

transmission can yet explain the origin, disappearance, replacement and recycling of subtypes of type A influenza virus. The new techniques of molecular virology should soon be able to detect latent residues of influenza virus if they are present in the host tissues. If they are not present we have a problem on our hands, because current epidemiological concepts are woefully inadequate to explain what we find to be happening to our patients.

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References

1. Glass T. In: Thompson T (ed). *Annals of influenza*. London: Sydenham Society, 1852: 524.
2. Hirsch A. Trans. Creighton C, from second German edn. *Handbook of geographical and historical pathology*. 1883; 1: 36-37.
3. Smith W, Andrews CH, Laidlaw PP. A virus obtained from influenza patients. *Lancet* 1933; 2: 66.
4. Kilbourne E. *The influenza viruses and influenza*. London: Academic Press, 1975: 524.
5. Webster RG, Laver WG. In: Kilbourne E. *The influenza viruses and influenza*. London: Academic Press, 1975: 287.

Clinical judgement

CLINICAL judgement is at the heart of medical practice, yet it defies satisfactory definition. Even within the traditional medical framework which focuses on the diagnosis of disease, clinical judgement seems to be more than the sum of measurable components. The diagnosis of the cause of acute abdominal pain has been shown to be more accurate if aided by a computer, but even in a condition where the outcome and pathology can be accurately determined, clinicians do not rely totally on the predictions of the computer.

In this issue of the *Journal*, Knottnerus' paper on the interpretation of diagnostic data¹ shows how the predictive value of a clinical examination or test changes with the prevalence of the disorder being sought. The idea that the interpretation of an objective test can change depending on the context in which it is applied appears to go against commonsense. It is an illustration of how a numerical analysis can aid an understanding of clinical judgement.

General practitioners strive for but rarely achieve certainty in making diagnoses. This raises the question whether the practice of medicine is an art or a science. The answer may lie in what is meant by science. Howie has drawn attention to the difference between the 'cellular' and 'behavioural' sciences.² Great advances in technological aspects of medicine have been made by the reductionist 'cellular' analysis of problems. General practice is only now coming to terms with the integrative 'behavioural' scientific method. There remains a conceptual gulf between medicine and sociology which leads to a mutual rejection of research findings. One problem is that we still look for 'correct' solutions to problems, despite our own experience that different solutions exist for the same problem. For example, a man with a duodenal ulcer could take antacids, stop smoking, give up his job, have an operation or suffer the pain. Whether the patient with a healed ulcer and no job is seen as a success or a failure depends on who is making the judgement.

It is not surprising that words such as 'science', 'judgement' and 'clinical' pose problems of interpretation for doctors. Authors such as Feinstein³ and Marinker⁴ have shown how medical taxonomy is inadequate for describing naturally occurring phenomena.

Where does this questioning of the meaning of clinical judgement lead? Perhaps we can learn from the disciplines which are concerned with the meaning and implications of concepts and

6. Hope-Simpson RE. Epidemic mechanisms of type A influenza. *J Hyg (Lond)* 1979; 83: 11-26.
7. Hope-Simpson RE. The period of transmission in certain epidemic diseases. *Lancet* 1948; 2: 755-760.
8. Hope-Simpson RE. The role of season in epidemic influenza. *J Hyg (Lond)* 1981; 86: 35-47.
9. Archetti I, Horsfall FL. Persistent antigenic variation of influenza A viruses after incomplete neutralisation *in ovo* with immune serum. *J Exp med* 1950; 92: 441-462.
10. Isaacs A. The 1951 influenza virus. *Proc R Soc Med* 1951; 44: 801-803.
11. Burnet FM. *Virus as organism*. Cambridge, Mass: Harvard University Press, 1945: 108.
12. Fothergill J. In: Thompson T(ed). *Annals of influenza*. London: Sydenham Society, 1852: 86-112.
13. Alling DW, Blackwelder WC, Stuart-Harris CH. A study of excess mortality during influenza epidemics in the United States, 1968-1976. *Am J Epidemiol* 1981; 113: 30-34.
14. Hope-Simpson RE. Recognition of historic influenza epidemics from parish burial records: a test of prediction from a new hypothesis of influenzal epidemiology. *J Hyg (Lond)* 1983; 91: 293-308.

issues. Welbourn,⁵ who is involved with the teaching of medical ethics, points out that moral philosophy and ethics do not provide answers to particular clinical problems but establish the framework and context for decisions to be made. Commonsense is not the basis for ethical or clinical judgement. Sound judgements can only be derived from a detailed and systematic knowledge of the respective disciplines.

The value of pluralism must be recognized in an operational specialty such as general practice. There was a danger that the processes of performance review, vocational training and postgraduate examinations would produce a uniform type of general practitioner, but there is no evidence that this is happening and general practitioners remain richly diverse. Uniformity carries the negative connotations of being controlled, static and inhuman. Pluralism, individuality and diversity are desirable in general practice especially if they are accompanied by a willingness to look at personal performance and an acceptance of change in the pursuit of better standards.

In this context performance review is not an end in itself. It is one aspect of the quest for improved quality in general practice. Doctors who are joining small discussion groups which involve performance review may be frustrated if discussions do not move beyond the aspects of practice that are easily measured. Quantitative analysis is an excellent basis for discussion but consensus may not be the desirable outcome.

General practice will develop not through the imposition of uniform methods but by the exploration of different approaches which can be supported by logical and if possible scientific argument. In general practice it is not only that the goal posts move during the game but the game itself can change.

References

1. Knottnerus JA. Interpretation of diagnostic data: an unexplored field in general practice. *J R Coll Gen Pract* 1985; 35: 270-274.
2. Howie JGR. Research in general practice: pursuit of knowledge or defence of wisdom? *Br Med J* 1984; 289: 1770-1772.
3. Feinstein AR. *Clinical judgement*. Huntington, New York: Kruger, 1968.
4. Marinker M. The chameleon, the Judas goat and the cuckoo. *J R Coll Gen Pract* 1978; 28: 199-206.
5. Welbourn RB. A model for teaching medical ethics. *J Med Ethics* 1985; 11: 29-31.