

PERSONAL VIEW

Equity and community child health

Richard Reading

Paediatricians have always played a leading part in ensuring that local child health services are of the best possible quality and are most suited to the needs of the local population. Three important dimensions of the quality of health services are that they should be effective and that they should be delivered efficiently and equitably.^{1,2} These three dimensions apply to the child health services as to any other.³ An effective service is one that achieves the greatest improvement in health outcome, whereas an efficient service is one that provides the most effective services for a given input of resources (that is, money and staff). The recent health service reforms^{4,5} attempt to address the two former dimensions. Whether or not they have led to any improvements in efficiency and effectiveness is under debate,^{6,7} but the drive to improve efficiency combined with the relative paucity of measures to improve equity in the reforms may result in a widening of inequities. Efficiency and equity are not always compatible and in some circumstances one may need to be traded off against the other.²

The purpose of this paper is to discuss the concept of equity in relation to community child health services, why those of us responsible for providing these services are in a position to ensure equitable provisions, and how this may be achieved.

What is equity?

Equity embodies the idea of 'fairness'. It means fair treatment regardless of social circumstances, area of residence, race, creed, sex, or any other distinguishing feature.^{8,9} It is thus, at least in part, a moral property. This is where it differs from the concept of equality, which is mathematically definable.

Two types of equity are recognised.^{2,8,9} Horizontal equity means equal treatment is provided for equal need. An example of this would be that each child with appendicitis receives an appendicectomy. Vertical equity means appropriately unequal treatment for unequal needs – for example, a child with appendicitis receives a greater input of medical resources (an appendicectomy) than a child with non-specific and self limiting abdominal pain (reassurance and discharge home).

The concept of vertical equity presupposes that there is some way of comparing different types of needs, because if resources are limited, as they inevitably are, vertical equity requires that the point at which resources run out is at an equivalent level of need even though the actual

needs are different. To give a hypothetical example, assume that speech therapy services are available only for children with greater than two years of language delay relative to their chronological age. An equivalent level of need for physiotherapy might be judged to be a child not walking by 3 years of age. Horizontal equity requires all children with greater than two years of language delay to be receiving speech therapy; vertical equity requires that if speech therapy could only be provided for children with greater than two years language delay, then only children over 3 years of age and not walking would receive physiotherapy.

It is apparent, from the triteness of these examples, that equity is a complicated notion to conceptualise, let alone measure. Nevertheless, examples of inequity abound; for instance, poorer access to health care in some inner cities and in rural communities, differences in the use of child health services by families from different ethnic backgrounds, lower immunisation rates in children from deprived, homeless, and travelling families, and social class differences in preventable conditions such as childhood accidents. These examples also illustrate that equity may be considered in terms of provision of services, access to services, use of services, or outcome.⁹

Should community paediatricians have a role in improving equity?

The recent reforms to the way the health services are managed are intended to produce a service which is more efficient by separating the purchaser from the provider of services, by the introduction of competition between providing units, and by the devolution of management decisions to provider units and to primary health care practices. A controversial aspect of these reforms is the promotion of fundholding practices because, by being able to contract directly for specialist services, there is the possibility of the development of preferential treatment for patients in these practices.¹⁰ This is not the only potential source of inequity arising from the reforms, however; for example, the emphasis on targets for preventive activities has been claimed to result in practices serving deprived areas being less concerned about immunisation in the realisation that they are unlikely to achieve levels of coverage which will lead to remuneration.^{11,12}

In theory, the purchasing authority should counter some of the inbuilt inequity inherent in a market system. The responsibility of ensuring

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equity in community child health, however, does not lie solely with the purchaser for the following reasons.

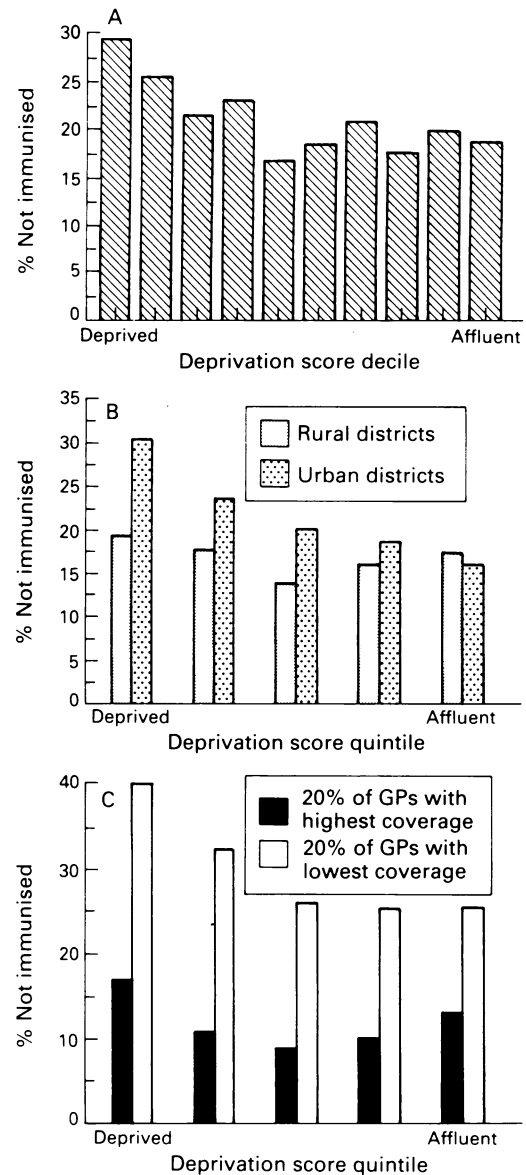
Firstly, as noted earlier, services provided by primary health care are potentially inequitable and many community child health services, especially to preschool children, are delivered by primary health care. Secondly, social disparities strongly influence the uptake of child health services and the state of child health. These disparities fuel inequality. Attempts to counter these inequalities are dependent on the efforts of those working in the community, and this includes those working in community child health. Thirdly, community paediatricians and public health doctors share an interface¹³ such that the two groups have a responsibility for providing health care for the whole population of children rather than simply for selected groups of patients. To discharge this responsibility community paediatricians are trained in the epidemiological principles underlying their work. Finally, the purchaser/provider split will never be complete. Purchasers require detailed advice on the specifications of what to purchase and providers, especially community child health departments, are in a good position to monitor the provision and uptake of these services.

These arguments may not be accepted by all community paediatricians, but those that are sympathetic to these views will want to understand more about what equity is, how to measure it, and what we need to do to improve equity in the delivery of child health services.

How can community paediatricians contribute to improving equity?

Community paediatricians can help to improve vertical and horizontal equity. Concerning vertical equity, resources need to be distributed on the basis of need. It is often claimed that one group of clients of the community child health services – children with disabilities and their families – have for long received less than their fair share of available health resources. Ensuring vertical equity is not simply a matter of pointing out the imbalance between the acute and community health services, however; within our service there may be inequity. For example, can we justify the relatively high level of expense on doctors in school health, while the medical needs of many disabled children and young adults are not attended to,¹⁴ although many of the tasks of the school doctors can be as effectively performed by nurses.¹⁵ Clearly much work needs to be done, not only on how to distribute resources equitably between patient groups with different needs, but also on which child health services are effective and how to deliver these in an efficient manner.

Perhaps of more interest and relevance is how to improve horizontal equity, not only because it is an easier concept to grasp, but also because it relates to the current interest in social and geographical inequalities in health.^{16,17} Although it may be beyond the capability of the health services to reduce social inequalities in measures such as height, mortality, and low birth weight,



Proportions of 15 month old children not immunised against pertussis by Townsend deprivation score of enumeration district. (A) All enumeration districts divided into deciles. (B) Rural and urban districts. (C) General practitioners (GPs) with highest and lowest coverage.

it should certainly be within our reach to reduce social inequalities in the uptake of services such as immunisation and child health surveillance (in other words, to improve horizontal equity in these activities). Of all groups within the health service, community paediatricians, with our epidemiological skills, our access to district wide child health information, and our responsibility for the provision of these services to a defined population, are best placed to monitor how equitably the services are being provided and to influence changes in the service designed to ensure greater equity.

An example of how horizontal equity may be monitored is shown in the figure. This shows the proportion of 15 month old children born between 1985 and 1989 in the county of Northumberland who were not fully immunised against pertussis. Social inequalities in coverage are shown by dividing the cases according to the Townsend material deprivation index¹⁸ of their enumeration district of residence. As this figure

is shown only to demonstrate how equity may be monitored, a full description of the methods is not given here but they are described elsewhere.¹⁹ Although pertussis immunisation is shown, similar results were found for the coverage of other childhood immunisations and of child health screening activities.

The top graph shows the extent of social inequality in coverage across the whole county from the most deprived 10% of areas to the most affluent. Coverage ranged from 70% in the deprived areas to between 80 and 85% in the more affluent areas. The analysis shown in the lower two parts of the figure demonstrates where attention needs to be directed to reduce these inequalities. The middle graph divides areas at equivalent levels of deprivation into urban and rural, and shows that almost all of the inequalities were found in the urban area. The bottom graph shows social inequalities in coverage by general practice. Practices were divided into five quintiles according to their overall immunisation coverage rate, from the 20% of practices with the poorest overall coverage to the 20% of practices with the best coverage. For simplicity only the two extreme quintiles are shown in the graph – that is, those with the poorest overall coverage and those with the best. It can be seen that social inequalities are much more evident in the practices with poorer overall coverage.

Although these analyses only describe patterns of inequality and do not suggest how to improve equity, they indicate that in Northumberland it is in urban areas and among practices with poor overall coverage where most improvements are needed, and they suggest that, somehow, in rural areas and in practices with high overall coverage, child health services are being delivered in a way which is inherently more equitable.

It is not that simple, however. Mooney^{9,20} has described several different definitions of equity, two of which (equality of access to health care for equal need and equality of use of health care for equal need) are pertinent to this argument. On the one hand, are social inequalities in immunisation the results of poor families not having equal access to health care? Access is not simply a matter of how near the local health centre is, it also includes issues such as the financial penalty of taking time off from low paid work to seek health care, which is much less of a problem in professional or salaried jobs.^{21,22}

Alternatively, are social inequalities in immunisation more to do with differences in the way that people use the health services? There is some evidence that the importance of health care is viewed differently within different social classes.²¹ Hence even if complete equality of access was ensured, there might still be a lower uptake of immunisation (or use of the services) in poorer families because preventive health care is not accorded the same value or importance.

These are important questions because they imply that for us to improve horizontal equity in the delivery and uptake of our services, not only do we have to work towards improving access, but we also need to try and increase the value that poorer families place on comprehensive preventive child health care. Access to child health

services may be increased by making facilities physically more accessible to families in deprived areas, having greater consideration for the problems of low income families in obtaining health care for themselves and their children, and delivering services at times and in places which are convenient for families with single or unemployed parents, or who are socially disadvantaged in other ways. Increasing the value of preventive health care calls for appropriate health information and a greater understanding of the priorities, and the reasons for those priorities, of families who currently have a poor uptake of child health services.

Whether it is believed that more emphasis should be placed on equalising access or on improving the use of services by the poor depends in part on whether a materialist view of health inequalities is held, in other words that poor health is determined by the health risks of poverty, or a behavioural view in which poor health is thought to be the result of behaviour and attitudes.¹⁶ Although the two explanations probably contribute, there is a risk of putting the blame for poor health on the shoulders of the poor and not appreciating the difficulties they face in ensuring good health for themselves and their families in the face of financial, environmental, and social pressures over which they have little influence.²³

Conclusions

Equity in health care is one of the founding principles of the NHS and it remains a priority of the general public. The new health service reforms are designed to improve efficiency but, by introducing market values, they threaten the principle of equity. Equity is a complicated concept that needs to be understood by those responsible for purchasing and providing health services. Community paediatricians are in a unique position to monitor and improve equity in the provision of child health services and we should perhaps accept this as one of our duties.

To carry out these functions community paediatricians need an understanding of the ways of comparing the needs of children with different type of problems; we need an understanding of the causes and extent of social and geographic inequalities in child health and ways of monitoring these; we need to plan child health services in the context of ensuring equity of provision; and we need to be aware that equalising the access to child health services for poorer families is a far ranging task that may ultimately require major social changes towards a more egalitarian society.

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- 1 Cochrane AL. *Effectiveness and efficiency: random reflections on the health service*. London: Nuffield Provincial Hospitals Trust, 1972.
- 2 Culyer AJ. The promise of a reformed NHS: an economist's angle. *BMJ* 1991; **302**: 1253–6.
- 3 Allsop M, Colver AF, McKinley I. *Measurement of child health: report of a working party of the executive committee of the Community Paediatric Group*. London: British Paediatric Association, 1989.

- 4 Health Departments of Great Britain. *General practice in the National Health Service: the 1990 contract*. London: Health Departments of Great Britain, 1989.
- 5 Secretaries of State for Health, Wales, Northern Ireland and Scotland. *Working for patients*. London: HMSO, 1989. (Cmnd 555.)
- 6 National Health Service Management Executive. *The NHS reforms, the first six months*. London: National Health Service Management Executive, 1992.
- 7 Radical Statistics Health Group. NHS reforms: the first six months – proof of progress or a statistical smokescreen? *BMJ* 1992; 304: 705–9.
- 8 West PA. Theoretical and practical equity in the National Health Service in England. *Soc Sci Med* 1981; 15(C): 117–22.
- 9 Mooney G. What does equity in health mean? *World Health Stat Q* 1987; 40: 296–303.
- 10 Drummond M, Crump B, Hawkes R, Marchment M. General practice fund holding. *BMJ* 1990; 301: 1288–9.
- 11 Gaze H. FPC defies government over screening targets. *Health Service Journal* 1990; 100: 682.
- 12 Jones K, Moon G. Multilevel assessment of immunisation uptake as a performance measure in general practice. *BMJ* 1991; 303: 28–31.
- 13 Joint Working Party of the Faculty of Public Health Medicine and British Paediatric Association. *Working together for tomorrow's children: the interface between the work of consultant paediatricians (community child health) and public health physicians*. London: BPA, 1990.
- 14 Bax MCO, Smyth DPL, Thomas AP. Health care of physically handicapped young adults. *BMJ* 1988; 296: 1153–5.
- 15 Houghton A, Egan S, Archinal G, Bradley D, Azam N. Selective medical examination at school entry: should we do it, and if so how? *J Public Health Med* 1992; 14: 111–6.
- 16 Department of Health and Social Security. *Inequalities in health: report of a research working group*. London: DHSS, 1980. (Black report.)
- 17 Davey Smith G, Bartley M, Blane D. The Black report on socioeconomic inequalities in health 10 years on. *BMJ* 1990; 301: 373–7.
- 18 Townsend P, Phillimore P, Beattie A. *Health and deprivation: inequality and the north*. London: Croom Helm, 1988.
- 19 Reading R, Jarvis S, Openshaw S. Measurement of social inequalities in health and use of health services among children in Northumberland. *Arch Dis Child* 1993; 68: 626–31.
- 20 Mooney GH. Equity in health care: confronting the confusion. *Effective Health Care* 1983; 1: 179–84.
- 21 Le Grand J. The distribution of public expenditure: the case of health care. *Economica* 1978; 45: 125–42.
- 22 Le Grand J. *The strategy of equality: redistribution and the social services*. London: Allen and Unwin, 1982.
- 23 Graham H. *Women, health and the family*. Brighton: Wheatsheaf Press, 1984.

Commentary

As a moral concept equity embodies ideas of fairness as justice.¹ As a word it is related to the morally neutral idea of equality, and most attempts to assess equity begin in a search for inequalities. Inequalities are not necessarily inequitable, and the definition of equity will vary with cultural values. Since 1948 British health and social services have been seen in part as instruments of social equity, but the last decade has imposed significant changes on the cultural assumptions underlying their design and operation. It is timely to examine the concept of equity to which health professionals should be working.

Equity transcends specialty frontiers. In restricting examples of 'vertical' equality to the field of paediatrics, Reading avoids the issues of assessing equity in the total social context.² The community paediatrician will not necessarily solve problems of equity by improving the take up of vaccination if this is achieved at the expense of services for stroke patients. Technical and ethical problems in the equitable commensuration of the wellbeing of different individuals have yet to be satisfactorily resolved.^{3,4}

Inequities may be detected in inequalities in service provision, access, use, and outcome. Inequalities of provision must be evaluated in their relation to inequalities in need, bearing in mind that if services are effective they should in time remove the needs they address. The concept of need raises its own problems of definition⁵

but is nowadays seen primarily as a measure of ability to benefit; it seems poor logic to define people as being in need of something that would do them no good if they obtained it. We know little about the parameters of effectiveness of most of the services that health and local authorities offer and the public expect. How much does a 15% difference in pertussis vaccination actually matter? What are the opportunity costs of correcting it? One of the problems for the Black report was the lack of sufficient evidence that the interventions it proposed would actually work.⁶ An unexpected benefit of inadequate resources may be a new paradigm for research by making it ethical to carry out randomised controlled trials of withholding interventions.⁷

Reading exemplifies concern about equity in the ability of fundholding general practitioners to enable their patients to jump queues²; we might fear more the incentive in fundholding for general practitioners to prevent the access of their patients to expensive forms of secondary care. Any effects of this will fall most heavily on the less educated and less demanding classes. Personal opportunity costs will also contribute to differential use of services and raise what may be a crucial dimension to the contemporary concept of equity, that of perceived desert. The opportunity costs of a bus fare and of a missed episode of 'Neighbours' may be large and equivalent to an indigent mother who decides for one reason or the other not to take her child to an immunisation clinic; they may not be seen as equivalent by the providers and purchasers of immunisation services, nor by the majority of middle class taxpayers who fund them. When Reading² writes of 'increasing the value that poorer families place on comprehensive preventive health care' he is working to a traditional model. Is it still the public view that the state has a right and duty to protect children against the cultural values of their parents? Where do we now stand in the general case about freedom of choice and multicultural autonomy if they cause inequalities? In an affluent and civilised nation the major preventable factors in illness lie with lifestyle and personal choice. The 'new order' of the 1980s began from the notion of personal responsibility 'rolling back' a paternalistic state. Personal responsibility and choice may have little meaning for the poor (who are still with us) but does equity require that they alone remain wards of the state?

In a democracy the public must accept ultimate responsibility for the equity of its institutions and so we must divine what the public expects of its servants in the health and social services. Presumably the result of the last general election implies public acceptance of the market ethos claimed to underlie the new NHS. In a perfect market 'good consumers'⁸ with money, choice, and knowledge can obtain at efficient cost the services they demand, and these will be, by implication, the services they deserve. Moreover, the tradesman's principle of 'caveat emptor' removes moral responsibility from those who furnish, whether as 'providers' or 'purchasers', poor quality services. Unfortunately for the consumers of British health services, they are not the emptors of the idealised