The Read clinical classification

The NHS has acquired a coding system designed for the computer age

Last month the Secretary of State for Health acquired for the NHS the Read clinical classification—an event of considerable importance for information strategy within the service.[1] Dr James Read, a general practitioner in Loughborough, has been developing his system of classification for the past eight years, and it is now the most comprehensive medical coding system in the world, with over 250 000 codes, including 150 000 synonyms, and it is still evolving. The classification codes not only diseases but also history and symptoms; examination findings and signs; diagnostic procedures; preventive, operative, therapeutic, and administrative procedures; drugs and appliances; and occupations and social information.

The classification of clinical data has three main purposes.[2] It can help in clinical care—by aiding the recording and retrieval of information held as part of a medical record. It can make it easier to analyse data statistically for planning and research purposes. Thirdly, it is a key element in the electronic transmission of data from one computer to another. A standard coding system should ensure that data are transferred reproducibly and received in the form in which they are sent, without corruption or loss of accuracy; whereas if different classifications are used by sender and receiver serious communication problems can arise.

The Read clinical classification was developed as a thesaurus of medical terms and a computerised medical language with six key criteria: it is designed to be comprehensive, hierarchical, coded, computerised, cross referenced, and dynamic. It also includes and is cross referenced to all of the widely used standard classifications.*

The Read codes are five character alphanumeric codes. At each level the code may be a lower (small) or upper case (capital) letter or a number. There are 58 available characters at each level and so a theoretical maximum of 656 356 768 available codes. Such a large set of possible codes is needed to provide sufficient flexibility and space to incorporate and follow the structure of the large subset classifications included and to allow for the addition of new codes within the existing framework without disturbing the hierarchies. In other words, there is sufficient redundancy in the coding system to cope with any reasonable expansion of entities and synonyms.[2]

The advantages of the Read codes were recognised in 1988 by the technical working party of the Joint Computing Group of the Royal College of General Practitioners and by the General Medical Services Committee. The working party was mainly concerned with classification in primary care, and it recommended that the Read classification should (with appropriate modifications) be adopted as the basis of a standard classification of general practice data for the United Kingdom.[2] None the less, the working party recognised the potential for a standard classification to be used throughout the NHS, and it also recommended that such a classification should be maintained and controlled by a fully resourced United Kingdom standing professional committee.

The working party report was adopted as policy by the General Medical Services Committee and the Royal College of General Practitioners and was welcomed by the Department of Health. In 1989 at the annual representative meeting the BMA resolved "that this meeting strongly supports the view that a UK standing professional committee should be established to maintain and control a standard data classification system, to be adopted universally by the NHS." Thus the report of the technical working party of the Joint Computing Group and the demonstration of professional support for the Read classification were seminal in promoting the acquisition of the classification by the Department of Health.

The next step is that the Read codes are to be developed by an NHS centre for coding and classification, which will have Dr Read as its first director. Most importantly, policy and direction for the centre will be set by a supervisory board with members drawn mainly from the medical profession but also including representation from the Department of Health and the Office of Population Censuses and Surveys.[1] One important task for the board will be to ensure that the classification achieves compatibility with the tenth revision of the International Classification of Diseases. Already, however, the Read codes are being widely used in general practice and in one of the six experimental sites in the Resource Management Initiative.[1 3] The NHS review *Working for Patients: Framework for Information Systems* consultative documents envisage not only the introduction of the Read coding and classification system as the national system for coding in general practice but also its growing use in the hospital and community health services and for outpatient referrals from general practitioners.[4 5] It seems likely that the Read codes will prove very useful in medical audit.[5]

So with the development of the Read classification being directed by an appropriately constituted supervisory board and with professional and government support we may expect to see rapid spread of the classification particularly within primary care but also in the hospital service. Though the classification is now owned by the Department of Health the plan is that it should be marketed and promoted internationally. Indeed, given the limitations of other standard classifications and the lack of an accepted international standard medical nomenclature, the Read codes may well become recognised and used around the world as a coding system ideally suited for use in computers.

The benefits of a standard classification should include better records, better patient care, better clinical decision making and clinical research, better statistics for health care planning, audit, resource management, and the accurate reliable electronic transmission of clinical data. The purchase of the Read codes by the Secretary of State for Health has brought all of these possibilities nearer.

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*Classifications included in the Read clinical classification are the international classification of diseases, injuries, and causes of death (ICD 9), the international classification of diseases clinical modification (ICD 9-CM), the Office of Population Censuses and Surveys classification of surgical operations and procedures (OPCS 4), the physicians' current procedural terminology (CPT-4), the *British National Formulary* and the OPCS classification of occupations. Subsets of ICD 9 such as the international classification of health problems in primary care (ICHPCC-2), the international classification of primary care (ICPC) and the Royal College of General Practitioners (1986) classification are by definition also included and cross referenced.

1 Department of Health. *New clinical classification system will streamline computerised medical records.* London: Department of Health, 1990. (Press release 29 March 1990.)
2 General Medical Services Committee-Royal College of General Practitioners Joint Computing Group. *The classification of general practice data: final report of the GMSC-RCGP Joint Computing Group Technical Working Party.* London: General Medical Services Committee, British Medical Association, 1988.
3 British Medical Association. *Resource Management Initiative: an evaluation of the six experimental sites by the Central Consultants and Specialists Committee.* London: BMA, 1989.
4 Department of Health. *Working for patients: framework for information systems: overview.* London: HMSO, 1990. (Working paper 11.)
5 Department of Health. *NHS review: working for patients: framework for information systems: information.* London: NHS Management Executive Information Management Group, 1990.