A recent report from Uppsala, a centre with a long interest in urticaria, re-emphasised many of these concepts in an analysis of 330 patients with chronic urticaria of over three months’ duration, many of them specially referred from a wide area. Interestingly, the Swedish workers now see fewer cases due to food additives, a reflection perhaps of different patterns of referral and of the more stringent regulations about food additives in Sweden. One-third of the patients had positive challenge test results with one or more substances. Tests for focal sepsis were considered unrewarding, though in three patients clinical improvement did coincide with removal of dental sepsis.

When no main or contributory cause can be elicited treatment must be symptomatic, and here the antihistamines remain dominant—but several contain tartrazine. Despite anecdotal evidence of benefit from H₂ antagonists such as cimetidine more formal double-blind trials have so far failed to substantiate this response. There is no indication for the indiscriminate use of cimetidine in urticaria. Cromoglycate given by mouth has also proved disappointing in idiopathic chronic urticaria. Systemic steroids have little part to play. Preliminary evidence suggests that a combination of ketotifen and terbutaline may help in some very difficult cases, though this is not without side effects. Dozens of other drugs may be used to good effect when specific stimuli can be identified and treated, and the use of dozens more is quite empirical and anecdotal. Fortunately, even longstanding chronic urticaria has a strong tendency to spontaneous remission, for which the drug, the physician, or whoever else may be advising the patient at the critical time may be given unwarranted credit.

On the other hand, x-ray examinations are commissioned by doctors, and service departments have little chance to assess whether requests made to them are in the patients’ interests. Quite apart from the hazards and unpleasantness of the procedure itself (and having a barium examination or indeed any sort of contrast study is no picnic), radiography is potentially hazardous. When requesting examinations, therefore, clinicians should have a clear idea of the radiation risks.

Radiation dosage is measured in rads (grays in SI units), the unit of energy given to the tissues. Not all tissues are equally susceptible to the effects of x-rays, so that a factor called the relative biological effectiveness, which varies for each tissue, needs to be combined with the dose of radiation to compute the energy which will theoretically produce biological damage, which is measured in rads (sieverts). Since gonadal tissue is reckoned to be the most sensitive, its relative biological effectiveness is generally used in assessing radiation protection. The annual background exposure to natural radiation at sea level in Britain is about 100–150 millisieverts. This increases with altitude and decreasing latitude, but a radiographer acquires something of about 250 millisieverts a year in the line of duty and is not likely to come to much harm. People living at high altitude may receive several times this dosage, again without harm.

The exposure of parts of the body does not necessarily expose the whole body to a risk from radiation. Thus, while a radiograph of the hand requires a local dose of about 100 millisieverts, with proper technique the beam is collimated with the rest of the body shielded so that the dose reaching the gonads will be too small to be measurable. The use of special types of fast film enables doses to be kept very low, with a posteroanterior chest radiograph taken in a child “costing” as little as 12 millisieverts but with a lateral costing more than twice as much. These are small doses and the cost-benefit equations are not hard to assess.

Nevertheless, when larger doses are needed, or are needed over larger areas, are administered near sensitive targets, and, above all, are repeated at intervals, doctors should recognise the risks. Thus an x-ray examination of the skull or an antero-posterior view of the spine each costs about 250 millisieverts. The former is not so far from the thyroid gland, and in the latter x rays reach both active bone marrow and the gonads. An intravenous urogram—lightly ordered, perhaps—exposes a child to over 1000 millisievers. The staff in the x-ray department trust the clinician to have ordered sensibly and are in little better position to query the request for an intravenous urogram than is a local pharmacist to decline to dispense a prescription. But, whereas the cost of that prescription is monitored, there is no audit in radiography. Regular urography may be a very “expensive” way of assessing renal growth in childhood, especially when ultrasonography is becoming available and may soon be supplanting radiology as an imaging technique for several organs.

The need for each x-ray examination, the number of views requested, and the number which routinely constitute the examination should all be assessed critically by clinicians and radiologists. Too often the care given to shielding the gonads is not all that it should be. A lateral view of the spine “costs” twice that of an antero-posterior view. Are both necessary for the clinical problem? Would a single lateral skull film provide sufficient information for the clinical purpose as against the standard three or four views? Is the radiographic quality of the proposed examination—particularly the intravenous urogram—such that it will be likely to give

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Primum non nocere

That children may develop long-term psychological consequences from their attendance at or admission to hospitals is well recognised; but children are such a small fraction of the patients in large district general hospitals that their needs may often be overlooked. This is especially likely in ancillary departments. In particular, taking radiographs may be routine to departmental staff, but the panoply that surrounds the procedure, the waiting before and after the examination, the strange surroundings, the disappearance of staff behind protective screens, and the whirring of apparatus may be frightening for patients of any age. Radiologists and radiographers need to remember the aura created in their departments, and schools of radiography should emphasise it to their students.

useful information, or would it be better to arrange for it to be carried out at a specialised centre so as to optimise the diagnostic yield? Each x-ray exposure may constitute a very small risk, but many small risks constitute a real danger. Clinicians are consumers of resources, but frequently they seem to be little aware of the financial consequences of their actions. Even more important, they should be aware of the risks to which they expose their patients in mental and physical terms, in every sense. Patients have a right to be concerned about the risks to which they may be subjected, and doctors have a duty to have sufficient knowledge both to keep those risks to a minimum and to explain them to the patient. In x-ray examinations of children the principle of Primum non nocere must be paramount.

Strategic policy monitoring at DHSS

Last year the Commons Select Committee on Social Services turned its attention to the Government’s spending plans for the health and personal social services. It produced a report 1 that was sharply critical of the Department of Health and Social Security’s ability to formulate and evaluate strategic policies across the range of services for which it has responsibility. In a spirited reply 2 the DHSS pointed out that the committee had failed to ask for information about its machinery for strategic policy making and that had it done so it would have learnt of the existence of several policy-oriented groups and committees within the DHSS and would have been told about the central features of the department’s strategic plans.

Now the select committee has returned to the fray, albeit in less strident tones, in a new report 3 on public expenditure in the social services. The committee acknowledged the changes that have been made in the department’s planning machinery since its previous report, and it particularly welcomed the setting up of the new Policy Strategy Unit. Even so, the committee argued that any improvements in the machinery for strategic policy making will not necessarily produce more coherent or consistent policies unless those who operate the machinery are more specific about their objectives and more rigorous in monitoring the impact of new policies.

An illustration of the committee’s argument is found in its discussion of the effects of changes in the level of spending on particular services, programmes, and client groups. An increase in expenditure might lead to an improvement in the quality of a service, but it might equally result in an expansion in the volume of the service, an extension in its coverage, or an increase in its cost. The committee argued that these effects were very different in their social impact and that policy makers should therefore be clear about their aims when deciding to increase expenditure and should subsequently be able to assess the extent to which those aims had been fulfilled. Accordingly, the committee recommended that every effort should be made to find new ways of measuring the quality of care, the savings arising from improvements in efficiency, and the effectiveness of programmes in meeting established policy goals.

Understandably, however, the select committee’s enthusiasm for what it called “strategic consistency and coherence” is not shared unreservedly by the DHSS. In its earlier rejoinder to the committee, 4 the department pointed out that it is often unrealistic and impracticable to specify policy objectives or to measure their impact with the precision demanded by the committee. Decisions which have to be taken on the basis of less-than-perfect information may easily be criticised later with the benefit of hindsight. Yet the department also seems deliberately to be taking steps that will impair its ability to behave in ways expected by the committee. The DHSS’s failure to specify priorities in resource terms in its recent handbook on policies, 5 its determination to shift some of the emphasis in making policy away from the centre towards the regions and districts, and its proposals 6 to curtail the available statistical information about health and health services will make it more difficult for the department to be accountable for its policies in the way that the committee would wish.

In this sense, the continuing dialogue between the Select Committee on Social Services and the DHSS provides a fascinating illustration of the tension between those who favour a comprehensive rational approach to making policy and those who favour a judicious blend of rationality and pragmatism. The new report from the committee resolves nothing but it plays a sharp volley back to the Secretary of State’s court by asking him to identify precisely the guidelines by which the committee and others can monitor the progress being made towards the Government’s policy objectives. Doctors will await with interest his return stroke.

Alpha,-antitrypsin deficiency and liver disease

Alpha,-antitrypsin, a glycoprotein with a molecular weight of 54 000 which is synthesised and catabolised in the liver, is a major serum protease inhibitor but its physiological function is still unknown.

The genetics of alpha,-antitrypsin deficiency are well worked out, with at least 26 alleles identifiable by starch-gel electrophoresis or by isoelectric focusing. The protease inhibitor (Pi) alleles are labelled alphabetically, with the electrophoretically slowest being designated Z, the medium M, and the fastest F. The most common allele is PiM, its frequency being at least 0·87. 1 Deficiency of alpha,-antitrypsin is usually associated with the phenotype PiZZ and sometimes PiSZ. Patients have been described in whom alpha,-antitrypsin is virtually undetectable and no electrophoretic pattern is available; the allele in this case is called Pinull. 2

The inheritance of the alleles follows an autosomal co-dominant pattern. Histological examination of the liver of individuals who are homozygous or heterozygous for the phenotype PiZ shows that the hepatocytes contain character-

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1 SI conversion: 1 rad (old unit) = 10⁻² gray (SI unit)
1 rem = 10⁻² sievert
1 millirem = 10⁻³ sievert

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2 Department of Health and Social Security. Reply by the Government to the third report from the Social Services Committee, session 1979-80. London: HMSO. (Cmd 8086.)

