in persons who use cocaine and again the use of cocaine is under-estimated by clinicians; hugely expensive tests looking for stroke syndromes in the young are often requested, when the stroke has been precipitated by cocaine use, rather than a rare illness type.

Mental illness secondary to cocaine use is increasing – predominantly psychosis; however acute behavioural disturbance (a life-threatening condition, formerly referred to as ‘excited delirium’) is increasing and proving problematic for both the police and health services. Having increased recognition and number of cases presenting, it was necessary to develop a treatment guideline for this condition that is increasingly being utilised.

Once regarded as the ‘champagne’ drug, it is now widely consumed by all members of society. Varying strengths of the drug are supplied, from 2% (very poor quality ‘council’), to 20-30% (street), to ‘shine’ >60% purity. The cutting agents used (predominantly local anaesthetic agents e.g. benzocaine) are not without toxicity itself. The injecting route for cocaine consumption is increasing, particularly in chaotic drug users.

Benzodiazepines (Diazepam-like Drugs)

These drugs are ubiquitous in the West of Scotland and consumed by the handful; traditionally diazepam 10mg tablets (coloured blue) were produced for selling ‘street blues’ and in an attempt to highlight fake tablets, NHS Greater Glasgow & Clyde ceased to supply such tablets into the community. This simply shifted the market to the 5mg yellow diazepam mimics. There is currently a major problem with the drug etizolam, a benzodiazepine that has much greater potency – 1mg etizolam = 10mg diazepam. As a result of the introduction of etizolam into the supply chain (see BBC News [https://www.bbc.co.uk/news/uk-scotland-glasgow-west-46634384]) Glasgow Royal Infirmary has seen a massive rise in the number of admissions of benzodiazepine toxicity, with patients unconscious for up to 9 hours. Other benzodiazepine drugs are being used to sell on the street; ‘Xanax’ (alprazolam) is a drug that whilst it has gained favour and press coverage, has not been detected in samples, but rather tablets made to mimic the shape of Xanax ‘bars’ using etizolam have been sold. A pure benzodiazepine overdose is not thought to be lethal, however in combination with alcohol or other sedative drugs, benzodiazepines are frequently found.

Prescription Drug Use

The issue of prescription opiates in the US has caused significant concern; in the UK prescription drug use has remained an undercurrent and a late developer. That said the use of prescription drugs is a real problem – as is the inappropriate prescribing of such medications by clinicians; it at times disheartening to see a patient to be on multiple drugs (often for chronic pain), although this is slowly being addressed (but with little enthusiasm). The co-prescription of drugs such as co-codamol and dihydrocodeine to those on methadone is poor prescribing yet continues to happen.

Prescription drugs of use (abuse) include (but are not limited to)

- Analgesics – commonly morphine, tramadol, co-codamol, dihydrocodeine.
- Antidepressants – amitriptyline, mirtazapine, trazodone
- Antiepileptics – pregabalin, gabapentin
Antipsychotics – quetiapine, olanzapine

**Butane**

Thought to be consigned to history, the use of butane has risen sharply. Sold from various outlets in gas-refill canisters, butane inhalation has been used as a cheap method of obtaining a ‘high’ particularly amongst chaotic users of substances; it is not unusual to see street beggars with canisters hidden up the jacket sleeves or for overdose victims to be found behind commercial bins within town centres.

**Novel Psychoactive Substances ‘Legal Highs’**

There has been criticism for the introduction of the Novel Psychoactive Substances Act (2016), with claims that it has “driven NPS underground” and “led to a proliferation of use amongst the homeless.” From my own observations I disagree with these comments; prior to the Act, there were daily presentations to my A&E particularly in young persons who were of school age or in looked-after-and-accommodated care. Persons who use drugs would rarely use NPS agents as they preferred drugs they were familiar with. The day the Act was introduced, the daily presentations ceased; there has been an increased in synthetic cannabinoid use in HMP establishments, reflective of the ease to transport them into jail. The plethora of other chemicals under the banner of NPS has reduced in frequency to doctors and is reflective of the decreased access to such agents.

**Conclusion**

Finally, the wider consequence of drug use must be considered; it is not unusual for a victim of a stabbing to be under the influence of alcohol, cocaine and cannabis. Drug driving is on the increase (and probably under-recognised unless overtly dangerous). Domestic violence as a result of substance use within the relationship is a prominent feature and under-reported for several reasons. Prostitution remains one of the main sources of income for female drug users (young men also to a lesser degree).

I am concerned that ‘front of house’ testing currently being promoted as a harm reduction measure lacks formal evidence of efficacy and safety. It would be prudent to analyse events where this intervention has been deployed, compared to historical incident and festivals whereby such testing has not been used.

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