

Context

The misuse of licit and illicit drugs and volatile substances in the UK is a major public health challenge for today. It affects not only the health and well-being of those using these substances but also their families, colleagues and wider society. It lies behind a high proportion of acquisitive crime, unnecessary deaths and it costs the country billions of pounds each year in prevention and treatment programmes, crime and other socio-economic costs. Those working within the healthcare and law enforcement sectors are very likely to encounter individuals with substance-related health problems. Those in healthcare have a key role in improving the nation's public health.

Our contribution relating to the concerns around drug misuse is to monitor and report on drug-related deaths and emerging trends in drug use. This is achieved through two key surveillance programmes: the primary being the National Programme on Substance Abuse Deaths (np-SAD), and the secondary the Volatile Substance Abuse (VSA) Mortality Project.

The Programmes' primary objectives are to

- Collect, collate, and analyse data on drug and volatile substance abuse-related mortality
- Identify substances implicated in such deaths – including new drugs, new substance combinations, and new modes of use
- Monitor and examine patterns and trends, e.g. geographic, demographic, substances implicated in death, cause and manner of death
- Act as an early warning system for new trends in substance misuse and mortality
- Use data as an indicator to estimate the prevalence of substance-related problems and assess the hazards associated with such substance abuse
- Collaborate with relevant agencies in research on substance-related mortality locally, nationally and internationally
- Inform and facilitate discussion on the prevention of substance-related deaths, whether accidental or intentional
- Provide data for local and national substance abuse policy formulation and programme planning
- Disseminate information on volatile substance-related mortality to the scientific community, clinicians, policy makers and other interested parties

National Programme on Substance Abuse Deaths (np-SAD)

The main aim is to reduce and prevent drug-related deaths in the UK due to the misuse of drugs, both licit and illicit, by collecting, analysing, and disseminating information on the extent and nature of such deaths. Since its beginnings in 1997 details of more than 28,000 deaths have been received.

- **What is an np-SAD case?** When a death features at least one of the following: (a) presence of one or more psychoactive substances directly implicated in death; (b) history of dependence or abuse of drugs; (c) presence of controlled drugs at post mortem; it qualifies as an np-SAD case

Volatile Substance Abuse (VSA) Mortality Project

The main aim is to monitor trends in deaths associated with the abuse of volatile substances (the deliberate inhalation of a volatile substance such as gas, aerosol propellants, solvents in glue and other solvents to achieve a change in mental state). This surveillance project is the only UK-wide source of comprehensive information on the phenomena of deaths related to VSA; provides an indication of possible evolving changes in use patterns; and reports on newly-emerging issues such as fatalities due to the deliberate inhalation of helium.

- **What is a VSA case?** When a death is found to have occurred from the direct toxic effects of deliberately inhaled volatile substances, or from trauma related to such use, with toxicological and/or pathological and/or circumstantial evidence that suggests deaths were associated with volatile substance abuse; it qualifies as a VSA case.

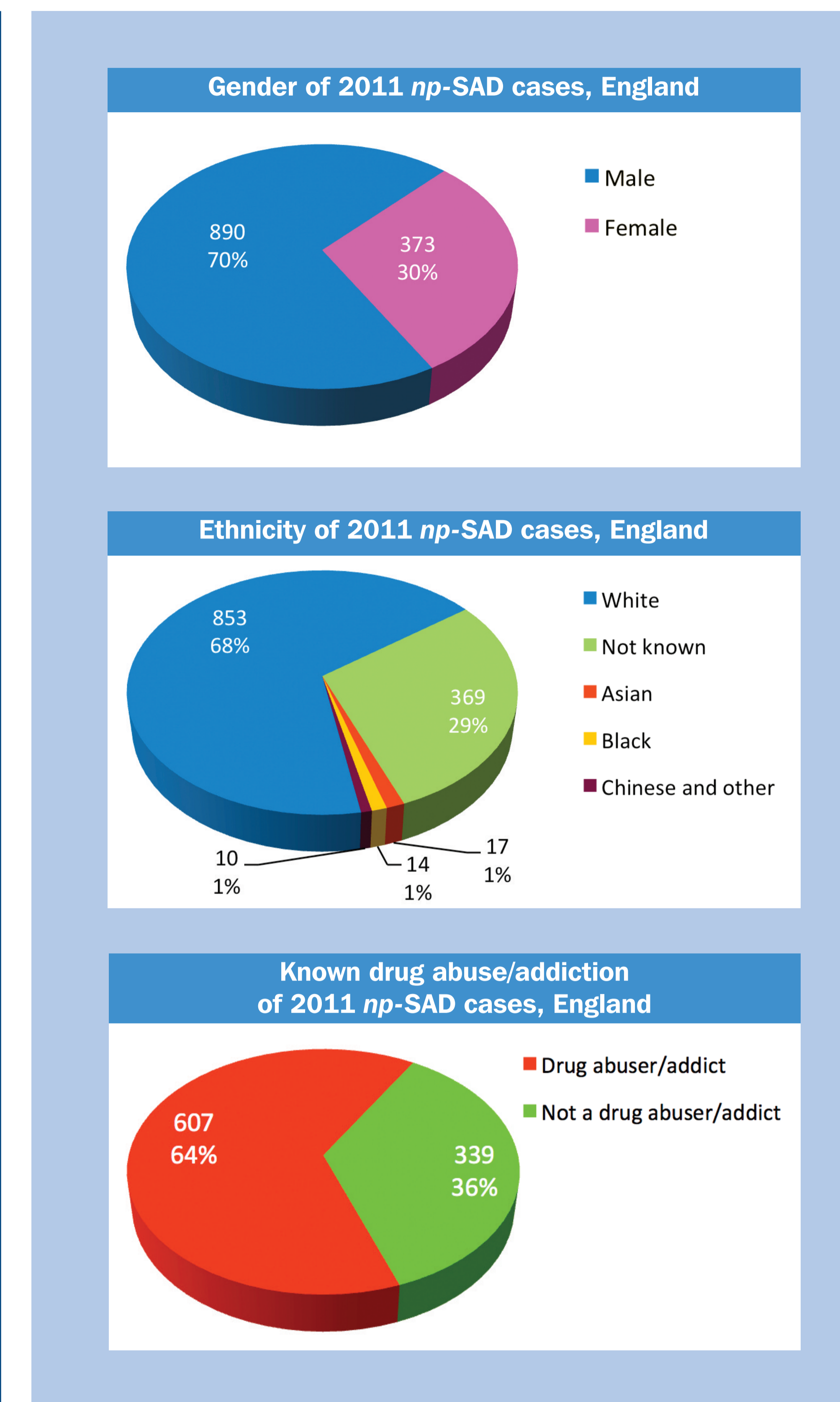
Data sources: forensic toxicology providers; pathologists; Coroners (England, Wales, Northern Ireland, Channel Islands, Isle of Man); Scottish Crime & Drug Enforcement Agency/Police Scotland; Drug & Alcohol Action Teams; and General Mortality Registers – all on a voluntary basis. Regular Internet searches of specialist websites as well as media reporting on drug-related deaths and inquests.

Data collected: Data collected includes substances implicated; substances consumed; socio-demographics of the deceased; cause of death and Coroner's verdict; prescribing history; history of drug use and other risk factors. Other aspects of decedents' circumstances are also reported to the programme such as known mental health diagnosis; hepatitis and HIV/AIDS status; prison history; and any support services involved at the time of death. The countries covered are England, Wales, Northern Ireland, Scotland, the Channel islands and the Isle of Man.

Listed below are some examples of the analysis we can perform from the data collected:

- deaths by age group, sex and ethnicity
- underlying and contributory causes of death
- substances implicated and found at post mortem (single or poly-substance, licit or illicit, prescribed or non-prescribed including methadone) allowing for detection of emerging issues
- employment status and living arrangements of decedents
- drug abuse/dependence history of decedents
- deaths per 100,000 by governmental regions, for example by Strategic Health Authority

Number of reported np-SAD deaths and death rate per 100,000 population in English Strategic Health Authorities in 2011, by usual area of residence



Relevance to Public Health

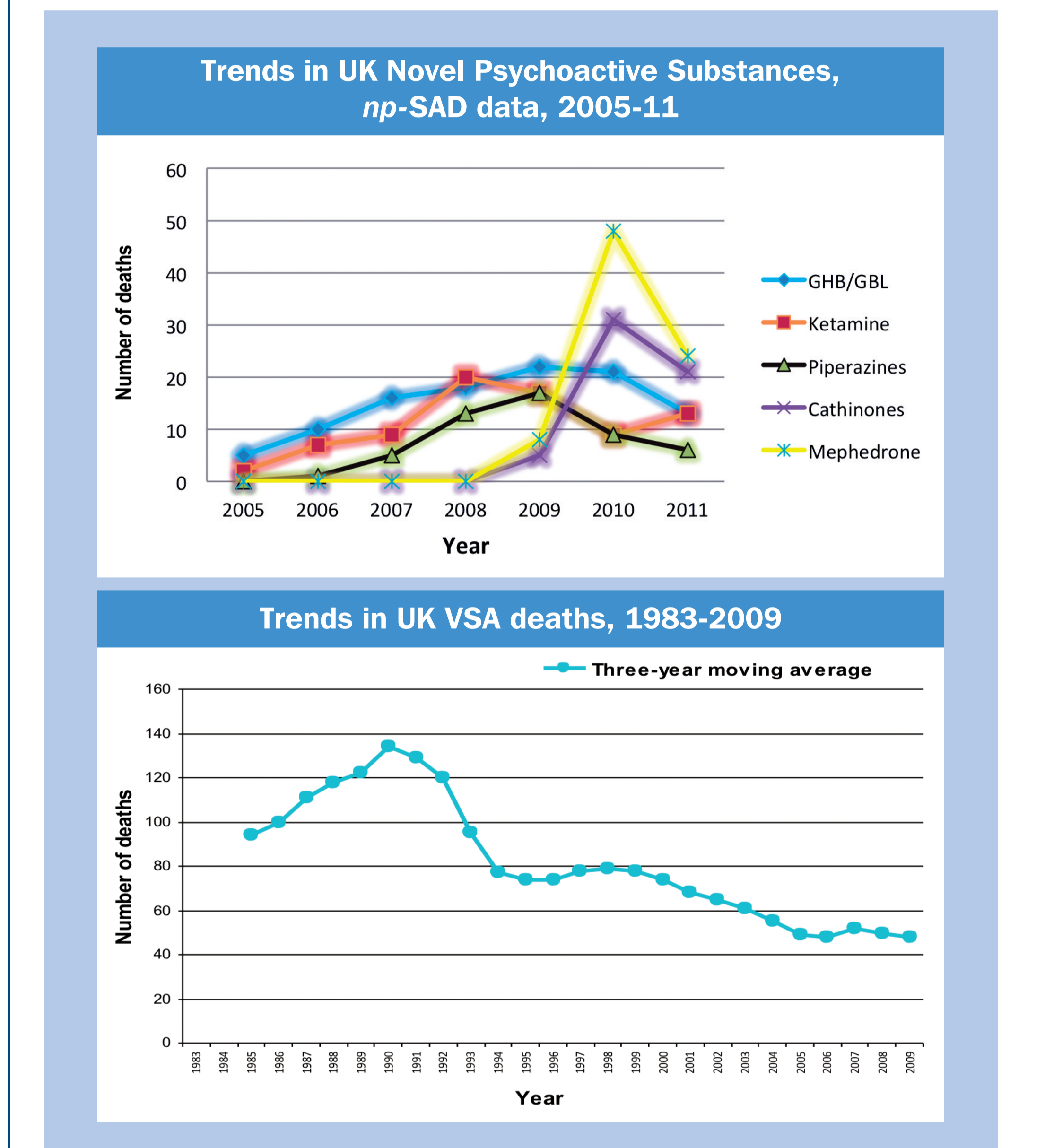
Since 1997 the programme has been contributing to raising awareness of the health and social problems caused by drug mortality. np-SAD data as well as annual and special reports, are available to those working in the drugs sector and generally in public health and governmental bodies such as the Advisory Council on the Misuse of Drugs. These have covered topics including:

- Polydrug use of opiates, cocaine and ecstasy
- Nature, extent and pattern of cannabis-related mortality
- Deaths involving buprenorphine and tramadol
- Mortality related to Z drugs (zopiclone, zolpidem and zaleplon)
- Data regarding deaths involving GHB/GBL, methcathinones, ketamine, methoxetamine, piperazines, desoxypropylol, phenazepam, MDAI, B-Fly, amongst others
- Reporting of new substances appearing on the drug scene and their role in deaths

In addition, information is regularly provided to the UK and European Drugs Early Warning Systems, and to international bodies including the European Monitoring Centre for Drugs & Drug Addiction, the United Nations and the World Health Organisation.

Emerging issues

An increase has been observed in the number and range of Novel Psychoactive Substances (NPS) in post mortem toxicology results and/or cause of death of cases notified to the Programme. Below are examples of the changing profiles of drug-related deaths involving NPS and VSA.



Future drugs of concern

Synthetic opioids

A death has been reported in the UK that may involve the synthetic opioid AH-7921. Two deaths in Sweden and one in Norway have also been linked to this drug. It has not been sold commercially.

Synthetic cannabinoids

One death in the UK has been reported as involving synthetic cannabinoids. There are many different types easily obtained via the internet, including AM2201, AM1248 and AM694

Slimming aids

DNP (2,4-Dinitrophenol), a pesticide which has been marketed as a slimming aid caused the death of a 23 year old female in late 2012. Two other deaths involving DNP are awaiting coronial investigation in Buckinghamshire and Surrey. 2008 also saw two DNP-related deaths.

2-C drugs

2-CE and 2-CI (phenethylamines), which are similar to LSD, have been linked to deaths that occurred earlier in the year. They have also been linked to seven non-fatal intoxication cases in January 2013.

Want to know more?

The strength and value of these programmes lie in the continuity of approach, analyses performed and level of information that can be extracted from the databases it has assembled, as has been demonstrated here. For more information, either scan the QR barcode, or email the team at icdp@sgul.ac.uk

