Is Estimating the Prevalence of Problem Drug Misuse Possible at a Small Local Level in Scotland?

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Based on a report by
Centre for Drug Misuse Research, University of Glasgow:
"Estimating the National and Local Prevalence of Problem Drug Misuse in Scotland"

Purpose

Following publication of the 2000 National Prevalence Study, several DATs indicated that prevalence information at the small local level would be useful in supporting the better planning of local service provision. A project was, therefore, undertaken to test the feasibility of providing such small local level information. This sought to:

a) consider appropriate administrative groupings for small area prevalence estimation
b) develop a robust method for translating the chosen administrative aggregation into clearly defined geographic areas
c) explore whether local prevalence estimates could be produced at a small local level within two NHS board areas.

The findings of this project, presented here, were used to inform the 2003 National Prevalence Study.

Background

The first national study of the prevalence of problematic drug use in Scotland was commissioned by the Scottish Executive in 2000, and conducted by the Centre for Drug Misuse Research at the University of Glasgow in collaboration with the Scottish Centre for Infection and Environmental Health. Using the methodology known as capture-recapture, prevalence estimates were produced for opiate and / or benzodiazepine use at the levels of National Health Service (NHS) Boards (n=15), Drug Action Teams (DATs) (n=22), Police Force areas (n=8) Council areas (n=32), and for injecting, at NHS Board level.

In total it was estimated that there were 55,800 problem drug users in Scotland in 2000; this estimate converts to two per cent of the population aged between 15 and 54. There were differences in the estimated prevalence of problem drug between the DAT areas, with the Aberdeen City, Argyll & Clyde, Dundee City, Edinburgh City and Greater Glasgow experiencing greater levels of problem drug use. The study was not, however, designed to provide estimates of variation within individual areas.

Methods

Local Health Care Co-operatives (LHCCs) and Social Inclusion Partnership areas were considered as possible administrative groupings. The majority of SIPs are defined geographically. However, LHCCs are operational units responsible for managing and delivering integrated primary health care for a locality. The structure of LHCCs allows groups of GPs to develop extended primary care which encompasses district nurses, health visitors, midwives, community psychiatric nurses and professions allied to medicine within a multi-practice framework. In order to provide prevalence estimation for LHCCs areas it was necessary to convert these administrative groupings into geographically defined areas.

An anonymised extract from the Community Health Index (CHI) was used to examine the postcode sector of residence of the patients of each GP within an LHCC. From the patient CHI profile, LHCC areas were defined by where the majority of the patients in an area attended one of the GPs who had come together to form the LHCC. For example, 69 per cent of the population within the TD13.5 postcode sector are patients of a GP within the East Lothian LHCC; therefore the whole of this postcode sector was assigned to that LHCC area. This method was applied to allocate all postcode districts (n=443) and sectors (n=950) to LHCCs across Scotland. This created a map of LHCCs as groups of coterminous postcode districts and sectors. NHS Board areas (n=15) and Council areas (n=32) were mapped in a similar way from population estimates at the postcode sector and district level.

Capture-recapture techniques were tested to estimate small local area prevalence in two NHS board areas. Three data sources from the 2000 National Prevalence Study were used in the capture-recapture models: Scottish Drug Misuse Database (SDMD), police records and criminal justice information from social work departments. The two pilot NHS board areas contained 13 LHCCs and two SIPs.

Results

This study was able to create both postcode sector and postcode district maps at the levels of LHCCs, NHS boards and council areas. Capture-recapture estimates were successfully produced for the majority of the LHCCs (12 out of 13) and for both SIPs. It was found that there were marked variations in the estimated prevalence of problem drug use across the two NHS board areas. This observation reinforces the importance of providing prevalence estimates at the small area level. Knowledge of small local area prevalence allows the DATs and other service providers (e.g. health, social work and voluntary sector services) to ensure that appropriate agencies are located in the areas of greatest need.

Recommendations

Future national prevalence studies should include estimation of problem drug misuse at a small local level, where feasible.