I report this preliminary account as the results appear relevant to the work of the Industrial Injuries Advisory Committee.

I am deeply indebted to many hundreds of people for help in the original survey and the follow-up. I cannot thank them all by name. I would, however, like to thank the people of the Rhondda Fach once again, all the medical officers of health who answered so many of my queries, Mr. Jonathan and Mr. Moore, who played important parts both in the original survey and the follow-up, and Mr. David Hole for the statistical analysis.

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General Practice Observed

Diabetic Clinics Today and Tomorrow: Mini-clinics in General Practice

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Summary

In the belief that there was need for diabetic clinics in general practice, 14 of them have been started in the Wolverhampton area. Provided that patients with diabetes that is difficult to control, or who need extra care, remain the responsibility of the hospital diabetic department, this system is an advantage for the hospital department, general practice, and the patient. We believe that many patients are now getting better care in general-practice clinics than they were in the hospital department.

Introduction

Diabetic clinics were started to deal with insulin treatment and were among the first hospital special clinics. There are now about 500 of them in Britain. Although papers on diabetes are numerous, assessment of the place of diabetic clinics is unusual.¹⁻⁴ In many areas a diagnosis of diabetes is regarded by all concerned as an indication to attend the hospital clinic for ever. The result is that diabetic clinics have such a large clinical load that they are unable to devote sufficient time to difficult cases. Medical manpower to deal with the growing work load is usually met by increasing use of junior staff,⁵ and the situation is well described by Wilks.⁶

Diabetes is an all-embracing disorder, so whoever looks after the patient's diabetes tends to look after the whole patient. After 50 years of insulin and 15 years of oral treatment, surely many diabetic patients should be looked after by their own

practitioner. We believe that the best way for a general practitioner to look after his diabetic patients is to organize a special session for that purpose. A practice with four partners may well have 80-100 diabetics on the list, so a monthly session is worth while. Starting such clinics should be a combined operation between the practitioners and the consultant who runs the hospital clinic, and we believe that these clinics—which we call mini-clinics—should continue to be run in co-operation with the hospital clinic.

Malins² wrote that "most physicians who run diabetic clinics would be glad to know of any satisfactory method by which patients could be returned to the care of their own doctors." We think that the scheme we describe here is satisfactory but we do not think that the experimental clinic described by Malins and Stuart⁷ goes far enough in establishing an autonomous clinic run by the general practitioner.

Diabetic Population Studied

This hospital diabetic clinic started in 1924 and the mini-clinic scheme in 1970. The total number of patients concerned in this report is 2,136. This includes every patient who attended either the hospital clinic or a mini-clinic during 1970-2. Each patient has a punch card on which is recorded year of birth, age at diagnosis, year of diagnosis, general practitioner, and type of treatment. All long-term attenders and new attenders in 1970 and 1971 had their treatment assessed at the end of 1971, whereas new attenders in 1972 were assessed at the end of that year. Patients known to have died during the survey are not included as they are no longer a follow-up problem. The type of treatment for all these patients is shown in table I and age at diagnosis related to type of treatment in fig. 1.

Mini-clinic Practices

By the end of 1972 14 practices in the area had started mini-clinics. The distribution of those practices with mini-clinics among all the practices on the list of the Wolverhampton Executive Council is shown in fig. 2. There are two four-partner practices, six with three partners, four with two part-

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TABLE I—Type of Treatment of all Diabetic Clinic and Mini-clinic Attenders

	1971 and Before (n = 1,772)	New Attenders, 1972		Whole Group (n = 2,136)
		Diagnosed in 1972 (n = 282)	Diagnosed Before 1972 (n = 82)	
Diet	294 (17%)	117 (41%)	7 (8%)	418 (20%)
Oral	802 (45%)	115 (41%)	36 (44%)	953 (45%)
Insulin ..	676 (38%)	50 (18%)	39 (48%)	765 (35%)

FIG. 1—Type of treatment related to age at diagnosis in the 2,136 patients.

FIG. 2—Practices with mini-clinics shown as proportion of all practices on Wolverhampton Executive Council's list.

TABLE II—Relation of Treatment to Mini-clinic Discharge Rate

		Patients in Mini-clinic Practices	Discharged to Mini-clinics	Percentage Discharged
Diet		108 (20%)	103 (24%)	95
Oral		236 (44%)	227 (53%)	96
Insulin ..		197 (36%)	98 (23%)	50
Total		541	428	79

ners, and two single-handed practices. Twenty-two per cent. of the doctors on Wolverhampton Executive Council's list are in practices which have mini-clinics. These practices have 104,514 patients on their lists of whom 541 are diabetics who have attended our hospital clinic; 428 of these have been discharged from the hospital to their practice mini-clinic. The proportion of patients discharged is related to their type of treatment and to the age at which diabetes was diagnosed in table II and

table III. Half the patients on insulin and two-thirds of those whose diabetes was diagnosed before age 35 still attend the hospital clinic but most of the others attend their own doctor's mini-clinic.

TABLE III—Relation of Age at Diagnosis to Mini-clinic Discharge Rate

		Patients in Mini-clinic Practices	Discharged to Mini-clinics	Percentage Discharged
0-34		98 (18%)	37 (9%)	38
35-64		359 (66%)	315 (73%)	88
65+		84 (16%)	76 (18%)	90
Total		541	428	79

Mini-clinics

For a mini-clinic to succeed there should be one or two members of the practice who are prepared to take a special interest in diabetes, and the practice must be prepared to set aside a session a month for the diabetic clinic. We think that a special record card for diabetic patients is necessary and that liaison with the hospital clinic should be maintained.

We believe that most patients should be seen once at the hospital clinic when diabetes is diagnosed. This is an opportunity to agree the diagnosis and discuss treatment, it gives the patient hospital records which are likely to be necessary at some time during his diabetic career, and it puts the patient in touch with the clinic health visitor and the chiropodist when necessary. After the initial consultation the practitioner is entirely responsible for the continuing care of these patients, so there is no further visit to hospital for a mini-clinic patient unless referral is made for consultation. We have found that an annual visit by the consultant to the mini-clinic is welcomed by the practitioners because it gives further opportunity for consultation and discussion about individual patients and about diabetes in general.

All the practitioners running mini-clinics regard it as important that patients are seen at a session. This enables a routine to be set up for weighing patients, for urine testing, for taking blood and transporting it to the laboratory. Most patients attending mini-clinics have more blood sugars done annually than they used to when attending the hospital clinic. If mini-clinic patients go to hospital for a consultation concerning diabetes, their mini-clinic record card should go with them.

Discussion

Any scheme for advising diabetic patients is influenced by the doctor's beliefs about diabetes. Like most clinicians who run diabetic clinics, we believe that it is best to keep the carbohydrate metabolism of those patients on diet alone or on oral treatment as near to normal as possible. We try to keep patients on insulin reasonably well controlled by conventional standards, and all clinics in this scheme are run on these principles. At every visit to both types of clinic weight, urine tests, and a blood sugar are done. Control of diabetes is a controversial subject, but if patients are only kept free of symptoms without regard to their biochemical status then they certainly do not need to attend the hospital and there seems little point in their attending a mini-clinic either. A decision that symptomatic treatment without biochemical control is all that is required for a given patient is made from time to time and such a patient is likely to be discharged from either type of clinic.

Many hospital clinics, and certainly this one, have grown to a size which makes them difficult to manage and inefficient. The hospital holds two diabetic clinics a week: at one we see between 75 and 100 old patients, while at the other we see up to 12 new patients and about 35 old ones. The clinics are staffed by a consultant, a clinical assistant, and either a registrar or an

S.H.O. If the clinic does not correspond with holidays, study leave, or sickness of either of the two senior members of the clinic staff, the patient stands a two in three chance of seeing a doctor who regularly does the diabetic clinic. When one of the senior members is away, then the patient stands a two in three chance of seeing a doctor whom they are never likely to see again.

Many of the diabetic population are at present on diet alone or diet and oral treatment and are in their second half of life (fig. 1). The management of most of these patients is not difficult and many of them would have been discharged to their general practitioner if it was known that they would have regular supervision of their diabetes in the practice. Some patients, however, have difficult diabetes or need extra care and they should continue to attend the hospital clinic—this group includes children, teenagers, pregnancies, and difficult patients on insulin. Complications or the development of other diseases may also necessitate hospital management from time to time. The hospital clinic continues to look after most of those patients whose practices do not have a mini-clinic or whose doctors have no special interest in looking after their diabetic patients.

Based on the figures for the last three years it is possible to make out a provisional annual balance sheet of clinic attenders. This shows that despite discharges to mini-clinics, about 50 discharges annually for other reasons, 50 defaulters, and 40 deaths a year, the clinic will continue to grow.

General practice seems the proper place to look after many diabetics. The advantages to the general practitioner of being responsible for the diabetics in his own practice are many. The diabetic patients on any list represent a large section of clinical medicine and if responsibility for them is removed to or shared with the hospital clinic then interest naturally fades. When the practitioner takes responsibility for decisions on the management of his diabetic patients, it is likely that he will become increasingly competent in looking after them. If he has to attend one of them in an emergency it is much more satisfactory for him if he has been in complete clinical charge of the patient previously. In most areas practitioners have full access to laboratory and chest x-ray facilities and no other special techniques are required to look after most diabetic patients.

Many practices now have one or more nurses attached, who are becoming involved with the mini-clinics and with educating the patients. When education of the patient is carried out by the practice nurse, it is done in a familiar environment by a person already well known to the patient. Thus the mini-clinic scheme increases the number of both doctors and nurses interested in diabetes.

The *practitioners'* interest in diabetes has been aroused by running these clinics, and this interest has been fostered by monthly journal club meetings or formal lectures at the medical centre.

After some initial resistance from long-term attenders, we find that *patients* are delighted to be discharged from the hospital to a mini-clinic. At a mini-clinic they are seen in more comfort, with less waiting, and see the same doctor at each visit. When attending a mini-clinic the patient has both consultation and prescription from the same source. This is one of the reasons why we believe that defaulting will be much less of a problem with mini-clinic patients.

Conclusions

Three years is too early to assess the results of any system for advising diabetic patients. General practice seems to be the proper place to look after many diabetic patients provided there is a practitioner in the practice who has, or will cultivate, an interest in diabetes. If hospital diabetic clinics in densely populated areas continue to try to look after most of the diabetic population, the service which they provide will deteriorate steadily owing to overcrowding. It is our experience that most diabetic patients attending mini-clinics now are getting better medical care than when they attended the hospital clinic.

We are grateful to all those practitioners who have taken part in this scheme with enthusiasm and have also helped to keep the punch card system up to date in order to document the scheme. We thank Professor J. M. Malins for continuing interest and encouragement. A heavy load of additional secretarial work has fallen on Mrs. E. Collins and we thank her for the way in which she has done this for three years.

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