deaths and cancer registrations. Hence, calculation of death rates and cancer registration rates for the populations registered with primary care groups will be difficult with currently available data. Some health authorities have tried to derive death rates for their general practice populations by using locally available information. This can, however, create discrepancies with rates derived from the national data held by the Office for National Statistics, which has very specific rules for coding the underlying cause of death from the causes given on a death certificate.

Difficulty in attributing data to practices

Even when data are available at general practice level they can be difficult to attribute to general practices because of inaccurate coding or because the patient has changed general practice since the general practice code on the record was completed. This applies particularly to hospital admissions data and hospital referral data.[3] Further problems arise when general practices located in one health authority have a substantial proportion of their patients living in another authority. Because of limitations in the way that information on hospital admissions is sent to health authorities complete admissions data are often unavailable for practices that are located on health authority boundaries. Many such practices therefore often have artificially low referral and admission rates.

Problems in setting primary care group budgets

Budgets will initially be based on the current use of services. As Gilley states, however, use of current practice based data to determine the existing level of services used by the population of each primary care group will be imprecise. Hence, setting the budgets will be a difficult task and may lead to arguments between groups in the same authority, particularly when there are wide variations in the use of resources. Ultimately, groups will move from this method of funding, based on the current use of services, to one based on a needs based formula. But this "needs based" method of funding groups also suffers from a number of problems.

The white paper stated that, "There will be a national formula to set fair shares for the new primary care groups as there is now for health authorities."[1] Several technical problems have to be overcome, however, before this objective can be achieved. The current formula for setting health authority budgets for hospital and community health services includes weightings for total population, age, mortality, and socioeconomic status. If a similar formula is to be used for primary care groups Gilley is correct in saying that the most important issue to be dealt with is what population base should be used in the formula. If general practice list sizes are used without any adjustment for list inflation this will lead to resources being moved from areas with low list inflation to areas with high list inflation. In the longer term the department of health would like to move towards using general practice lists as the population base for resource allocation despite the current limitations of these lists.

The next issue that needs to be covered is how mortality and socioeconomic data can be included in the formula for setting the budgets of these groups. As death rates are not routinely calculated for general practices one method of deriving these rates would simply be to attribute the mortality for the locality covered by a primary care group to that group. Because the populations of primary care groups will inevitably overlap, however, this will introduce errors into mortality attributed to the groups.

Estimated socioeconomic variables for use in the resource allocation formula for primary care groups can be produced for general practices by linking patients' postcodes with census data for enumeration districts.[4] As with attributed mortality data, however, these census derived variables will also contain errors. The size of the errors in attributed mortality and census data and their likely effect on funding are all currently unknown.

Conclusion

Although it will be important for NHS information systems to produce accurate and useful information for primary care groups, technical problems will make it difficult to achieve this objective given the current arrangements for collecting and analysing health related information. Similarly, technical problems may also make it difficult to develop and implement a valid formula for determining the budgets of primary care groups. Gilley also discusses some other problems that could hinder the work of primary care groups. These include the level of payments for general practitioners who sit on primary care group boards and the costs of meeting the proposed future developments in information technology. A wide debate about these problems, what effect they might have on primary care, and how they can be overcome is needed to ensure that primary care groups can be funded fairly and carry out their functions effectively after they come into existence in April 1999.

1 Secretary of State for Health. *The new NHS*. London: Stationery Office, 1997. (Cm 3807.)
2 NHS Executive. *The NHS modern and dependable: a national framework for assessing performance*. Leeds: NHS Executive, 1998.
3 Majeed A. Hospital admissions data: why are they collected? *Clin Manage* 1998;7:160-6.
4 Majeed FA, Cook DG, Poloniecki J, Griffiths J, Stones C. Socio-demographic variables for general practices: use of census data. *BMJ* 1995;310:1373-4.

Corrections

Obituary
Dr Monica Fisher (28 November, p 1529-30) left Oxford in 1960 to join her husband, Professor R B Fisher, who became dean of the medical school in Edinburgh. We said that she moved to Oxford.

Safer non-cardiac surgery for patients with coronary artery disease
In this editorial by Sonksen and colleagues (21 November, pp 1400-1) the third author's name and affiliation should have been given as Peter Hutton, Hickman professor of anaesthesia.

Community survey of factors associated with consultation for low back pain
In this general practice paper by Waxman and colleagues (5 December, pp 1564-1567) the contributors section should have included an acknowledgment of the valuable help of Dr Dee Kyle, director of public health, and her staff at Bradford Health Authority.