ABSTRACT

Background A recent report by the UK Drugs Policy Commission has highlighted the high levels of drug use in Britain and this has been interpreted as indicative of ineffective drug policies. However, the interpretation was based on sporadic self-report data and indirect extrapolation. This paper assesses trends in the prevalence and incidence of drug misuse in the UK from 1998 to 2005 as recorded in general practice.

Methods The study was a retrospective analysis of the General Practice Research Database. The study cohort comprised ~900 000 patients each year from 183 general practices.

Results Among the Government’s key target age group (16–24 years), there was a marked decrease in both prevalence and incidence of illicit drug misuse from 1998 to 2002 ($P < 0.01$). In older adults (25–59 years), the pattern was more variable during the first part of this period, but incidence remained stable from 2002 to 2005.

Conclusions These data indicate that the problematic drug use in the UK may be declining and that the policies may be more effective than has been previously thought. General Practice data are nonetheless only part of the picture in terms of understanding the prevalence of problematic drug use.

Keywords epidemiology, primary care, public health

Introduction

In 1998, the UK Government set out a 10-year Drug Strategy. This aimed to restrict the illicit drugs market and to protect families and communities from drug-related harm, focusing on enhancing treatment services, public information and community engagement. A key aim of the strategy was to ‘prevent young people from becoming drug misusers’. A 2007 review by the UK Drugs Policy Commission, which is an independent body for the objective analysis of policy relating to drug use, concluded that there is little evidence that policies designed to reduce the level of drug misuse have been effective. A recent study published by the Home Office, the government department responsible for drug policy, suggested that there were 327 000 problematic drug users in the UK. One of the Home Office study’s authors has stated that ‘on the basis of the long-term trend of problem drug use of the last 40 years, it is certainly not beyond the bounds of credibility that the number of problem drug users could increase 3-fold to the 1 million level by 2025’.

Although estimates of problematic drug use are episodic and based on indirect extrapolation, there is more direct evidence about drug use in the general population. The most comprehensive analysis is based on the British Crime Survey (BCS). The BCS is an analysis of the general population based on self-report of drug use. Although it is important to acknowledge that not all drug use recorded by the BCS is necessarily ‘problematic’, Government assessments of trends are based on the level of self-report of Class A drugs in the BCS (the vast majority of which is cocaine, ecstasy and hallucinogens but also including crack and heroin). BCS data for the general population aged 16–59 years indicate that, although Class A drug use increased overall from 2.9% in 1998 to 3.4% in 2005–06,
it has been stable from 2000 onwards. Among young people (age 16–24), Class A drug use in the last year has remained stable (≈8–9% of this age group having used such a drug in the previous year) since 2000.6

Another indicator of the level of drug use is the Drug Harm Index. The Government’s Drug Strategy, which ends in March 2008, is underpinned by a Public Service Agreement (PSA) target to ‘reduce the harm caused by illegal drugs’.7 The index was developed in order to assess the efficacy of the strategy in terms of this target, measuring the impact of illicit drug use on a number of crime and health indicators. It combines robust national estimates of these indicators into a single-figure time-series index. With a 1998 ‘baseline’ of 100, the index has shown a year-on-year decline between 2001 and 2005, falling from 120.8 to 83.8.8

The Home Office is responsible for both the BCS and the DHI. Data from the National Drug Treatment Monitoring System (NDTMS) indicate that the number of individuals in contact with drug treatment services increased by 89% from 1998 to 2004/05.9 The stabilization of rates of Class A drug use, combined with a decline in the harm caused by illegal drugs and an increase in the number of drug misusers receiving treatment, all suggest that PSA targets are on their way to being met. However, it is difficult to gauge whether actual trends in problematic drug use are stable, increasing or decreasing. Data from drug treatment services may be problematic as a guide to long-term trends, since they may reflect expansion in treatment provision rather than the actual number of cases. Continuous data collected from general practitioners may provide a more accurate estimate of the rate of drug misuse since the number of cases can be expressed as a proportion of registered patients. By definition, drug use recorded by a GP is likely to be problematic, and thus may give a clearer indication of long-term trends.

The General Practice Research Database (GPRD) has previously been used for analyzing trends in drug misuse.10 The GPRD is a national database with information on over 3 million patients in the UK and has been used in a range of epidemiological studies, including trends in asthma and allergic disease,11 and antibiotic prescription.12 Unlike data from specialist in drug treatment services, there are fewer problems in interpreting trends, because the base population is clearly specified as the number of registered patients at a given point in time. Approximately 95% of the UK population is registered with a general practitioner, and age and sex distributions of patients within the GPRD are similar to those reported by the National Population Census.13 Furthermore, the quality of GPRD data has been found to be satisfactory for clinical research, with validation studies reporting high levels of concordance between clinical and computer records.14,15 In the context of the present research, a validation study found that 92% of cases seen in specialist secondary care settings for drug dependence were known and recorded by their general practitioner to be drug dependent.16

The focus of this paper is to determine the prevalence of drug misuse recorded in general practice within the UK population aged 16–59, and the rate at which new cases occur each year. In the paper, we report 1998–2005 trend data for incidence and prevalence rates of drug misuse in primary care the UK. In line with the Government’s drug strategy, the focus of the analysis is the 16–24 age group, but for comparative purposes, we contrast them with those aged 25–34 and 35–59, these being the categories used in the BCS.

Methods
Sample
The data for this study come from the GPRD. The GPRD is owned by the Medicines and Healthcare Products Regulatory Agency (MHRA). The data were obtained by us under a license from the Medical Research Council. The study cohort comprises all patients aged 16–59 in 183 GPRD practices, with almost 1 million patients within each study year. These practices were selected from the database because they continuously submitted data from 1996 to 2005. The practices are drawn from the nine National Health Service (NHS) Regional Office areas for England, plus Scotland, Wales and Northern Ireland. Based on figures taken from the 2001 census published by the Office for National Statistics (ONS), the data represent ~2.3% of the UK population aged 16–59.

For this analysis, ‘drug misuse’ is defined as having a diagnosis of misuse or dependence, either through recorded GP consultation or referral, and/or a prescription for the treatment of dependence on illicit drugs. There are 241 diagnostic codes for drug misuse disorders and 12 codes for related prescriptions. These codes do not include alcohol or tobacco. An incident case was defined as one which occurs for the first time in a calendar year. Only cases with a minimum 1-year lookback period (i.e. those registered on the database for at least a year prior to their first drug misuse diagnosis) were included in the analysis of incidence. The lookback period was applied to all incident cases from 1996 onwards. This was to ensure that a measure of genuinely new cases was obtained and not simply existing cases registering onto the database for the first time. The average
period of registration for incident cases increased from 10.3 years in 1996 to 12.6 years in 2005. A prevalent case was defined as any case with a diagnosis or treatment in a calendar year; they may also have appeared as a case in a previous year.

**Analysis**

The denominators used to calculate substance abuse rates in the general population were Patients’ Years of Exposure (PYE). As the length of exposure on the database varies from patient to patient (e.g., some patients may only be registered on the database for a few weeks, whereas others may be registered for several years), it is more appropriate to use PYE than simply the number of patients. A patient who registered on 1 January 1996 and left the database on 1 January 1997 would have a value of one person year, whereas a patient who registered on 1 January 1996 and left on 1 July 1996 would have a value of 0.5 person years (i.e., 6 months of exposure). Incidence and prevalence rates were calculated by dividing the number of cases by the appropriate PYE (denominator) for that year. Linear trend test was used to examine the time intervals from (i) 1998–2002 and (ii) 2002–2005. From 1998 and 2002 relate to the launch and update of the Government’s drug strategy.

**Results**

**Drug misuse prevalence**

All proportions and differences stated are per 100 000 PYE. Fig. 1 illustrates the trends in prevalence stratified by age group. There was an overall decline in those aged 16–24 during the observation period 1998–2002, with a consistent downward trend since 1998 ($\chi^2 = 34.09$, df = 1, $P < 0.01$). There were significant increases overall during the observation period for those aged 25–34 ($\chi^2 = 10.83$, df = 1, $P < 0.01$) and 35–59 ($\chi^2 = 39.90$, df = 1, $P < 0.01$).

From 2002 to 2005, there was a continuing significant decline among those aged 16–24 ($\chi^2 = 51.04$, df = 1, $P < 0.01$); no change for those aged 25–34 ($\chi^2 = 2.74$, df = 1, $P > 0.05$); and a significant increase for those age 35–59 ($\chi^2 = 2.06$, df = 1, $P < 0.05$). Translating the prevalence rates into estimated numbers for the UK population aged 16–59, this would indicate that in 2005 there were ~90 460 drug misusers aged 16–59 in contact with their GP compared with 102 810 in 2002.

**Drug misuse incidence**

Fig. 2 illustrates the trends in incidence stratified by age group. During the observation period 1998–2002, there was a significant decline for those aged 16–24 ($\chi^2 = 6.87$, df = 1, $P < 0.01$), with a consistent downward trend since 1998; no change for those aged 25–34 ($\chi^2 = 2.32$, df = 1, $P > 0.05$); and a significant increase for those age 35–59 ($\chi^2 = 9.71$, df = 1, $P < 0.01$).

From 2002 to 2005, there was a continuing significant decline for those aged 16–24 ($\chi^2 = 9.98$, df = 1, $P < 0.01$); and no change for those aged 25–34 ($\chi^2 = 1.87$, df = 1, $P > 0.05$) and 35–59 ($\chi^2 = 1.29$, df = 1, $P > 0.05$).

In conclusion, 16–24 year olds showed marked declines in both the prevalence of existing drug misuse cases and the incidence of new cases over the period 1998–2005. Between 1998 and 2002, incidence and prevalence decreased in 16–24 year olds; whereas they generally increased or stayed the same during this period in the older age groups. From 2002 to 2005, incidence and prevalence decreased in 16–24 year olds and either increased or stayed the same in the older groups. Changes in rates are summarized in Table 1.
Discussion

Main findings

The most notable findings of the present study concern the 16–24 age group, which showed marked declines in both the prevalence and incidence of drug misuse over the 1998–2005 study period. From 2002 to 2005 incidence either declined or stayed the same for all age groups, indicating an overall reduction in the number of new drug misuse cases among the population aged 16–59. Although the UK Drugs Policy Commission have implied that drug policies have been ineffective,2 the present data seem to suggest that fewer young people are becoming drug misusers.

What is known already

The scale of problematic drug use in the UK has generated controversy and conflicting evidence. While a recent Home Office study3 implied that problem drug use has been increasing and is likely to continue to do so, more direct evidence from the BCS6 and the Drug Harm Index8 suggest that the levels are actually stabilizing or even falling.

What this study adds

The current study is the first to use longitudinal data collected from general practice to assess trends in drug misuse in the UK. Given that 95% of the population is registered with a general practitioner, the cohort captured by the GPRD may be regarded as broadly representative of the general UK population. The results indicate a significant reduction in the rate of young people consulting their GP for drug misuse. Whether this reflects a genuine reduction in the level of problematic drug use in the UK wider community is harder to assess. However, as well as the GPRD, examination of other data sources suggests a stabilization or decline in drug misuse among young people. Despite this, annual spending on drug treatment services continues to increase and is currently over £500 million per annum.18

Policy makers need to be aware of the trends in order to make informed decisions regarding drug policies.

Limitations of this study

Although the GPRD can provide reasonable epidemiological measures of trends in diseases seen and treated by general practitioners,11 trends in illicit drug misuse may be influenced by other factors.

First, there may be a problem with defining incident cases in general practice in that their previous consultation behaviour is not known. However, we have specifically addressed this in our study by showing that incident cases have an average of 10–12 years of previous consultation data available throughout the study period. Secondly, there is treatment provision; part of the drug strategy was to encourage the use of drug treatment services, namely structured community-based services, or residential and inpatient services. Data from the NDTMS9 indicate that the number of individuals in contact with drug treatment services increased by 89% from 1998 to 2004/05. It is possible therefore that declining incidence and prevalence over this period may reflect drug misuse cases receiving treatment elsewhere than their GP, their GP not being informed by other agencies or not otherwise consulting their GP about the problem. It should also be noted that the GP enhanced service contracts provided an ‘opt-out’ clause to GP practices not to be involved in the treatment of drug dependence. This might contribute to the relative reduction in new cases amongst the 16–24 years.19

One way to clarify this is to examine trends in referral sources to drug treatment services over the study period. Between 2001/02 and 2004/05, the proportion of referrals from GPs remained broadly similar in the extent of their referrals over the study period.5 Thus, while the actual number of individuals receiving the treatment for drug misuse has increased substantially, the relative consistency in referrals from GPs suggests that the role of General Practice has remained similar throughout the observation period data.

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Table 1. Changes in the prevalence and incidence of illicit drug misuse cases from 1998–2002 and 2002–2005 (P-values in parentheses)

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<tr>
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<th>Prevalence</th>
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<td>16-24</td>
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<td>1998-2002</td>
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<td>2002-2005</td>
<td>↓ (P &lt; 0.01)</td>
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Taking account of all these factors, the analysis reported here supports the tentative hypothesis that problematic drug use in the UK is decreasing but whether general practice data are a good measure of problematic drug use remains an unresolved issue within drug use epidemiology.

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References