fact that the drug and device must be considered as a single entity. Such an approach should lead to the more effective and safe use of inhaled drugs and to more realistic estimates of the relative cost effectiveness of different treatments.

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1 International consensus report on the diagnosis and management of asthma. *Clin Exp Allergy* 1992;22:S1-72.
2 Guidelines on the management of asthma. *Thorax* 1993;48:S1-24.
3 Borgström L, Derom E, Ståhl E, Wåhlin-Boll E, Pauwels R. The inhalation device influences lung deposition and bronchodilating effect of terbutaline. *Am J Respir Crit Care Med* 1996;153:1636-40.
4 Agertoft L, Pedersen S. Importance of the inhalation device on the effect of budesonide. *Arch Dis Child* 1993;69:130-3.
5 Thorsson L, Edsbäcker S, Conradson T-B. Lung deposition of budesonide from Turbohaler is twice that from pressurized metered dose inhaler P-MDI. *Eur Respir J* 1994;7:1839-44.
6 Olsson B. Aerosol particle generation from dry powder inhalers: can they equal pressurized metered dose inhalers? *J Aer Med* 1995;8(suppl 3):13-9.
7 Borgström L, Newman S. Total and regional lung deposition of terbutaline sulphate inhaled via a pressurized MDI or via Turbohaler. *Int J Pharm* 1993;97:47.
8 Bisgaard H, Berg E, Madsen J. Dose delivery and fine particle dose of aerosol from three spacers intended for asthma treatment in young children [abstract]. *Eur Respir J* 1996;9(suppl 23):431.
9 Bisgaard H, Anhøj J, Klug B, Berg E. A non-electrostatic spacer for aerosol delivery. *Arch Dis Child* 1995;73:226-30.
10 Persson G, Wirén JE. The bronchodilator response from inhaled terbutaline is influenced by the mass of small particles: a study on a dry powder inhaler (Turbohaler). *Eur Respir J* 1989;2:253-6.
11 Yuksel B, Greenough A, Maconochie I. Effective bronchodilator treatment by a simple device for wheezy premature infants. *Arch Dis Child* 1990;5:782-5.
12 O'Callaghan C, Milner AD, Swarbrick A. Spacer device with face mask attachment for giving bronchodilator to infants with asthma. *BMJ* 1989;298:160-1.
13 Bisgaard H. A metal aerosol holding chamber devised for young children with asthma. *Eur Respir J* 1995;8:856-60.
14 Lipworth BJ. New perspectives on inhaled drug delivery and systemic bioactivity. *Thorax* 1995;50:105-10.

Cancer registration: integrate or disintegrate?

A national body is needed to ensure quality and comparability

Cancer registration in England is under serious threat. For more than 20 years cancer registries were the responsibility of the regional health authorities, which have now been abolished. Although a new organisational structure and new funding mechanisms were supposed to have been in place in April 1996, much is still undecided. The likely path to be followed is devolution of funding and contractual responsibility to lead purchasers. Such devolution accords with the ideological framework of the changes taking place throughout the NHS, but it sits uneasily with the need for a national system of uniformly acceptable quality.

The many reasons why a national system is required are well known and need little elaboration. In the context of the *Health of the Nation* targets[1] and the implementation of the report of the Expert Advisory Group on Cancer Services,[2] however, we would underline the essential role of cancer registration in the monitoring of screening programmes, in evaluating survival from cancer on a population basis, and in assessing the extent to which research results giving rise to improvements in treatment feed through to general clinical practice. A national system, based on regional registries, would provide both local information and overall national comparability.

The performance of the cancer registries under the regional health authorities was uneven. In some regions quality compared well with the best registries overseas, this being achieved usually by direct involvement of the local research and clinical community. In other regions, however, in the 1970s and through much of the 1980s, quality fell well short of acceptable levels in accuracy, timeliness, and completeness. In some areas—for example, the former North East Thames region—registration virtually ceased for a number of years, and in others the abandonment of cancer registration was being seriously considered. The principal reason for this unevenness is clear. There was no national focus of responsibility to ensure that standards were maintained or that regional funding was adequate. Regional managers often had no interest in their registry and regarded it as a soft target for budgetary pruning. Several registries are still seriously underfunded.

Recent years, however, have seen some notable improvements. The UK Association of Cancer Registries, to which all regional registries belong, has achieved much in the past three and a half years in harmonising procedures (the fine print on which comparability depends) and developing a unified approach to training and information technology. The Department of Health established a national steering committee for cancer registration which has been responsible for defining a core dataset which all registries should collect. It also developed a national core contract which should be obligatory for lead purchasers to include in their arrangements for purchasing cancer registration. This core contract lays down standards for completeness, accuracy, and timeliness in the collection of the minimum dataset. These standards, initially rather lax to accommodate the variations in achievement, should become more stringent over time, rising to a level which, if achieved, would represent a notable improvement in the overall quality of registration nationwide.

The problem is that there is great uncertainty about how, or even whether, this is going to happen. There is a dangerous possibility that the advances made by the steering committee and the UK association will be lost because of fragmentation. The existing steering committee, which has been notably effective, disappeared in April and it is not clear what will replace it. The association has neither money nor power and is limited in what it can do. The quality of cancer registration will be largely dependent on the contract between a purchasing commission and a body representing the registry, the level of funding to be agreed by local negotiation and, from 1997 onwards, in direct competition with all other services. Although the regional directors in the new regional offices have been very supportive of registries, their ability to secure adequate funding and to ensure coherent national development with rising standards must be limited. It will be all too easy for local purchasers, struggling to satisfy huge demands, to satisfy the letter of the contract without committing any funds for development—and the result will be a decline in standards and national coherence.

What is required as a minimum is an authoritative national body to ensure that the steady improvement in quality envisaged by the core contract actually happens nationwide; that the national consolidation of procedures, training, and information processing initiated by the UK Association of Cancer Registries is enhanced and given formal status; and that funding for each registry is sufficient to ensure comparable levels of activity across the country. A mechanism must be agreed soon before the advances of the last few years are lost.

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1 The Health of the Nation. *A strategy for health in England.* London: HMSO, 1992.
2 Expert Advisory Group on Cancer. *A policy framework for commissioning cancer services. A report by the to the chief medical officers of England and Wales.* London: Department of Health, 1995.