

duced as individual tests in the universal form used now.

The number of new diabetics detected, the ramifications of the glucose tolerance test results and their significance, and the number of diabetics who emerged from those who initially tested negative, have all been extensively reported in the publications of the Working Party.

The data from these studies, particularly those from the reviews over the following 10 years, contributed to the national debates on an agreed set of criteria for glucose intolerance.⁷

The study highlighted the importance of a multi-disciplinary approach. Although initiated and coordinated by a working party of the Birmingham Research Unit of the College of General Practitioners, it would not have been possible without the equal involvement of local consultants and laboratory-based colleagues, the GPs from the practices involved, local nurses and health visitors, and the pharmaceutical industry.

It is ironic that our main finding at that time^{2,8,9,10} was the inefficiency of mass screening of urine for presence of glucose as a method for uncovering previously undiagnosed diabetes. The best approach, as now, was one based on constant awareness by the GP of the possibility of diabetic risk, where age, being overweight, family history, and the presence of cardinal symptoms, physical signs, and other commonly associated pathology might indicate an increased likelihood.

Studies of the family history of diabetes,¹¹ diabetes as a community health problem,¹² and disease concurrence in diabetes¹³ were also carried out. The diabetic syndrome^{14,15} and the use of disease registers¹⁶ were evaluated.

Bullimore and Keyworth would have done well to take note of this earlier work on the subject of screening for diabetes by urinalysis. The passing years have not lessened the value of one of the earliest pieces of cooperative research by a College working party consisting of GPs, diabetologists, and statisticians.

L A PIKE
D L CROMBIE

Birmingham Research Unit
Lordwood House
54 Lordwood Road
Harborne
Birmingham B17 9DB

References

1. Bullimore SP, Keyworth C. Finding diabetes: a method of screening in general practice. *Br J Gen Pract* 1997; **47**: 371-374.

2. Report of a working party appointed by the College of General Practitioners. A diabetes survey. *BMJ* 1962; **i**: 1497-1503.
3. Crombie DL. Diabetes surveys. *Research Newsletter of the College of General Practitioners* 1957; **4**: 319-321.
4. Research Committee of Council. Diabetes detection drives. *J Coll Gen Pract* 1959; **2**: 189-192.
5. Report by the Birmingham Diabetes Survey Working Party. Five-year follow-up report on the Birmingham diabetes survey of 1961. *BMJ* 1970; **3**: 301-305.
6. Report by the Birmingham Diabetes Survey Working Party. Ten-year follow-up report on the Birmingham diabetes survey of 1961. *BMJ* 1976; **2**: 35-37.
7. Fitzgerald MG, Keen H. *BMJ* 1964; **1**: 1568.
8. Editorial. Detection of diabetes. *BMJ* 1962; **i**: 1536-1538.
9. Crombie DL. Testing in family practice for diabetes. *J Coll Gen Pract* 1964; **7**: 379.
10. Crombie DL. Diabetes mellitus - incidence, causation and management. *Proceedings of the Royal Society of Medicine* 1962; **55**: 205-207.
11. Report of a Working Party appointed by the College of General Practitioners. The family history of diabetes. *BMJ* 1965; **1**: 960-962.
12. Crombie DL. *Diabetes: a community health problem. The view of the general practitioner.* (Excerpt from the papers read before the Health Congress of the Royal Society of Health.) London: Royal Society of Health, 1963.
13. Fleming DM, Crombie DL, Cross KW. Disease concurrence in diabetes mellitus: a study of concurrent morbidity over 12 months using diabetes mellitus as an example. *Journal Epidemiology and Community Health* 1991; **45**: 73-77.
14. Crombie DL. The diabetic syndrome. A hypothetical model. *Lancet* 1964; **1**: 626-629.
15. Crombie DL. The diabetic syndrome. *J R Coll Gen Pract* 1968; **15**: 428-436.
16. Fleming DM. Diabetic registers in general practice. *BMJ* 1994; **308**: 134.

Sir,

By recording the extent of negative attitudes to the diagnosis of type 2 diabetes in a screening programme, Bullimore and Keyworth (*June Journal*) have made a valuable contribution to a very limited literature.¹ However, they also present but do not comment on the significance of data that suggest they may have encountered a much more serious type of resistance to accepting the diagnosis of diabetes. This needs to be addressed if calls for wider screening are to be implemented² in view of the uncertainty about the long-term impact of screening, both on those who test positive and are subsequently followed up, and also on those who are told they are not at risk.³

Fifteen of the 32 individuals who originally recorded their urine test as positive subsequently said that they had made a mistake and that their test had been negative. Although it is possible that this was the result of a mistake in completing the

return slips, the change in response may also represent a form of denial of being at risk of diabetes, which could obstruct necessary immediate follow-up and subsequent attempts to carry out further screening or encourage lifestyle modification.

Perhaps explanations for the positive test other than the onset of diabetes had become more convincing to the subjects before they were followed up, leading them to doubt the validity of their self-administered screening tests. For example, students offered tests for a fictitious risk factor subsequently rated the test as being less accurate if they were diagnosed as being at risk rather than testing negative. The tendency to denigrate the test accuracy was even more marked when told that they alone had tested positive out of the group.⁴ The explanation offered for these findings was that more thought is given to undesirable than desirable facts. In other words, if it is good news, then relatively little further attention is offered. If it is bad news, then a complex set of thoughts is triggered in which alternative (and perhaps more acceptable) explanations might be uncovered.

Reluctance to acknowledge a diagnosis of diabetes is only one of a number of social and psychological issues that need to be addressed through further research alongside current work to establish whether screening for type 2 diabetes is likely to be effective.

ANDREW FARMER

Health Services Research Unit
Department of Public Health
University of Oxford
Institute of Health Sciences
Old Road, Headington
Oxford OX2 7LF

References

1. Bullimore SP, Keyworth C. Finding diabetes - a method of screening in general practice. *Br J Gen Pract* 1997; **47**: 371-374.
2. Macready N. American Diabetes Association calls for testing all those over 45. *BMJ* 1997; **315**: 11.
3. Stewart-Brown S, Farmer A. Screening could seriously damage your health. *BMJ* 1997; **314**: 533-534.
4. Jemmott JB, Ditto PH, Croyle RT. Judging health status: effects of perceived prevalence and personal relevance. *J Pers Soc Psychol* 1986; **50**: 899-905.

Sir,

In their study on postal screening for diabetes (*June Journal*), Dr Bullimore *et al* express surprise at finding that some patients 'showed surprisingly negative attitudes to the diagnosis of an illness, and