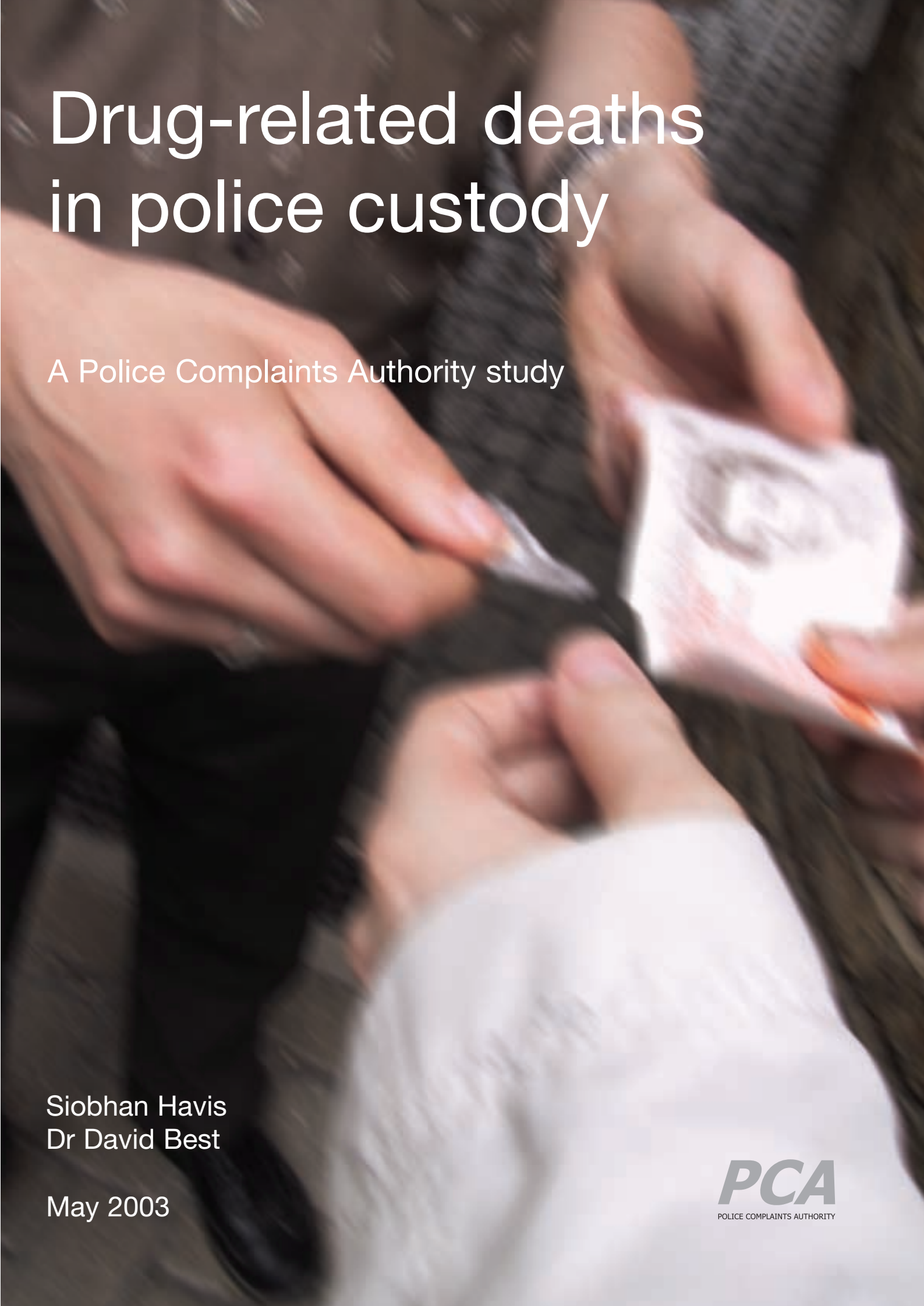




Drug-related deaths in police custody

A Police Complaints Authority study

Siobhan Havis
Dr David Best

May 2003

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Foreword

The report is further indication of the PCA commitment to producing ground-breaking research and to making the most of our unique supervisory and oversight position to identify trends and patterns in adverse incidents involving the police. The drugs report maintains a preventative focus by collating common themes and examining where lessons may be learned through raising awareness and attempting to develop a framework for policy development and training.

Part of that agenda is to recognise the diversity of personal characteristics and circumstances of the individuals who have died from drug-related causes. It is imperative that stereotypical prejudices are overcome – many of those who died were not long-term intravenous drug users, were not physically dependent and were not users of street opiates.

Such diversity necessitates increased vigilance on the part of officers and a preventative strategy that emphasises safety and the need for adequate training for custody officers in drug awareness, overdose recognition and prevention, in first aid and in development of effective protocols to address major challenges such as dealing with drug swallowers.

Although the number of deaths reported here is small in comparison to the total number of detentions in the period of study, this does not mean that any one of the events is less tragic, nor should the opportunities for prevention be ignored. Many of these deaths may have been prevented by earlier recognition of consumption or drug effects, by more rapid accessing of medical support and by the immediate provision of resuscitation. All of these areas can be improved. Furthermore, new initiatives, such as the use of nurses in custody suites, the development of protocols for drug swallowing in forces, and the introduction of improved monitoring systems may all contribute to safety endeavours. However, there is no room for complacency and all professionals involved in police custody must be aware that this huge social problem will continue to have ramifications for the custody environment that can only be tackled by officer vigilance and commitment, by force policies and practices that facilitate good practice and by an awareness of the vulnerabilities faced by the population who are using or swallowing illicit drugs.

Executive Summary

The paper is a review of 43 deaths in police care or custody between 1997 and 2002 in which the consumption of illicit or prescribed drugs was given as the cause of death at either the post-mortem or at the coroner's inquest, or where the police investigation indicated that the individual had consumed illicit drugs in the period immediately prior to their arrest or death. The drug most commonly consumed (by 24/43 respondents) was Cocaine, followed by Cannabis (19/43), and Diazepam (17/43). Eleven of the 43 individuals had opioids identified in blood or urine samples toxicologically examined post-mortem. Surprisingly, the most common route of administration was oral (in 29/43 cases) with only five individuals having injected the drugs used intravenously.

Co-morbidity was identified as a significant issue with 21 of the cases also showing evidence of alcohol consumption and 18/43 having indications of previous self-harm attempts or diagnosed or reported mental health problems.

While the circumstances and reasons for the deaths vary markedly across cases, there are a number of important learning points with regard to the training of police officers in both drug awareness issues and in providing emergency first aid interventions, in policies for the management of drug-intoxicated individuals and for the use of medical input in police custody. Increased prevalence of drug use nationally and in arrested populations would suggest an increase in prevalence of drug-related custodial fatalities. This requires a concerted and effective response from police forces in England and Wales if occurrence of such fatalities is to be minimised.

Introduction

Drug risks and death rates – general population

Drug dependency and misuse are serious problems both for the individual user and society as a whole. For the individual, problematic drug use can lead to serious social, economic and health problems that are often difficult to overcome. For society, widespread drug use has resulted in increased public expenditure in tackling these problems and in attempting to address related factors such as drug-induced criminality. It is estimated that up to £4 billion is spent nationally each year dealing with drug misuse consequences such as crime and related costs, injuries, sickness and unemployment (Drugscope, 2001).

This reflects increased prevalence of drug taking across social groups. Drug misuse is on the increase in the UK as it is in other countries throughout Europe and beyond (EMCDDA, 2002), with the largest rises reported among young people (16-24 years) who are experimenting with illicit drugs in increasing numbers. Furthermore, as indicated by British Crime Survey data, although there is only a slight increase overall in drug consumption, the largest increases are occurring at the more problematic end of the illicit drug range with drugs such as Cocaine, Crack Cocaine and Heroin (Ramsay et al 2001).

Increased prevalence has been reflected not only in increased drug-related morbidity but also in mortality rates. Drug related deaths continued to rise across England and Wales during 2000 with opiate deaths representing by far the greatest cause of drug-related mortality. Official statistics indicate that just under 3,000 (n=2,922) drug poisoning-related deaths occurred in England and Wales during 1998 (Office for National Statistics - 2000). There are a number of inter-related factors that affect the potential risk associated with drug misuse, and the risk of drug-related mortality. For example, mode of consumption has a marked effect upon overdose risk. Rapid blood level peaks are experienced almost instantaneously when the mode of consumption is intravenous, whereas oral consumption results in a much slower and prolonged elevation to peak plasma level (Advisory Council on the Misuse of Drugs, 2000).

Both UK and international studies suggest that drug users who inject, particularly with regard to opiates, are at a far greater risk of death than the general population (ACMD, op cit). However, the risk to the individual is mediated by their tolerance, which in turn will be determined by factors such as general health, levels of recent usage and pattern of consumption (Best et al, 2001). When a user develops a physical dependence upon a drug, abstinence can result in physiological reactions ranging from minimal discomfort to life-threatening consequences, although withdrawal-related mortality is relatively uncommon in opiate users, certainly relative to the mortality risks associated with uncontrolled alcohol or benzodiazepine detoxification.

Mortality related to one specific mode of consumption - drug swallowing deaths

The concealment of illicit drugs such as Heroin, Cocaine and Cannabis in the body has become increasingly prevalent amongst drug couriers ('mules' or 'body packers') since it was first reported (Mebane and De Vito, 1975). Drug packages are typically wrapped in outer layers such as cellophane, latex, condoms, plastic bags, self-adhesive tape or aluminium foil (Glass and Scott, 1995; Bogusz et al, 1995) before being swallowed or packed into body orifices (most commonly the vagina or rectum). Such practices are common due to the low rates of detection and potentially high-financial rewards for successful transportation. However, such practices carry with them a range of potentially lethal risks such as those resulting from drug overdose from ruptured packages (Glass and Scott, 1995; Stewart, Heaton and Hogbin, 1990), asphyxiation, or intestinal obstruction (Freed et al, 1976).

Why drug-related deaths are relevant to the police and the PCA

Deaths that occur whilst in police care or custody will normally be subject to a Police Complaints Authority (PCA) supervised investigation. Such cases are supervised either following a formal complaint or, more commonly, when the forces themselves voluntarily refer such drug deaths under Section 71 of the Police Act 1996.

The role of the PCA in these cases is to:

- Ensure that the investigation is robust and thorough in identifying and obtaining all relevant information required for the coroner's inquest.
- Consider the conduct of any police officers involved. Any impropriety identified may result in criminal or disciplinary proceedings against the officers concerned.
- Identify any lessons to be learnt and any procedural or policy changes that may be implemented as a consequence of the police investigation.
- Ensure confidence in the integrity of the police discipline system on behalf of the bereaved family and the general public.

The PCA recorded 54 cases of death in police care or contact in 2002, of which 36 were defined as deaths in custody (PCA, 2002). These figures are slightly lower than those issued by the Home Office, a discrepancy that occurs for a number of reasons. For instance, Home Office figures will include all deaths that occur during or as a result of a police pursuit whilst the PCA will classify these separately as road traffic incidents (RTIs) (PCA, 1999), and not within the death in custody grouping. Recent attempts to standardise methods of recording should remove such anomalies in the future.

Leigh et al (1998) estimated that approximately 13.5% (n=25) of deaths in police custody can be attributed to either drug or alcohol intoxication. Norfolk (1998) carried out a retrospective analysis of 32 deaths that occurred in police custody between January 1st and December 31st 1994. He categorised deaths into three groups: deaths by hanging (n=12), deaths amongst detainees arrested for drunkenness (n=11), and other deaths (n=9). Norfolk found around 40% (n=13) had died as a result of alcohol or drug poisoning.

Custody – care and management

Following the work of Bennett et al (2001) on the New-ADAM research programme, it is possible to estimate the number of arrestees arriving at police custody suites under the influence of illicit substances. Bennett reported that on average 65% of arrestees gave positive urine samples for at least one illicit substance with regional variations ranging from 59% in London to 77% in Liverpool. Analysis of the Liverpool site

data indicated the highest percentage of positive opiate (including Heroin) results (exactly half of all those tested) whilst Nottingham had the second highest rate at 31%. Liverpool also presented the highest rates of Cocaine/Crack Cocaine use (40%) compared with just 5% in Sunderland, suggesting marked regional variations in the rates of drug use among arrestees, but generally a high prevalence of recent drug use among arrestees.

Prior to the New-ADAM study, it was known that large numbers of drug addicts were being arrested by the police. When Gordon (1990) surveyed opiate users in a treatment centre, he found that around 80% had a previous criminal record. Pearson et al (2000) found that about 4% of all individuals in police detention were known opiate users. They also found that around 30% of known opiate users were intoxicated at the time of their arrival at the police station and that 13% would experience significant withdrawal symptoms during their detention. Gudjonsson et al (1993) reported that 22% of all arrestees in the UK had consumed illicit drugs prior to their arrest.

These results clearly demonstrate the frequency with which arresting officers and custody officers are required to deal with drug-intoxicated individuals. This group of arrestees present numerous additional problems and strains on a custody system that is frequently over-burdened with competing responsibilities and demands. The care and management of drug users presents many dilemmas for custody officers. To offer them no treatment runs the risk of them developing withdrawal symptoms which may well place additional stress both upon the detainee and the officers charged with their care and control (Davison and Gossop, 1999). To offer them treatment, particularly medication, on the other hand, may increase the length of their detention by several hours due to their continued intoxication and may present an additional overdose risk (Davidson and Gossop, 1999).

The importance of PACE in such considerations

The treatment of detainees by police officers is governed by the Police and Criminal Evidence (PACE) Act 1984 and its Codes of Practice, particularly those outlined in section C. The role of custody officer was delineated under PACE, and officers undertaking this role have clearly defined duties of

care towards detainees. They are required to immediately call out a Forensic Medical Examiner (FME) in the following circumstances: If the detainee:

- Appears to be suffering from physical illness or mental disorder; or
- Is injured; or
- Fails to respond normally to questions or conversation (other than through alcohol intoxication alone); or
- Otherwise appears to need medical attention.

FME/ medical

Thus the responsibility for the safe management of detainees who may have consumed intoxicating substances is devolved in part to a qualified physician. The Forensic Medical Examiner (FME), at the discretion of the custody team, will see detainees who are known or suspected to be under the influence of illicit drugs, to assess their fitness to be detained, their fitness to be interviewed or to address other medical needs they may have. Payne-James et al (1994) reported that approximately 11% of all detainees seen by FMEs were drug addicts. 77% of these were Heroin users, 30% used both Heroin and Cocaine on a regular basis whilst 32% were receiving prescription Methadone. Similarly, Stark (1994) found that custody officers called out FMEs with increasing frequency for drug users.

Pearson et al (2000) found that 65% (n=75) of detainees identified as opiate users were seen by the FME but that over 70% (n=15) of those considered drug intoxicated received no medication, although the authors observed that medication was prescribed for all (n=14) of the detainees suffering from withdrawal. Most withdrawal related prescriptions were for opiate class medication with Dihydrocodeine (DF118) being the favoured form of opiate treatment method.

Research plan and methodology

The aim of this study was to explore the frequency and circumstances of drug related deaths in police care or custody over a five-year period (March 1997 – July 2002), to identify risk factors and prevention lessons. By examining the cases that resulted in fatalities, the aim was to examine possible organisational issues in the management of drug users in custody and the adequacy of the medical provision for this group.

Data sources

The main sources of data available were the PCA casework files. These files, held in the PCA archives, contain the investigating officer's (IO's) final report, PCA internal minutes and copies of all relevant correspondence between the PCA and relevant parties such as police forces (both the home and investigating force for the investigation, on the occasions that these are different), Coroners and the Crown Prosecution Service (CPS). They also contain correspondence between the PCA and any relevant medical experts and the family members of the deceased, along with their legal representatives where applicable.

Method of case identification

In order to identify appropriate cases for inclusion, two methods were employed. Firstly, PCA casework staff and supervising members were contacted regarding recent death in custody cases in which drugs were considered to have played a contributory role. This method identified approximately 20 cases. A subsequent trawl of the PCA's complaint database (QA) was then undertaken. A further 35 viable cases that carried a 'drugs marker' *were identified. This increased the potential number of cases to be examined to 55. Seven of these cases were duplicates of cases already identified, and so the viable number of candidate cases was therefore 48.

Once files were identified, a pilot of 5 completed cases was examined. This allowed researchers to establish appropriate inclusion criteria, and aided the development of a standardised research pro forma for case analysis. These five cases were subjected to a qualitative analysis, which became the foundation for the subsequent quantitative analysis. Having carried out this initial analysis, a number of primary

themes and areas for investigation were identified.

1. Does the death satisfy the Home Office (2002) definition of death in police care or contact?
 2. Was the investigation supervised by the PCA?
 3. Are there any significant drug factors (i.e. was the deceased drug intoxicated at the time of arrest or were they arrested on a drug related offence?)
 4. Was a post-mortem carried out?
 5. Was toxicological analysis available?

Table 1: inclusion criteria

Files were excluded if the death resulted from a police shooting or pursuit, even if drugs were believed to have been present, as they were currently subject to other PCA research investigations.

Of the 48 cases originally identified, 5 were excluded. The first two cases were not deaths in police custody and so were considered inappropriate - one related to a death in prison and the second to a complaint about an investigation into a suspicious death. A further two cases concerned the deaths of men who fell ill and subsequently died more than 24 hours after release from police custody. The final case involved a young man who was already seriously ill prior to police involvement, and so it was felt that the police contact did not play a significant role in his death.

A standardised pro forma was completed for each case and the resulting data entered into SPSS for statistical analysis.

Statistical analysis

Once the data had been entered into SPSS, it was subjected to a range of statistical procedures in preparation for analysis. Thus where data distributions were not normal, as a result of the presence of outliers, mean substitutions (to the nearest value) were carried out. This was to enable parametric testing of the data. The tests used as a result were independent (student) t-tests and one-way analysis of variance (ANOVA). In addition, the chi-square test was used to test group differences for categorical data.

*QA system provides a range of predetermined electronic 'tags' that can be applied to any file. 'Drugs' is one such marker.

Results

The results section is based on a series of questions that attempt to convey the richness and complexity of the cases included. Thus the initial section examines the demographic characteristics of the sample, followed by an analysis of the location of death. The focus then shifts to the drug consumption, examining the type of drugs consumed, the method of consumption and, where this is known or can be inferred, the reason for consumption. The next area for consideration is around the police involvement – reason for initial contact, whether the individual was searched and how the police recognised and responded to the advent of drug-related morbidity. The final section deals with events after the death – the results of both the post-mortem and the inquest (where available) and the outcomes of the investigation into the death in terms of both criminal and disciplinary factors.

Who died?

Males (n=38, 88.4%) were more likely to die in police custody than their female (n=5, 11.6%) counterparts. The majority of those who died were white (86%, n=37). The remaining 14% (n=6) consisted 7% (n=3) Asians, 4.7% (n=2) blacks and 2.3% (n=1) Arab. The mean age of those included in the study was 32 (± 10.9 years). Ages ranged from 15 to 65 years.

Core characteristics of the deceased group – the issue of vulnerability

Many of the individuals in the study had characteristics that rendered them vulnerable as a consequence of a history of substance misuse or mental illness, including previous attempts at self-harm or suicide. Forty percent (40%) of the cases in the study involved individuals with a history of mental health disorders ranging from depression or anxiety, to suicidal tendencies and schizophrenia. Furthermore, post-mortem toxicological analysis revealed that over two thirds (67.4%) of the sample exhibited signs of poly-drug use in the period prior to death (n=29). Combined drug consumption and dual diagnosis status are indicated in the table opposite:

Case number	Alcohol	Amphetamines	Cannabis	Cocaine	Diazepam	Ecstasy	Heroin	Methadone	Painkillers	Other Pharmaceuticals
1					R			R		
2	R		R	R						
3				R			R			
4			R		R			R	R	
5			R	R	R		R		R	
6			R				R			
7	R	R	R		R		R		R	R
8	R			R						
9	R				R					R
10				R	R		R			
11	R	R		R	R			R		
12	R			R					R	
13				R						
14		R			R			R	R	
15	R			R		R				
16				R			R		R	
17			R	R						
18					R		R			R
19	R			R						R
20	R		R	R		R				
21	R			R						
22	R								R	R
23			R	R	R		R			
24	R	R	R	R						
25	R	R	R	R	R					
26				R			R		R	
27	R		R			R				
28				R						
29			R	R						
30	R				R					R
31	R		R		R		R		R	
32	R				R		R		R	
33			R							R
34										R
35			R			R				
36	R		R	R						
37					R				R	R
38			R	R						
39		R		R					R	
40	R		R	R					R	
41	R				R			R		
42	R								R	R
43			R		R					
Freq	21	6	19	24	17	4	11	5	14	10
%	48.8	14	44.2	55.8	39.5	9.3	25.6	11.6	32.6	23.3

Table 2: Substances detected in blood

Table 2 illustrates that multiple drug use was the standard use pattern with only four individuals having consumed only one substance, and 13 showing indications of the consumption of four or more drugs. Furthermore, 18/43 (41.6%) were identified as having mental health or suicide issues (either from previous self-harm attempts or diagnosed episodes of mental health problems).

When did the deceased first show signs of medical distress?

Working from custody records and the investigating officers' reports, it was possible to calculate time intervals relating to the identification of health problems and the subsequent police response. The mean amount of time that had elapsed between initial police contact and first signs of collapse was 297 minutes (around 5 hours) with a standard deviation of 419.6 minutes (7 hours). However, 27.9% (n=12) of deaths involved individuals already exhibiting signs of medical distress prior to the arrival of police officers. Of those cases where the onset of medical distress occurred after initial police contact, 25.8% collapsed within 15 minutes of police contact, a further 22.6% (n=7) collapsed between 15 minutes and 1 hour after initial contact. However, in 25.8% (n=8) of cases, first police contact occurred at least 8 hours prior to onset of medical distress.

What factors predicted variation in time gaps between police contact and death?

a. Substance use effects

The first comparison made was on the basis of whether the individual had been drinking alcohol prior to involvement with the police. Although there were no significant differences in the mean time in custody prior to falling ill, differences were found in other time domains. For those who had consumed alcohol, there was a shorter time interval between arrest and death and between first signs of illness and certification of death (see Table 3). However, there were no differences in time-related aspects of FME attendance as a function of alcohol consumption. Similar time differences were not identified as a function of other forms of substance use.

When examining time effects as a function of multiple drug use, it was found that those who had used multiple drugs (n=29) did not exhibit signs of medical distress as quickly (mean = 245.6 minutes) as those who had used only one illicit drug (n=14, mean = 82.3 minutes, $t [41] = 2.03$, $p < 0.05$) (these calculations exclude alcohol).

Question	Alcohol	N	Mean	SD	T	DF	P
Time in care or custody prior to falling ill (mins.)	Yes	21	139.67	302.59	1.06	41.00	0.29
	No	22	242.77	331.77			
Time between first signs of illness and certification of death (mins.)	Yes	21	291.52	683.59	2.28	27.29	0.03
	No	22	1223.59	1782.00			
Time from arrest to death	Yes	21	441.57	761.22	2.67	29.49	0.01
	No	22	1501.45	1689.16			
How many minutes after arrest was FME attendance requested?	Yes	4	72.50	72.46	0.22	10.00	0.83
	No	8	63.13	69.10			
How many minutes after 1st Call did the FME arrive at the custody suite?	Yes	4	89.00	66.89	1.49	3.42	0.22
	No	8	37.63	24.72			
How many minutes did the FME spend with the deceased?	Yes	4	32.75	22.72	1.83	3.30	0.16
	No	7	11.43	6.66			

Table 3: Impact of alcohol consumption on time gaps between major events

b. Age effects

Age was recoded using a median split to create two age groups (younger than 30 years compared with 30 years of age or older). The mean times for the two age groups were significantly different in terms of how quickly the individuals fell ill (those in the younger group fell ill after a mean of 279.1 minutes, while those 30 or over fell ill much more rapidly once in custody (mean=101.6 minutes, $t [29.97] = 1.91$, $p = 0.06$, ns), although this difference does not quite attain statistical significance. There were no differences in other time gaps as a function of age.

c. Ethnicity

When assessing time lapses by ethnicity, the data indicated no statistically significant difference in the time periods elapsing between first signs of illness and time of death, or between time of arrest and time of death. However, the onset of medical distress was significantly more rapid once in detention among the non-white detainees (mean = 12.7 minutes) than among the white detainees (mean = 221.6 minutes, $t [36.59] = 3.79$, $p < 0.001$). However, the small number of individuals from non-white ethnic groups ($n=6$) makes this result difficult to interpret.

d. Location of drug consumption

Although not statistically significant ($t [41] = 1.76$, $p = 0.08$), those who had consumed drugs outside of police custody ($n=35$) exhibited first signs of serious medical distress after a greater time lapse (mean=152.7 minutes) than those whom consumed drugs at point of arrest or while in police detention ($n=8$, mean=366.4 minutes).

e. Was the individual seen by the FME?

An independent t test was carried out on those who had been in police custody at the time of falling ill ($n=24$), by whether they had seen an FME. Those seen by an FME had been significantly longer in custody at the point of falling ill (mean = 492.4 minutes) than those not seen (mean = 178.5 minutes, $t [22] = 2.26$, $p < 0.05$).

Where did the deceased first show signs of medical distress?

Almost half (46.5%, $n=20$) of the cases examined collapsed whilst in a police environment (police vehicle, police station or police cell). Of these, 14/20 occurred in a police cell (32.6%), four (9.3%) in the police station, and two (4.7%) in a police vehicle. Of the remaining 23 cases who did not first display distress in police care or custody, 14 (32.6%) collapses occurred in a public place, four (9.3%) in a hospital setting and the remainder (11.7%, $n=5$) involved collapses either in the home of the deceased or some other setting.

Where did they die?

The 43 cases examined were drawn from 23 forces. Distribution was relatively even across included forces with the exception of the Metropolitan Police Service which accounted for 18.6% of the sample ($n=8$) and Devon and Cornwall Constabulary which accounted for a further 11.6% ($n=5$).

Force area	Frequency	Percent
Avon and Somerset	2	4.7
Bedfordshire	1	2.3
Cheshire	2	4.7
Cleveland	1	2.3
Devon and Cornwall	5	11.6
Dyfed-Powys	1	2.3
Essex	1	2.3
Greater Manchester	2	4.7
Humberside	1	2.3
Kent	1	2.3
Lancashire	2	4.7
Merseyside	1	2.3
Metropolitan Police Service	8	18.6
North Wales	1	2.3
Northamptonshire	1	2.3
Northumbria	3	7.0
South Wales	2	4.7
South Yorkshire	1	2.3
Staffordshire	1	2.3
Thames Valley	1	2.3
West Midlands	3	7.0
West Yorkshire	1	2.3
Wiltshire	1	2.3
Total	43	100.0

Table 4: Force area in which death occurred

What drug(s) had they consumed?

Toxicology results highlighted that over half the individuals had consumed Cocaine (55.8% n=24) prior to death, with 87% of these individuals having consumed levels of Cocaine that were identified as being consistent with fatal toxicity, according to the report prepared by the toxicologist.

Post-mortem blood and urine analysis data show that almost half of those included in this study (48.8% n=21) had consumed **Alcohol** prior to their death. Five of these had consumed a level of alcohol considered by toxicologists to be within a range typically associated with very heavy/near fatal or fatal range.

In relation to **Cannabis**, the data showed that 44.2% (n=19) of toxicology results were positive for Cannabis or one of its metabolites (Cannabinoids). Since there have been no reported cases of Cannabis toxicity, rarely were detailed further analyses undertaken to determine levels of usage and none of the pathologists considered the doses of Cannabis used to have contributed to the deaths.

In terms of prescribed pharmaceuticals, over one third of cases involved positive post-mortem toxicology results for **Diazepam** (39.5% n=17).

Around one third of cases involved the use of at least one prescription painkiller (32.6%, n=14), most commonly **Dihydrocodeine** (DF118) (14.0%, n=6). In 3 cases (7%), a fatal overdose of prescription painkillers was recorded.

Just over a quarter (25.6%, n=11) of the blood/urine results were positive for **Heroin/Diamorphine**, with 63.5% of these (n=7) having consumed quantities that were potentially fatal. Of the other opioids, 11.6%, (n=5) of cases involved Methadone, of which two were at a very high/ near toxic dosage.

Amphetamine use was indicated in 14.0% (n=6) of post-mortem samples although the data indicated that none of these individuals had consumed dangerous levels immediately prior to their death.

The final drug/substances that were examined were **Ecstasy**. In four (9.3%) cases, blood and urine results indicated that fatal quantities of Ecstasy had been consumed by the individuals immediately prior to their deaths.

What mode of consumption was used?

In the 43 cases, four distinct methods of consumption were identified. Oral consumption (swallowing) was by far the most prevalent with 67% (n=29) of users employing this method. The other methods identified were intravenous use (IV) (11.6%, n=5) and inhalation (smoking or snorting) (11.6%, n=5). Only two users (4.7%) injected intramuscularly. The methods employed by two of the users (4.7%) could not be determined.

Case Study A: Swallowing at the point of arrest

Police officers unsuccessfully attempted to stop A when he was riding a motorbike. As they knew A, the officers went to his home address, where they took him to the rear of the police van and carried out a basic search finding two small white tablets and what appeared to be Cannabis resin.

A pushed the officer aside and was seen to put his hands to his mouth with blue tissue. A struggle ensued and A was told to spit the items out. He spat out white mucus and allegedly told the officers that this was what he had swallowed. He was then conveyed to the Police Station, where CCTV footage shows him having trouble breathing. He is not presented to the custody officer but is taken to a bench where he appears to become increasingly unwell. An officer is heard to say that A is 'play acting' and, after he has fallen to his knees from a bench the custody officer instructs officers to convey A to hospital.

On arrival, A is placed in a wheelchair and taken into A&E. Emergency treatment commenced, including defibrillation. Whilst being treated, staff removed a blue package from his airway (later found to be a condom wrapped in blue paper – it contained 2.74g of Heroin). A failed to respond to treatment and died having never regained consciousness. The cause of death recorded at

post-mortem was hypoxic brain damage due to inhalation of a foreign object and the effects of morphine. Toxicological analysis revealed Morphine and benzodiazepine use.

Why were drugs consumed?

Although this is, to some extent, speculative, the most common reason for consumption was classified as for 'personal use' (i.e. for drug effects) (44.2%, n=19), with concealment (swallowing or secreting in body orifices) accounting for a further 34.9% (n=15) of cases. A further two individuals had systematically concealed drugs prior to contact with the police (in other words, consumption was not a response to coming into contact with the police). In one of these cases, the deceased was appearing in court and secreted drugs within his body as he was convinced that he would be remanded in custody (internal concealment would have enabled him to carry illicit substances into prison). A further six individuals (14% of the sample) appear to have consumed the drugs with the explicit intent of causing harm to themselves and/or committing suicide. In one case, it was not possible to determine the motive for consumption.

Case study B: Concealing drugs on contact with the police

Police officers noticed B acting suspiciously in the company of two men outside a hotel. The officers noted that B was speaking in a slurred voice, before she was seen to throw a piece of silver foil (containing a small polythene wrap of light brown powder) to the ground. All three were subsequently arrested on suspicion of being in possession of controlled drugs.

In custody, B was strip searched, and a substance (later identified as Cocaine) was recovered from inside her coat. Due to her intoxicated state she was placed in the observation room whilst awaiting the arrival of the FME. She was examined by the FME who recommended 15-minute checks to be carried out by custody staff and a four-hour review. There was some confusion over how frequently she should be checked and every half hour was recorded on her custody record as the appropriate frequency for checking.

Two hours later, B was found collapsed and unconscious in her cell. An ambulance was called and officers commenced cardiac massage and mouth-to-mouth resuscitation. The paramedics took over resuscitation attempts when they arrived before conveying B to hospital. During initial resuscitation at the A&E department, a nurse retrieved a clear bag containing a block of white substance from B's vagina (later identified as 19.9g of Cocaine with a purity level of 81%).

B died having never regained consciousness. During the post-mortem, a plastic bag wrap and a piece of plastic were removed from within her stomach (later analysis revealed traces of Cocaine). The cause of death was recorded as Cocaine toxicity.

With regard to age variations in reasons for use, the mean age of those who primarily consume drugs for reasons of concealment was significantly higher (n=17, mean = 33.6 years of age) than that of those whose primary reason for consumption was personal use (n=19, mean = 26.0 years, t [26.28]= 3.0, p<0.01)

Police searches

No form of police search was documented in 19 (44.2%) of the sample cases prior to the individuals' deaths. Of the remaining 24 individuals (55.8%), 14 (32.6%) were subjected to a basic search, eight were strip searched (18.6%), and only two (4.7%) were subjected to intimate searches. In nine cases (21%), concerns were raised (either by the investigating team or by the PCA) regarding the adequacy of the searches undertaken. In a number of cases, despite being subjected to some form of search, the deceased managed to convey illicit substances into their cells. In five cases (11.6%), the believed location of drug consumption was within the police cell.

Medical assessment/assistance

Half (n=12) of the 24 individuals detained in police custody prior to their collapse were seen by the FME who was typically called out 30 minutes after the initial arrest. In half

of these cases (n=6) the FME arrived at the police station within around 45 minutes of the call-out. The majority (11/12) of detainees were seen only once, and consultation times varied considerably with a median consultation of 15 minutes (range 3-70 minutes).

As shown in table 5, the most frequent reason given for a call-out was related to drug or alcohol intoxication, withdrawal or mental health concerns (66.6%, n=8). However, one third of call-outs were also requested to assess fitness to be detained (n=4). The reason for the call-out included the need to assess illness or injury in four cases.

	Fitness to be Detained	Allegation of assault	Injury or Illness	Drug, alcohol or mental health concerns
Number of cases	4	1	4	8

Table 5: Reasons given for FME call-out (more than one reason was stated in some cases)

Medication was prescribed by FMEs in 7 of these 12 cases – Dihydrocodeine (DF118) in 3 cases, Methadone in 2 cases (in one case the quantity of Methadone given was identified as having been a fatal dose), while the other drugs prescribed were Diazepam, Temazepam and Tylex.

After medical assessment, only two FMEs issued any special care instructions regarding the frequency with which custody officers were to check on the well being of the detainee. One of these cases is described in the case study below:

Case Study C: Failure to comply with FME instructions on rousing

Police arrested a 23-year-old white male with a long history of drug addiction on suspicion of obtaining goods by deception. When C was presented to the custody officer he had facial injuries (sustained during a fight prior to the arrival of police) and he appeared to be under the influence of drugs. The custody officer therefore requested an FME to conduct a health assessment.

The duty FME arrived 30 minutes after the request and spent 20 minutes with C. The FME declared him 'fit to be detained', but not 'fit to be interviewed'. He recommended that custody staff visited C's cell half hourly and roused him every hour.

Despite this advice, C was not visited at these time intervals nor was he frequently roused. C was found collapsed in his cell by a detention officer around lunchtime the following day and despite resuscitation attempts he died in the cell.

A number of timing factors associated with the request for, arrival of, and duration of FME visits were examined using independent t tests to explore differences between a range of sub-groups within the main cohort.

Factors such as alcohol, age, ethnicity, place of consumption, feigning illness, force geographical location, and poly-drug user status were assessed in terms of the speed of FME response and the amount of time the FME spent with the detainee. No statistically significant differences were found in relation to the number of minutes between arrest and FME requests being made, the time lapse between the FME being called out and subsequently arriving at the custody suite or the duration of FME consultations. However, it may be of note that FME attendance was not requested for any of the non-white detainees (n=6), although it should be pointed out that they spent relatively short periods of time in custody prior to collapse.

Officer responses to collapse

Of those who showed signs of respiratory/cardiac failure (n=36), officers attempted resuscitation in 17 cases (47.2%). The remaining individuals were generally placed in the recovery position and officers monitored their respiration and pulse rates whilst awaiting the arrival of ambulance staff. The failure to provide emergency care at this potentially crucial time is illustrated in the case study D.

Case study D: Failure to administer emergency aid

A 44-year-old man who had just been released from prison, was found slumped against a building by a security guard in the early hours of the morning. When the security guard was unable to rouse D, he called the police. Two officers attended and, on arrival, requested a police van to provide transportation.

Fifteen minutes later, one of the officers contacted the control room to say that they had identified a head injury and that D could not be roused. At this point they requested an ambulance. On their arrival (nine minutes after the initial request), one of the ambulance crew described D as cyanosed and pointed out to his partner that he believed D to be dead. When they turned him over, they found that D had no respiration and no pulse. No form of resuscitation was attempted.

The post-mortem examination concluded that death occurred very soon after the ingestion of a large quantity of Chlormethiazole and the cause of death was recorded as due to an overdose of Chlormethiazole together with Diazepam and alcohol. Toxicological analysis revealed 173mg alcohol/100ml of blood and 278mg alcohol/100ml of urine. The blood contained therapeutic levels of Diazepam and low therapeutic levels of Chlormethiazole. D's stomach contained 20-30 capsules of Chlormethiazole.

What was the post-mortem cause of death?

Post-mortem analyses were available in all cases. The most commonly cited cause of death was drug toxicity which was listed in over two thirds of cases (67.4%, n=29). 44.8% of these (n=13) involved fatal doses of Cocaine, 13.8% (n=4) involved Heroin overdose, Ecstasy and Methadone were both recorded in two cases (4.7% each) and a further 18.6% (n=8) involved other drugs (Alcohol, Dihydrocodeine, Dothiepin and Citalopram were all cited in one case). Asphyxiation (either via airway obstruction or aspiration of stomach contents) was recorded in four cases. A further four cases involved deaths by multiple injuries and head injuries which predominantly resulted from falls.

In three cases, hypoxia was recorded as cause of death and in three cases excited delirium was cited as either a primary or secondary cause of death. Case study E below offers an example:

Case Study E: Sudden loss of consciousness

Police were called by a member of the public reporting that a young male was acting in a bizarre and violent manner outside the witness' house. E was shouting, "don't shoot me" and "I will get the money". On arrival, officers found E smashing a wheelie bin on the ground and behaving in an aggressive and agitated manner. A violent struggle ensued before he was handcuffed and placed on the road next to the parked police car. E was physically and verbally aggressive towards the officers.

Whilst the officers were moving him to a safer position, E stopped struggling and lost consciousness. His handcuffs were removed and he was placed in the recovery position. Officers monitored E's life signs (which became increasingly weak) whilst awaiting the arrival of an ambulance. On arrival, the ambulance crew noted that his face was 'purplish' and that he had no life signs. CPR was commenced at the scene, before E was conveyed to hospital where he was pronounced dead.

Toxicology reports revealed high levels of Cocaine and its metabolite Benzoyllecgonine in the blood (0.36mcg and 2.5mcg per 100mls blood respectively). Low levels of alcohol were also detected in urine samples.

What was the inquest verdict?

In 30 cases, the inquest had been held prior to the report being written. In 10 cases, an inquest verdict of 'accidental death' was returned, with 'misadventure' the verdict in a further eight cases. Drug intoxication/ abuse (both dependent and non-dependent) was the verdict in seven cases; an open verdict was recorded in three, while suicide and negligence were each recorded as verdicts in one case each.

Criminal Outcomes

Criminal charges were recommended by the Senior Investigating Officer (SIO) in one of the 43 cases examined, but this was against an FME and not a police officer (see case study F below). In seven cases, the investigations were incomplete at the time of writing and therefore decisions on criminal culpability or the disciplining of officers had not been reached.

Case Study F: Criminal charges following one of the drug deaths

Following his arrest for shoplifting in a department store, F was presented to the custody officer who described him as exhibiting "classical symptoms of drunkenness". He stated that he was HIV positive and that he was an opiate addict on regular medication. As a result, an FME was requested and F was placed on thirty minute rousing checks until the FME's arrival.

The FME arrived 3hours 40 minutes after the request was made and spent 50 minutes examining him before declaring him fit for detention. He prescribed 50mg of Methadone to be taken orally later that evening. No special care recommendations were made and so F was given his medication and placed on a standard hourly cell check regime. F was not woken through the night, which the custody officers explained as being a result of F's PACE entitlement to uninterrupted sleep.

F was found collapsed in his cell the following morning with no vital signs. Despite resuscitation attempts, he was declared dead at the scene. The post-mortem and toxicological analysis revealed the cause of death to be "the toxic effects of Methadone and Diazepam".

A medical expert offered the opinion that the dose of 50mls was above sensible levels for a starting dose. He further commented upon the decision to administer the Methadone in a single dose. Although charged with manslaughter, the FME was never prosecuted as it was not in the public interest to proceed to trial.

In a significant number of cases, even when the deceased showed signs or reported signs of medical distress, they were not initially believed. In 5 cases (11.6%) officers initially believed that illness/ injury was being feigned by the detainee. In one case, this perception was conveyed to the FME who, based upon this information, decided not to make a return visit to a detainee who later died in his cell.

Disciplinary outcomes

Of the 43 cases included in this study 14 cases were still under investigation at the time of writing so decisions regarding disciplinary matters were pending. Of the remaining 29 cases, 12 resulted in either force (n=11) or PCA (n=1) recommended disciplinary charges being proffered against officers, involving a total of 27 individual officers and 63 allegations.

The behaviours that resulted in disciplinary charges were grouped using Home Office complaint categories. 'Failures in duty' was the most frequently recorded behaviour (n=53) followed by 'Oppressive behaviour' (n=5), 'Other' (n=4), and 'Incivility' (n=1).

In a number of cases a range of allegations were amalgamated into a single charge for recording purposes. The outcomes of these disciplinary charges were as follows; 'Written warning/ admonishment' (n=6), 'General advice' (n=2), and 'Words of advice' (n=16).

Three officers were not subject to disciplinary proceedings as they had retired prior to the commencement of proceedings. In another case disciplinary proceedings were not instigated due to the officer's ill health.

The topic of disciplinary outcomes will be examined in greater detail in a future paper.

Discussion and implications

The deceased can be broadly categorised as predominantly white and male and with a mean age in their early thirties (although the age range is from 15 to 65 years). The circumstances of the deaths (and the causes of death) vary markedly, but most of the post-mortem examinations (just over two-thirds) gave the cause of death as drug toxicity. This is reflected in the inquest verdicts for those cases that had reached that stage by the time of writing, with the most common verdicts being returned as ‘accidental deaths’, ‘misadventure’ and ‘drug intoxication’ or ‘drug abuse’.

However, the patterns of drug consumption and the modes of ingestion are atypical of drug-related deaths in the UK. While the vast majority of deaths classified as drug-related by the Department of Health relate to opiate overdose following the intravenous use of opiates along with either alcohol or benzodiazepines (Best et al, 2000), the current cohort of 43 deaths are markedly different. Only five of the deaths involved drug injection, and less than half of the cases examined involved the ingestion of any opioids. For this reason, the standard range of prevention activities and treatment-based interventions are unlikely to be effective.

The drug most commonly identified at post-mortem was Cocaine (24/43 cases), with toxicological evidence suggesting that the quantities of Cocaine consumed were at lethal levels in more than 85% of those who had used the drug. Similarly, two thirds of the cohort had consumed the drug or drugs orally, suggesting a markedly different pattern for consumption than that more commonly associated with fatal drug use. This is likely to be linked to the reason for use with clear evidence in 17 of 43 cases that the purpose of ingestion was concealment. In 15 of these cases, it seems likely that this was a response to actual or anticipated contact with the police. In only two of the cases is there evidence to suggest that the individuals were ‘body packers’ systematically preparing drugs for concealment.

For the majority, who we will categorise as ‘contact precipitated concealers’, the drugs are unlikely to have been prepared for this purpose, thus leading to the prevalence with which death appears to have been a consequence of packages rupturing in the stomach or intestine. Further

evidence for this arises from the cases where the cause of death is at least partly linked (as in Case study A) to choking or hypoxia resulting from a drug package being lodged in the throat. It is imperative that police officers are aware of any attempts at swallowing packages at the point of arrest and, if such actions are believed to have happened, that the individual is treated as a medical emergency from that point on. It is encouraging to note that several forces, including Sussex Police and the Metropolitan Police Service, have policies in place that instruct officers to take suspects straight to hospital if drug swallowing or significant intoxication is suspected.

However, analysis of reasons for use also indicated another area of concern, which relates to illicit drug use as part of a deliberate attempt at self-harm. In six cases, there is evidence to suggest that the consumption of drugs was a deliberate attempt at either self-harm or suicide. While previous work on custody-related deaths has tended to distinguish between deaths due to suicide and those related to drug or alcohol misuse (such as the PCA report on “Deaths in Police Custody: reducing the risks”, 1999), there are occasions when individuals will deliberately overdose for the same reasons that other forms of self-harm may be engaged in following contact with the police.

The cases where drug deaths may have been deliberate are indicative of the high levels of vulnerability demonstrated in the sample, relating primarily to two factors – one related to mental health problems and the other to multiple substance use (including alcohol use). It is notable that alcohol is present in the toxicological analysis for 21 of the cases (just under 50%), that 19 cases included traces of Cannabis, and, in 12 of the 43 cases, four or more drugs were detected at post-mortem. Similarly, there was documented evidence of previous self-harm or suicide attempts in seven of the cases and history of mental health problems (primarily schizotypal or depression) in 14 cases.

With regard to multiple substance use, there is considerable evidence that the risk of an overdose death is significantly enhanced when multiple central nervous system depressants are ingested. Indeed, in almost half of all overdose deaths either alcohol or benzodiazepines are

detected, in addition to the primary consumption of (usually) Heroin (Best et al, 2000; WarnerSmith et al, 2001). There is considerably less research evidence around Cocaine-based poly-drug deaths but, as Bennett's work on the new-ADAM programme (2001) has indicated, high levels of multiple substance use are common in detained populations, with use of Cocaine extremely prevalent.

In terms of the mental health concerns, previous work in London by Weaver et al (2001) reported high levels of co-morbidity – 24% of community mental health patients reported substance misuse problems and 53% of drug and alcohol patients reported current mental health problems. In other words, levels of 'dual diagnosis' are generally high, rendering those who have the additional trigger event of arrest and detention particularly vulnerable to the consequences of co-morbidity. This may be particularly relevant to officers' perceptions of 'faking' – those who are behaving in an irrational manner as a consequence of anxiety, depression or psychosis may not appear co-operative and therefore may be less likely to be either accurately assessed (as under the influence of drugs) or dealt with appropriately by police officers who may have limited training and experience in dealing with such complex problems.

Thus, the cohort consists of a population who may well be rendered vulnerable by co-morbid mental health problems, who may have compounded any dependent or recreational use of typical amounts of psychoactive substances with additional ingestion related to either self-harming or concealment motives, and whose vulnerability may be further compounded by their encounter with the police. For this reason, the population can be classified as a highly vulnerable and at risk group whose health may deteriorate at any point during their stay in police custody, irrespective of how they may initially appear to the arresting officers.

So what can be done to address this issue?

As has been evidenced in the new-ADAM programme, drug use is highly prevalent among arrestees, including both dependent and recreational users, and the use of alcohol and illicit drugs has been identified as a major cause of death in police custody. According to the 1999 PCA report, 40% of

deaths in custody between 1994 and 1998 were attributed to drug or alcohol consumption (1999). For this reason, intoxication, withdrawal and drug swallowing are all significant risk factors for custody death that all arresting officers and custody suite staff must have at the forefront of their minds when assessing the risk associated with detainees.

While the 43 deaths reported on in this study are a tiny fraction of all the arrests and detentions in this period, many represent a potentially preventable tragedy which has huge ramifications not only for the individuals concerned and their families, but also for the individual officers who are subsequently investigated at great length and for the forces who must endure the resource, emotional and organisational costs as well as the adverse effects such deaths incur for confidence in policing.

The main domains of potential shift are:

1. Attitudinal/cultural
2. Training
3. Resourcing
4. Liaison with health professionals (particularly FME's)
5. Risk assessment and compliance with the Human Rights Act (1998).

While it is well documented that police officers frequently do not feel trained or equipped to deal with substance users (Havis and Best, 2003), the nature of policing necessitates that they do so. In undertaking this task, it is imperative that, regardless of their personal views, that the approach is always 'safety first'. Speculations that individuals may be feigning illness are not appropriate and a trained medical professional can only draw this inference after suitable assessment. This principle should also be applied in the initial handling of possible drug cases, and particularly where there is uncertainty about whether the individual should be taken to hospital or to the custody suite. Particularly in the event of overdose, the onset of the event can be almost immediate (in instances of pulmonary oedema or heart failure) or part of a gradual descent into respiratory depression. In the former cases, the rapid accessing of emergency services may well prevent death and in the latter, if not life saving, may significantly reduce the likelihood of long-term neuro-cognitive deficit.

A similar approach is required in the custody suite where the decision on whether and when to call the FME may also be crucial and, as evidenced in the case studies, the nature and frequency of checking and rousing may well have a significant impact on the likelihood of rapid diagnosis and intervention in the drug overdose. Opiate overdose, at the very least, is most sensibly regarded as a gradual descent that may be arrested by various forms of sensory stimulation, although most of these are likely to require some form of physical contact. It is not enough to call through the cell hatch and it is critical to point out that snoring is indicative of respiratory depression and may well represent an early stage in the overdose process.

However, for each of the above issues to be addressed requires not only an appropriate individual commitment on the part of arresting officers and custody officers, it also requires an organisational commitment beyond that evident in the cases presented here. While these cases may be atypical of the response to drug use, they would suggest clear training and awareness needs in both the diagnosis and response to possible substance misuse. In particular, this training must emphasise:

1. The need to treat suspected package swallowing as a medical emergency that requires urgent hospitalisation;
2. The training and willingness to provide resuscitation and other forms of emergency first aid, while awaiting the attendance of ambulance crews or FMEs; and
3. Significant increases in the understanding and awareness of dual diagnosis as a prevalent condition among both primary drug users and among those with primary mental health problems.

It is also important to note that these initiatives should not be left to police services alone but require improvements, both culturally and through training, in the medical support services available to assist police officers in making these complex decisions in circumstances that are not conducive to appropriate diagnosis or intervention, particularly by those with limited training and experience. In addition to the prescribing error that led to the single criminal case, the failure to attend of at least one FME is worrying. It is to be hoped that the limited training many FMEs have in the areas

of alcohol, drugs, mental health and dual diagnosis can be rectified, as well as the complex funding issues that render the availability of FMEs highly variable in some areas of England and Wales.

Another possible mechanism for managing this issue is through either more systematic screening of substance misuse problems by custody staff or the availability of trained custody nurses equipped to deal with substance misusing populations, as has been piloted in the Metropolitan Police Service. However, while desirable, the key issue is the rapid accessing of appropriate medical interventions both by ensuring that drug users are seen quickly by health professionals and by implementing a 'safety first' approach in accessing emergency services for those who are suspected to have overdosed or to have swallowed drugs for reasons of concealment.

The research evidence base on deaths in custody, specifically police-related deaths, is weak, particularly in the UK. Therefore, while the inferences that can be drawn from a sample of 43 cases are limited, reports such as this and the two previous PCA reports on deaths in police custody provide a vital link between the case studies and public enquiries that have followed individual deaths and helps to put into context the annual data produced by the Home Office on changes in rates and circumstances of deaths in custody.

Given that the Matrix MHA and Nacro (2003) summary for the Home Office reported that, from nine police custody sites, between 36 and 66% of drug tests of detainees were positive with one site reporting that 44% of those tested for opiates were positive and another that 32% of those tested for Cocaine were positive, illicit drug consumption is a significant issue for arresting officers and custody teams throughout England and Wales. However, within this population two groups are likely to be particularly susceptible to harm – those who have swallowed drug packages immediately prior to arrest and those who are rendered vulnerable by co-morbid mental health problems. If these groups are not successfully identified and subsequently managed, the national increases in drug availability and drug deaths will be mirrored by spiralling drug-related deaths in custody.

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