out the laboratory tests. My thanks are due to Dr F. H. Milner of C. L. Bencard Ltd, London, for his advice on staphylococcal intradermal tests.

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FROM THE RESEARCH COMMITTEE OF COUNCIL

DIABETES DETECTION DRIVES

In February 1957, the research committee of council appointed a working party to consider the conduct of a College diabetes survey.

After preliminary trials with both " Clinistix " and " Tes-tape ", and after consultations with Mr D. H. Vobes of Ames Co., a pilot survey was carried out in the practices of six members of the research register of the College.

This paper describes the method used to detect patients with glycosuria in that pilot survey and which was shown to be suitable for a large scale survey conducted by general practitioners in their practices.

The purpose of diabetes detection drives in the past has been to establish, with varying degrees of accuracy, the true incidence of diabetes (and glycosuria) both known and previously undiscovered. To achieve this it is necessary that the testing of urines for sugar is not carried out indiscriminately or confined to any special medical, social, occupational, or age group. The urine specimens tested must be obtained from a representative sample of the general population. This can only be carried out satisfactorily, for a large population, in general practice. The relationship of non-diabetic glycosuria to true diabetes can only be established by a follow-up of patients with the former condition, and members of the College have a unique opportunity to study both problems.

The pilot survey population was composed of the members of the families of the first three different names in each letter of the

alphabet on each practitioners' list. The members of the family were defined as those living at the same address.

As a screening test a " Clinistix " was provided for each patient coming within the survey. Each was contained in a glass vial with Silica-gel in the base, and sealed by a plastic push-on cap. Attached to each vial was the following questionnaire:—

Name .....*Mr/Mrs/Miss*

Address .....

.....

Year of Birth.....*Doctor's Name*.....

Put ring around appropriate answer:

HAVE YOU EVER HAD DIABETES ? *YES* *NO*

ANY DIABETES IN YOUR FAMILY ? *YES* *NO* *NOT KNOWN*

Dip the test stick in fresh urine for 5 seconds, read the colour after holding in the air for ONE MINUTE. At the end of this time see if it has changed colour and ring the appropriate answer :

NO CHANGE BLUE OTHER COLOUR

Then place the stick in the bottle attached to this card and return it to your doctor in the envelope provided.

Serial Number.....

A sufficient supply of vials was given to *one* member of each chosen family on the practitioner's list, one for each of the other members of the family, with a strong, stamped, addressed envelope in which they were to be returned to the practitioner after use.

The representative of the chosen family, usually the wife, was instructed in the technique of testing and was asked to see that all the other members of the family carried this out. All the vials of the patients complying were returned in the envelope.

The instruction on the use of the " Clinistix " were as follows: The " Clinistix " should be immersed in the stream of urine, passed where possible within two hours of the largest meal of the day. Any colour change should be noted on the questionnaire which should be completed without detaching it from the vial. The " Clinistix " should then be returned to the vial, the stopper replaced, and returned to the general practitioner in the envelope.

The practitioner contacted the chosen family through patients seen during surgery or on visits. Families not contacted in this way were sent a letter of a standard type inviting one member to attend the practitioner's surgery at an appointed time. Where no reply was received, or where test materials had not been returned within a reasonable time after a personal contact by the doctor, the doctor then visited the patients in their own home.

The questionnaires were torn from the vials by the general practitioner, after checking the test, and filed.

All patients returning " Clinistix " noted as blue by the practitioners, or entered by the patient as having changed to blue were then asked to submit a specimen of urine taken one or two hours after a full meal, to be re-tested by the practitioner with " Clinistix " and " Clinitest ". Where this second test was also positive the patient was referred to hospital for a glucose tolerance test. The standard glucose tolerance test was as follows:—

A full diet without restriction of carbo-hydrate was taken for at least a week before the test.

No food or drink was taken after 9.0 a.m. on the day before the test.

The subject attended fasting at 9.0 a.m. for the test.

After a fasting blood sample was taken, a dose of 50 grammes of glucose in water was given by mouth and blood samples withdrawn at ½, 1, 1½ and 2 hours. Capillary samples were used.

Blood sugar estimations were made by either Hagedon and Jensen, or Nelson techniques.

The test was interpreted as follows:—

The result was considered normal if (1) the fasting blood level was below 120 mgs. per cent and (2) the blood sugar returned to the fasting level not more than two hours after the test dose.

Results

The results were broadly as would be expected. Three per cent of the " Clinistix " tests were returned having been noted as blue at the time of testing by the patient, but only 1.5 per cent were still blue when examined by the practitioner. Of this three per cent (19 patients), one per cent (7 patients) were confirmed as suffering from diabetes. Four of these were new cases of diabetes and three patients already receiving treatment. These preliminary findings agree with previously published work.

The method has been shown to be workable, to give consistent results, and to be satisfactory for the purpose of this kind of survey. In no case was a blue test, recognizable as such by the practitioner on return to him, not due to diabetes. On the other hand, no test paper noted by the patient as blue, but which had faded on return to the practitioner, came from a patient suffering from diabetes, and, in these cases it was impossible to elicit any further blue tests. We can only assume that these mildly positive tests were all due to contamination on the " Clinistix " at the time of testing from glucose on the patient's fingers.

The containers appear to stand up to the ravages of the postal services, and in no case did a broken container lead to trouble in the interpretation of the tests. Twelve patients are noted as " not

co-operating". This satisfactorily low figure may be an underestimate, for the 228 patients who were not contacted must have contained a number who did not intend to co-operate and evaded contact. It is, perhaps, disappointing that only 772 patients out of a possible 989 were in fact brought into the survey. Of these, however, 75 had left the district or were legitimately excluded for some other reason. This figure represents the floating population who will never be brought within the net of a survey based on practitioners lists. A further allowance of unknown size but possibly approaching this proportion would have to be allowed for the inflation of medical lists which undoubtedly exists in many parts of the country. Although 142 of the 989 patients were not contacted at all, in three practices a particularly determined effort was made to contact every one in the survey population of 453, representing the three doctors' share of the total survey population. Of this 457, 20 were known to have left the district, seven refused to co-operate and 23 were not contacted for some other reason, a total of 50 out of 458.

DIABETES PILOT STUDY RESULTS

Practitioner	A	B	C	D	E	F	*Totals*
Population at risk	193	210	128	144	151	163	989
Population contacted:							
(*a*) routinely	130	152	75	119	129	103	708 } 772
(*b*) special visit (with return of Clinistix)				21	11	32	64 }
Number of patients not co-operating	5	?	0	3	0	4	12
Number of patients not contacted:							
(*a*) left district	18	33	4	4	0	16	75
(*b*) other	45	25	49	0	11	12	142
Broken containers	0	5	1	1	0	4	11
Tests returned marked blue	2	3	2	0	7	5	19
Number of tests blue on examination at surgery	0	3	2	0	3	2	10
Number of patients diagnosed as suffering from diabetes	0	3	1	0	1	2	7
Number of these who were new cases	0	1	1	0	1	1	4
Number of old cases	0	2	0	0	0	1	3

These practices were probably unrepresentative in that the turnover was less than average and the amount of inflation, for various reasons, at a minimum.

It must also be remembered that the practitioners participating were asked to complete their survey in a period of only four weeks.

The working party were satisfied that the method of contacting the selected population was workable and that, allowing for the normal, annual float of patients in and out of a doctor's practice, as nearly a 100 per cent cover of a chosen population could be achieved as was possible by any other method. The planning of a full-scale survey involving a much larger number of patients and practices has been based on this study.

Working Party. J. M. Malins (physician-in-charge, diabetic clinic, General Hospital, Birmingham), R. J. F. H. Pinsent, K. L. Cross, and D. L. Crombie.

Members taking part in survey. H. N. Levitt, I. T. Carrie, E. D. Forster, L. A. Pike, A. J. Pearce and D. L. Crombie.

FACULTY NEWS

A SYMPOSIUM ON CHANGES IN GENERAL MEDICAL PRACTICE

South-east England Faculty

At the fifth annual general meeting of the South-east England Faculty held at Brighton on Sunday, 2nd November 1958 a symposium was held on Changes in General Practice.

The provost, Dr BERNARD HALFPENNY, was in the chair and opened the discussion by saying that the speakers would not discuss the changing pattern of disease—such as the elimination of diphtheria and the treatment of pneumonia by antibiotics—but the changing attitude to general practice and the individual patient. He thought that the five main factors in our changing attitude were developments in social medicine, the increasing possibilities for research in general practice, the study of the individual's whole personality as a background to his disease, the advances that had been made in preventive medicine, and the great amount of work that is now being done in health education. Dr Halfpenny, in introducing the speakers, said that they would enlarge upon these five points in their talks.

The REVEREND ALLEN COOK, M.A., spoke on the *Spiritual Opportunities of the Family Doctor.* He thought that the family doctor could help his patients much more nowadays because the profession