Mc Gill University

The Meaning of Diabetes Mellitus to the Patient With Special Reference to a Group of Twenty-Five Patients at the Royal Victoria Hospital 1942-43

A Thesis Submitted to
The Faculty of Graduate Studies and Research
In Partial Fulfillment of the Requirements
for
The Master's Degree in Social Work
by

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PREFACE

The writer was fortunate in being given permission to collect the data for this thesis on the Diabetic Service of the Royal Victoria Hospital. To Dr. E. H. Mason, Chief of the Diabetic Service who made this possible, the writer wishes to express her gratitude for his interest and help both in 1942-43 and in 1950. The writer also wishes to acknowledge the graciousness of Mrs. H. A. Paice, former Director of the Social Service Department in permitting the study to be done within the Social Service Department. We are also grateful to Miss Jean Trenhome, Head Nurse Ward K, for her willingness to help at all times both now and when the study was first undertaken. To Miss Large, Chief, Dietary Department, is also due sincere thanks in providing a dietitian for consultant on both occasions.

To Miss Elizabeth P. Grundy, faculty advisor in 1942-1943, the writer extends much appreciation for her guidance and untiring efforts. In 1950, we are happy to add to the list of acknowledgements, Mr. F. R. Breul, faculty advisor who has greatly helped the writer to reorganize this thesis, for more clarity and effectiveness.

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CHAPTER I

Purpose. -

Diabetes Mellitus is a chronic disease which requires active participation by the patient in order for treatment to be effective. Because of the responsibility which must be placed upon the diabetic and the nature of the symptoms of the disease as well as its complications, it is reasonable to expect that such an illness would create special problems for those who have it.

The provision of adequate instruction to permit diabetics to carry out the treatment prescribed is a prime requisite. Some degree of intelligence is necessary to absorb the instruction given. However, it is reasonable to expect that there is more than intelligence involved in the day by day management of a diet and, in the injection of insulin for those who take it. Disruptions in family living or problems at work could conceivably occur. Environmental and cultural factors may present obstacles to treatment. It seems probable too that the patient's attitude towards his illness and the effect that treatment has on his life is the key to his success or failure in making a good adjustment to the diabetic regime. Hence, the writer undertook this study with the twofold purpose of gaining an understanding of the personal and social problems of the diabetic and of discovering ways in which he might be helped

to overcome them.

Scope and Limitations. -

Emphasis is placed upon the role of the medical social worker. Her role is distinct from that of the physician as she does not diagnose or recommend treatment for the illness. Her contribution to the patient's treatment is made after diagnosis when the patient is confronted with the task of following a diet and of taking insulin. By means of the case work interview, she evaluates the social factors which have bearing upon the patient's ability to carry out a treatment regime. Her interest is in the area of interpersonal relationships and the patient's capacity for adjustment to new life experiences and particularly, his capacity to adjust to the new experience of being a diabetic. Her treatment is based upon a relationship with the patient and the goal is to enable the diabetic and his family make a satisfactory adjustment. If environmental factors present obstacles to treatment, the medical social worker mobilizes community resources best suited to the needs of the individual patient.

This study is focused upon a group of diabetics who were hospitalised, therefore, the problems encountered by diabetics attending the Diabetic Clinic are beyond its scope. While it may be anticipated that the patients' attitudes to treatment and the illness itself would be similar to those expressed by the group under study, the nature of

the clinic setting and the resources provided in the Diabetic Clinic to help the patients manage their diabetic regime might bear evaluation in a separate study.

In 1943, this thesis was submitted as a requirement for the Diploma in Medical Social Work awarded by the then Montreal School of Social Work. It is re-submitted in 1950 in partial fulfillment of the requirements for the degree of Master of Social Work, McGill University. Wherever possible, changes in treatment and the teaching of the patients on the Diabetic Service, Royal Victoria Hospital[1], have been recorded and explained in relation to the situation which existed in 1943. The writer has discovered that the previous study has been used by students at the McGill School of Social Work for orientation on the meaning of diabetes to the patients. The Dietary Department, Royal Victoria Hospital uses the study in teaching student dietitians the social component in diabetes. On occasion, medical students have expressed interest in reading it for the same reason. While it should be especially useful to students in a school of social work, the writer hopes that the revised thesis will continue to be useful to the student groups mentioned and also to the nursing students for whom individualisation of the patient is also important.

Method and Collection of Data. -

The Study was done in consultation with Dr. E. H.

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[1] - Hereafter referred to as R.V.H.

Mason, Chief of the Diabetic Service and with a member of Dietary Department appointed for that purpose. In order to permit random selection of patients, every patient admitted on and after December 8, 1942, to Ward K, the ward used by the Diabetic Service, Royal Victoria Hospital, whose diagnosis was diabetes mellitus, was included until a total of twenty-five was reached. The only exception was a baby, thirteen months old whose parents were not available for interview. The writer included those patients with a new diagnosis of diabetes and those with a diagnosis already confirmed.

Because the case study method was used, the findings do not lend themselves to statistical analysis. The writer has used the cases to illustrate the varied problems which diabetics experience but not in such a way as to try to prove that such problems can be expected to occur for every diabetic. Case work with these patients was limited to one interview, if there were no immediate problems with which a medical social worker could help. Any patients found to need further help were carried by the writer alone or in co-operation with other social agencies. The basis for each first interview was the medical and special diabetic record of the Royal Victoria Hospital. If a case were already active with a worker in the Social Service Department, the data were secured, as far as possible, through the worker concerned. All cases were registered with the Social Ser-

vice Index. Records available in other social agencies were consulted as well as social case records in the Social Service Department, Royal Victoria Hospital.

Plan of Analysis. -

Chapter II presents a brief summary of the nature of diabetes, its symptoms and treatment and the extent to which the diabetic must participate in treatment. This is background information to orient the reader in considering the social problems associated with the disease which are mentioned in later chapters. The following chapter presents certain information about the patients which serves to identify them as a group and includes age, sex, and location in the city or elsewhere. The significance of religion, ethnic groups and occupation is also considered in this chapter. Chapter IV is centered upon the medical history of the patient group. The role of heredity and age at onset are of general interest. Other aspects mentioned in this chapter, attitude to previous treatment, and the effect of symptoms, complications and other diagnoses need to be considered to understand the diabetic better. The next chapter contains the writer's findings regarding the problem which the patients encountered in managing a dietary regime. In this chapter, we have considered the cost of the diet, the need for further instruction and personality problems in adjustment. Chapter VI concerns insulin and includes a consideration of cost of insulin, accuracy of measurement, fear of

injections and insulin reactions, the difficulties encountered taking insulin at work, and those factors underlying poor management of the disease as well as personality changes which may occur. The chapters on diet and insulin include a summary of the use of diet and insulin in treatment, and a description of the method of instruction used at the R.V.H. In Chapter VII, we have attempted to identify the various attitudes to and the kind of problems encountered in the experience of our patients as diabetics. Chapter VIII is devoted to a discussion of the medical social worker's role in treatment. This is done by means of two case illustrations. The last chapter contains the summary and conclusions..

CHAPTER II

The Disease and its Treatment

Diabetes mellitus has been recognized as a disease entity since the time of Ancient Greece when Artaeus first used the term 'diabetes' meaning a siphon, observing that it was "a wonderful affection, melting down the flesh and limbs into urine". To-day through diligent clinical and laboratory research, medical science has found an endocrine gland chiefly responsible and has classified the disease as to symptoms and treatment.

Although it has not been possible to find the specific cause of the disease, the pancreas is the endocrine gland associated with diabetes mellitus and, more particularly, the tiny islet cells within the pancreas known as the Islands of Langerhans. The external secretion of the pancreatic juice acts upon the protein, fat and carbohydrate which reaches the stomach as food. It is the internal secretion of the Islands, the insulin, which is the controlling factor in the utilisation of carbohydrate in the body. "Diabetes may be defined as an hereditary disease, characterised by an increase of sugar in the blood and the excretion of sugar in the urine; it is dependent upon the loss or decrease of insulin secreted by the Islands of Langerhans and it is functionally interrelated with other endocrine glands, particularly the pituitary

but also the adrenal, thyroid and the liver". (I)

There are certain conditions which aggravate the disease to turn a potential diabetic into an actual one, or a mild diabetic into a severe one. Overweight is always regarded as one of the most dangerous predisposing conditions. Infections of any kind or gall bladder disease can cause a flare up. Patients who have hyperthyroidism may be found to have abnormally high blood sugars. Undue stresses and strains upon the individual are important considerations. Even dietetic treatment by low carbohydrate diets and starvation may aggravate the disease or, in the case of no treatment, poor food habits. Underlying these factors is a predisposing tendency which follows hereditary patterns.

Apart from the rise in blood sugar level and the sugar in the urine, the symptoms of the disease are often considered to be indications of a physical ailment, although all symptoms do not appear in each patient and in some patients, may not appear at all. In order of frequency of occurrence, the symptoms are as follows: loss of strength, polyuria, (frequency of urination) polydipsia, (increased thirst) polyphagia, (increased hunger) and itching, both local and generalized. Other symptoms may arise from complications such as, carbuncles, gangrene, pain in the extremities, obstinate eczema and vascular disease.

(I) E. P. Joslin, H. F. Root, P. White, A. Marble, The Treatment of Diabetes Mellitus, Lea and Febiger, Philadelphia, 1940 p. 18.

Even as late as the beginning of the twentieth century, there was little that could be done for the diabetic patient. "At the beginning of 1914, the outlook for diabetics was depressing. The statistics of the Massachusetts General Hospital showed that in the preceding year, for each 100 diabetics admitted, 28 were discharged dead, a record which duplicated the experience of the hospital between 1824 and 1898. Physicians dreaded to place their patients in an institution lest the treatment prescribed prove more disastrous than that adopted by the patient's fancy. Surgeons dodged the diabetic, while obstetricians were out and out afraid of diabetes and urged pregnant women to have abortions. The neurologist and the dermatologist would throw up their hands at complications within their respective spheres and exclaim: "Cure the diabetes and then we will help the patient". (I)

With the isolation of insulin by Banting and Best in 1922 at the University of Toronto Laboratories and the subsequent use of it in the treatment of diabetes, a new lease on life was given to the diabetic. Yet the insulin, although it came as a godsend, as Joslin said, does not replace the basic dietary regime. Mild cases may be controlled by diet alone but the more severe cases require insulin treatment as well. Diabetes remains a chronic illness none-

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(I) E. P. Joslin, "Banting Memorial Address" Proceedings American Diabetic Association, Cleveland, Ohio, June, 1941, p. 124

theless, and once treatment is instituted, it continues to the end of the patient's life.

In addition to this treatment which becomes a part of the patient's day to day living, there are certain rules of hygiene of which a diabetic patient is advisedly aware. To prevent infections, his skin and teeth must be kept clean and the skin free of cuts and cracks. He must watch his feet for the development of gangrene. To permit a more liberal diet, exercise is encouraged as well as regular bowel habits. A rest for one hour a day and eight hours sleep is also recommended.

Although it is the physician who makes the diagnosis and prescribes the diet along with the necessary amount of insulin, the patient is the unknown quantity who inevitably helps or hinders the treatment process. He is the one who must be responsible for maintaining good hygiene and taking enough exercise. In the last analysis, the patient has the responsibility for securing and eating the prescribed diet, taking the insulin and testing his urine for sugar. If he takes insulin, he has to be aware of the possibility of insulin reactions, know the signs and how to counteract the reaction, as well as the way to avoid another the next day. He needs to be aware of the time at which each kind of insulin might cause a reaction and adjust the dosage accordingly. Acidosis, (diabetic coma) which occurs if there is a disregard of diet, or, too little or no insulin, or if the patient has an infection, is another complication of which

the patient should be aware. The diabetic should be able to grasp the importance of well regulated diabetes in slowing up the less spectacular but inevitable process of degeneration of the vascular system which progresses more rapidly in the diabetic than in the non-diabetic. For the young diabetic, this is a preventive aspect which cannot be minimised as such changes lead to early development of cataracts, blindness from hemorrhages in the eyes, arteriosclerosis, high blood pressure and kidney disease.

It is recognized in the best centres of diabetic treatment that a period of hospitalisation is the most helpful way to launch a new diabetic on treatment[1]. More complicated laboratory tests to aid the doctor in establishing control can be done, and it gives the patient an opportunity to become more familiar with what will be required of him. Joslin says that before a diabetic patient is discharged from the hospital he should be able to:

1) test his urine for sugar
2) record his diet
3) measure out his prescribed dose of insulin and know where to inject it.
4) state dangers of: a) too much insulin
   b) its total omission
5) care for his feet and know why
6) fill out his identification card[2]

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1 - This is done as often as bed capacity permits at the R.V.H.

2 - E.P. Joslin, A Diabetic Manual, Philadelphia, 1941, p. 41

Once the diagnosis is made and treatment established in this way, the responsibility for maintaining control falls upon the patient. If he fails, he may develop complications. Some of these are painful and unseemly; they may require long treatment and in some instances surgical attention. Even though a patient may be controlled over a period of years, an unforeseen complication may arise which requires hospitalisation. This is expensive and temporarily takes him out of his home and away from his work.

In the preceding paragraphs, we have indicated that the patient must know much about his diabetes and its management to maintain his health, and that he needs to have every opportunity for careful instruction about his part in treatment. Unlike an illness which responds to medications or surgery and is cured, diabetes requires a life-time of self-discipline from those patients who have it. Hence, it is logical in considering treatment to have an understanding of the patient as a person.

CHAPTER III

Who is the Patient

While most of the data for this study were collected by means of the interview, specific identifying information was also available from the medical records which the writer feels are worth discussion in this chapter. The age at which diabetes occurs and the distribution by sex have always been of interest to those engaged in statistical research on diabetes, as definite trends have been discovered. The location of patients in relation to the Royal Victoria Hospital seemed important to consider, since distance could be an obstacle for some patients in continuing regular, medical supervision. Cultural background has been found to play a part in a number of social problems not necessarily associated with illness. It appeared a factor of some significance in the case of a first generation Italian and it presented a problem in learning about management of diet for several other patients whose English was limited. Religion 'per se' can seldom be regarded as an isolated factor as it is often so much a part of the cultural life. This is particularly true of the orthodox Jews. It could not be counted significant in our study except in the case of one Roman Catholic patient, whose religion represented a means of punishment for past sins committed. There was a wide

variety of occupations in our patient group, but those who were in business for themselves were the patients whose occupation did interfere with good diabetic control. Since the diabetic must absorb a considerable amount of factual information about his illness and its treatment and learn to use written information which is provided, it would have been valuable to have been able to collect specific information regarding the education of each patient. It so happened that information concerning the patient's education was not easily available from the case work interviews. Therefore, it cannot be included here.

Age and Sex. -

Table I

Classification of 25 patients with Diabetes Mellitus according to age and sex, Royal Victoria Hospital, 1942-43.

Age (in years)	Sex		
	Both Sexes	Male	Female
Total	25	13	12
1 - 10	0	0	0
11 - 20	2	0	2
21 - 30	4	2	2
31 - 40	1	1	0
41 - 50	6	4	2
51 - 60	4	2	2
61 - 70	5	3	2
71 - 80	3	1	2

From Table I, we can calculate that the mean age for both groups, male and female, fell between the 45th and

50th years, with a mean age of 49.6 for the males and 46.7 years for the females. The scatter in ages gave the writer an opportunity to interview patients in practically all age groupings with the exception of those in the first 10 years of life and the females in the third decade of life.

Table I shows an almost even distribution of males and females, the former numbering 13, the latter, 12. These figures are not typical of the usual sex distribution in the incidence of diabetes. There has been a rise in the proportion of female diabetics which Joslin attributes to the greater stress on the investigation of women's health and the increase in the number of females in the older age groups.[1] In the National Health Study, (United States of America). 1935-1936, in which a total of 2,520,391 individuals was considered, 9,182 diabetics were found of which, 3,285 were males and 5,897 females.[2] The writer has not found new evidence to discount the above-mentioned distribution of diabetes.

Marital Status. -

Statistics show that the incidence of diabetes is higher in married than in single women.[3] Marital status is not believed to be significant in the male diabetic. In our patient group, the number of married or widowed men greatly outseighed the single men. A little more than half of the

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[1] - E. P. Joslin, H. F. Foot, P. White, A. Marble. The Treatment of Diabetes Mellitus, Philadelphia, 1940, p. 34

[2] - Ibid. p.34

[3] - Ibid. p.36

females were married or widowed.

Table II

Distribution of 25 patients with Diabetes, according to Marital Status and Sex, Royal Victoria Hospital, 1942-43.

Marital Status	Sex		
	Both Sexes	Male	Female
All Patients	25	13	12
Single	7	2	5
Married	12	9	3
Widowed	6	2	4

Geographic Location. -

For the most part, the patient group came from an area which was not too far distant from the hospital and therefore it could not be said that distance represented an obstacle to treatment. One patient, Case No. 2. was an exception.

This man was an elderly Russian Jewish tailor, 70 years of age, who had diabetes for 23 years. He lived in the "North End" of the city, but the journey to and from his tailor's shop required one half hour morning and evening. If he came to the hospital to see the doctor, this visit required a similar amount of time. To keep his clientele, he went to work early and came home late. He found the travelling very tiring, especially at night, for it was often nine o'clock when he arrived home. Before he could eat dinner, he had to wait another half hour after taking his insulin.

All these things were time consuming. It irritated

him because time was precious now that he had become an old man. His vision was weakened, and his hand was no longer as skillful as it had been. His attendance at Diabetic Clinic was limited by the demands of his work and the distance from his shop. He agreed to hospitalisation only when his diabetes was so badly out of control that he was unable to continue working.

Table III

Classification of 25 patients with Diabetes Mellitus, according to Place of Residence, Royal Victoria Hospital, 1942-43.

Place of Residence	No. of Patients
Total	25
City of Montreal Wards	21
St. Louis	4
Laurier	3
St. Jean	3
Rosemount	2
Cote St. Paul	1
St. Jean Baptiste	1
St. Michel	1
St. Henri	1
St. George	1
Ste. Cunegonde	1
Villeray	1
St. Denis	1
Mercc	1
City of Verdun	1
Other	3
Sutton	1
St. Pierre Baptiste	1
Malone, N.Y.	1

Table III lists the sections of the city and other places than Montreal from which the group of patients came. Twenty-one of the total group lived in the city of Montreal proper. The majority of this number lived in an area quite close to the Royal Victoria Hospital, known popularly as the "North End". Three patients lived in other city wards known as Ste. Cunegonde, Cote St. Paul and St. Henri, and a fourth in the City of Verdun. These areas are in the south-western section of the city. It can be said however, that all communities mentioned are similar in that a large percentage of labourers as well as business people and white collar workers live in them.

The patient from upper New York State travelled to Montreal as a last resort because she could not find expert medical care near her home to control her diabetes. The two patients from Rural Quebec were not able to travel the distance to the hospital frequently. One of them, Case No. 8,[1] seldom visited the city as his father's farm was in an isolated area; therefore he did not have regular medical supervision at the R.V.H. He seldom consulted a local physician, and when he was admitted to the R.V.H., at the time of this study, his diabetes was not under good control.

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[1] - Infra pp. 78, 100.

Ethnic Groups. -

Because family customs, attitudes to medical care, and eating habits are often influenced by the cultural patterns to which the patient belongs, we have included a further classification of our patients according to ethnic group in Table IV. Ethnic is used here as a descriptive term for cultural background.

Table IV

Ethnic Classification of 25 patients with Diabetes Mellitus. Royal Victoria Hospital, I942-I943

Ethnic Group	No. of Patients
All Patients	25
Jewish	9
French Canadian	3
Italian	2
Syrian	1
Ukranian	1
(a) Unspecified	9

(a) Those patients to whom no particular ethnic grouping could be given due to lack of data in the hospital records, may be designated British. Two were Irish; one was born and lived in the U.S.A.

Discounting the nine patients grouped as "unspecified", it is evident from Table IV that there was a greater number of Jewish patients than any other single group, nine as compared with three French Canadians. This can not be explained on the basis of population. In 1941, the Island of Montreal and Ile Jesu had a total population of 1,020,018; the French Canadians numbered 619,785, while the Jewish community numbered 58,031.[1] There are two possible explanations for the greater number of Jewish patients. The first is that the R.V.H. is situated very near the oldest Jewish community which would mean that a higher percentage of Jewish patients as compared with French Canadian patients would use the hospital. Secondly, it has been proven that there is a high incidence of diabetes among Jewish people. The reasons given are varied, including intermarriage, type of occupation, social status, and a tendency to become overweight.

For a small random group, our patients represented a variety of cultural backgrounds. Because of an unfamiliarity with the English language, several patients were unable to grasp the dietary instruction given at the hospital. With one exception, the patients' problems in maintaining good diabetic control could not be attributed to family customs which interfered with treatment. Case No. 21 was the exception. The writer does not wish to imply as a consequence, that no importance should be placed upon the diabetic's eth-

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1 - Province of Quebec, Statistical Year Book, 1941, p.78.

nic group. We consider that one case in a total of twenty-five with outstanding problems of this nature, can be an indication that there will be other diabetics with similar problems which need to be recognized. It is likely that the patients who have this kind of problem will be first generation Canadians. With the post-war influx of immigrants, a consideration of the patient's cultural background may be even more essential.

> Case No. 21, a retired Italian, 73 years of age, had been a diabetic for 11 years. The nursing staff found him a placid, cooperative patient who did not demand attention and who took his meals and insulin without complaint. Nevertheless, when we interviewed him and his daughter, we found that his insistence upon Italian customs and his desire for the old life in Italy had created serious problems in the family group and in the management of his diabetes.
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> The patient expressed resentment towards what he called the "Canadian" customs of family life. To him, the Italian father was the head of the family, not only as the breadwinner but as the person who should make decisions for his children no matter how old they were. Now, he was forced to become a listener in the family affairs. Once his children had grown up and gone to work, they would not listen to their old father any more. He had begun to long for the old life in Italy, especially recalling the fruit trees from which he had been able to pick all he wanted as a youth.
>
> His home was a small, comfortably furnished flat. Two younger daughters worked to support the family, and his eldest daughter remained at home to look after the house, to attend to his personal needs, to prepare his diet and to give him his insulin. This daughter cared for him as well as she could, but her time was given grudgingly as she resented having to remain at home and curtail her own social activities. While the other sisters could have helped more, the patient preferred the eldest daughter to look after him.
>
> While he ate at the hospital without complaining, we learned from his daughter that he often refused food at home because the meals were too monotonous. He wanted more Italian type foods which were not avail-

able in the stores due to war time restriction of imports.

About the time he developed diabetes, this patient had lost his grocery business. He had grown older and the end result was that he had lost his place of authority in the family. The only demands he could make were for his own personal needs. While it cannot be said that his cultural background wholly accounted for his attitude towards diabetic treatment at home, it did play a significant role in the extent to which he could accept his daughter's efforts and the food that was available.

Religion. -

We have included religion as well as ethnic groups as it is possible that a patient's attitude to his religion and its teachings can affect his personal adjustment and secondarily his management of his diabetes. Table V lists the patients according to their religious affiliations.

Table V

Religious Affiliations of 25 patients with Diabetes Mellitus, Royal Victoria Hospital, 1942-43.

Religious Affiliations	No. of Patients
Total	25
Roman Catholic	11
Hebrew	9
Protestant	4
Church of England	3
United Church	1
Syrian Orthodox	1

Almost one half the number were Roman Catholics. This is not surprising as 1941 statistics indicated that Roman Catholics numbered 2,463,160 in a total population of 2,874,255 in the province of Quebec.[1] Only three patients were French speaking; this small number, in comparison with that for the English Catholics, was possibly due to the preference among French Canadians for their own hospitals.

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[1] - Province of Quebec, Statistical Year Book, 1941 p. 68.

To illustrate how a person's religious life and attitude towards church teachings can affect personal adjustment, we present Case No. 16.[I]

> A member of the Roman Catholic Church, this patient, a single woman, 42 years of age, had been a diabetic for nine years. She had evidently accepted the teachings of her Church but experienced no comfort from prayer or the Sacraments. She had an extreme amount of guilt about her earlier behaviour and that of her parents, for she had been an illegitimate child and had become an unmarried mother herself. She had stayed 13 long years in a Catholic maternity home, paying penance for what she considered an unforgiveable sin. Unfortunately, she was apparently given little understanding or encouragement to try to make a more satisfying life for herself outside the institution. Emphasis placed upon meditations about death inspired her with a fear of the next world. In her anxiety about her uncontrolled diabetes, she feared dying because of the many sins she had committed and for which she would have to account, despite penance paid. At our hospital, she felt it obligatory to go to a nearby chapel to pray. Because she fell in the street the day she neglected to go to Church, she was sure she was being punished.

Occupation. -

Our patient group had a wide range of occupations which are listed in Table VI. The largest category of wage earners, male and female, were those designated unskilled. However, there was a considerable spread of occupations represented. In general, it can be said here that the patients in business for themselves which involved waiting on the public and irregular hours were the group whose work interfered with good diabetic management. This was true of Case No. 2[2], already mentioned. The two following cases

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[I] - Infra p. 31
[2] - Supra, p. 16.

Table VI

Distribution of 25 Patients with Diabetes Mellitus According to Occupation and Sex, Royal Victoria Hospital, 1942-1943.

Occupations	Sex		
	Both Sexes	Male	Female
All Occupations	25	13	12
Wage Earners	9	7	2
Skilled			
Butter manufacturer	1	1	
Semiskilled			
Telephone cable splicer	1	1	
Unskilled	7	5	2
Factory worker	3	3	
Laborer	2	2	
Railway coach cleaner	1		1
Domestic	1		1
Business own account	3	2	1
Tailor	1	1	
Restaurant proprietor	1		1
Bowling alley proprietor	1	1	
Business employee	2	1	1
News agent	1	1	
Sales clerk	1		1
House work	6		6
Farmer	1	1	
Student	1		1
Retired (a)	3	2	1

(a) Of these, one male and one female patient were old age pensioners.

also demonstrate how patients in business for themselves find that their work interferes with a diet and insulin regime.

> Case No. 25, a 45 year old, married, male patient, came to our hospital for regulation of his diabetes which he had had for 7 years. He lived in a rural area and worked for his brother-in-law who owned a butter factory and store combined. His brother-in-law was the executive head and the patient the business manager who served in the store as well. Although he lived above the store, he found this tiring work, especially since his eldest son had left to join the Armed Forces. The patient believed that the increase in work had been partially responsible for his developing symptoms of uncontrolled diabetes during the past year. Like other diabetics obliged to serve customers in a store, he found it difficult to regulate his meals with his insulin because he had to serve while he was eating.

> Case No. 5[2], a 56 year old Jew, was admitted to the hospital unable to walk because of inflammation of both small toes which were exceedingly painful. He worked in a bowling alley owned by himself and his brothers. In his desire to provide for his family, his satisfaction in the work, and with an intense pride in being able to secure a college education for his children, he worked long hours, often 18 to 20 hours a day. Most of this time he spent on his feet and often he carried heavy crates of soft drinks. Despite his extreme fatigue, it was not until he was unable to walk that he would submit to hospitalisation.

Later chapters include case illustrations in which the kind of occupation has an effect upon or is affected by diabetic treatment.

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[2] - Infra, pp. 55 and 86.

CHAPTER IV

The Patient and His Medical History

In the previous chapter we were considering the patient in relation to his social setting in order to determine the significance of such factors as location, cultural background, religion, and occupation to diabetics. Since we are dealing with a specific medical diagnosis, it is also imperative to be familiar with certain aspects of the disease in order to appreciate its effect on the people who develop it. General considerations such as the role of heredity and the age of onset of the disease have been included as they are of importance from a preventative standpoint in early diagnosis of diabetes. The duration of the disease, if long, may have served to increase the diabetic's confidence in his ability to maintain good health, but this confidence is not always justified. We have found that diabetics of long standing, as well as those newly diagnosed, can make mistakes with diet and insulin or, if they have a negative attitude, they are not successful in following the prescribed treatment. Complications may occur or symptoms reappear if the diabetes is not properly controlled. As the diabetic grows older, other diagnoses may cause him more discomfort than the actual diabetes, with the result that he neglects his diabetic care and only seeks treatment

for the other illness. His attitude to previous medical treatment for his diabetes may also determine his willingness to cooperate in the treatment prescribed.

It should be pointed out here that the medical social worker is particularly interested in knowing the patient's attitude to previous treatment, the duration of the illness with its symptoms and complications, along with the patient's attitude towards other illnesses which may have developed. Before she interviews the patient, the medical social worker reviews the medical record and be clear about the patient's condition and about the treatment prescribed by discussing the situation with the doctor concerned.

Heredity. -

Studies of diabetic children have given evidence that the hereditary factor in the disease is basic, as neither obesity or acute infection can account for the incidence of it. Joslin presents four facts which can be used as evidence in favour of the theory of the inheritance of diabetes.[I]

1) The almost simultaneous occurence of the disease in sets of similar twins.

2) The greater incidence of diabetes in the blood relatives of diabetics than in those of the controlled group.

3) The demonstration of mendelian ratios of the recessive type found in a large series of causes selected at random.

4) Demonstration of expected ratios in presumably latent cases.

[I] - Joslin, op. cit. p. 48.

Further eugenic considerations are presented by Joslin which seem appropriate to insert here.[1]

1) If both parents have diabetes, the child will almost certainly have it.

2) If one parent has it and the other has not but, in the family of the non-diabetic parent, the father or mother has it, there is an even chance for the non-diabetic parent to be a carrier. If a child of this union has established the fact also that the non-diabetic is a carrier, it shows that all the other children stand a fifty per cent chance of developing diabetes. If a mother or sister of a non-diabetic patient has diabetes, he may or may not be a carrier, so the chances of the child developing it are less than even. If a remote relative of the normal parents have it, chances are possible but not probable.

3) If neither parent has diabetes but the disease has occurred in one of their parents, both are carriers and the chances of the child developing diabetes are one in four. If the brother or sister of the parents has it, the parents are probably carriers and the chances are still one in four. If the child develops diabetes, this shows that the parents are carriers and chances of the other children in the family developing it are again one in four.

Only 8 of our patient group, gave evidence of familial and hereditary incidence in their diabetic history. The sources of the information were chiefly the medical history in the medical record and references made to diabetic relatives during the course of research interviews. The accuracy of the data thus collected depends on the reliability of the patient's statement. Older patients often lack such information about their relatives. More careful questioning might have revealed some forgotten relative where no history of diabetes within the family is given.

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[1] - Ibid p. 59.

Table VII

Incidence of Diabetes Mellitus, Hereditary and Familial, in 8[a] of 25 Patients, Royal Victoria Hospital, 1942-1943.

CASE NO.	REPORTED INCIDENCES			
	Heredity[a]		Familial[b]	
Both	7			8
6	_____		Sister	1
8	_____		Cousin	1
9	Parent	2	Sisters	2
13	_____		Siblings	2
17	Aunt	1	_____	
18	Grandmother	1	_____	
	Mother	1	_____	
22	Mother	1	Sisters	2
23	Mother	1	_____	

(a) includes: parents, grandparents, uncles, aunts, children
(b) includes: brothers, sisters, cousins

Of the twenty-five patients, only eight had a family history of diabetes. Among the eight, the female relatives were predominantly the carriers of the hereditary tendency towards diabetes. Of the eighteen patients, both male and female, classified as married or widowed, fourteen had families ranging from one child to nineteen. Even when the

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[a] - Statement of patients taken from medical history.

children were in the third or fourth decade of life, no history of diabetes was given.

Age and Onset. -

Contrary to popular opinion, diabetes is not exclusively a disease of the aged. According to Table VIII prepared for Joslin by the statistical bureau of the Metropolitan Life Insurance Company, we see that the onset of diabetes appears higher in the fourth, fifth and sixth decades for both males and females.[I] There is a falling off in incidence in the earlier and later decades of life.

Table VIII

The Age and Onset of Diabetes Mellitus
(Experience of E.P. Joslin, 1936-1938)

Age in Decades	Per cent, each decade 1936-1938	
	Males	Females
Total	100.0	100.0
1	6.7	4.6
2	9.0	6.2
3	8.6	6.2
4	13.1	11.0
5	19.8	21.0
6	22.1	28.1
7	16.2	18.1
8	4.3	4.4
9	0.2	0.4
Number of cases	1265	1622

If we make a comparison with our twenty-five patients by arranging the nine decades into groups of three, it can be

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[I] - Joslin, op. cit. p. 30.

seen from Table IX that the majority of male patients do fall between the fourth and sixth decades of life as in Joslin's table which was compiled from the same group of patients as that used in Table VIII.

Table IX

Age and Onset of Diabetes Mellitus

	Per cent appearing in every three decades of 25 patients, R.V.H., 1942-43		Per cent appearing in every three decades, experience of E.P. Joslin, 1936-38	
Decade	Male	Female	Male	Female
Total	100.0	100.0	100.0	100.0
1 - 3	38.5	50.0	24.3	17.0
4 - 6	61.5	33.3	55.2	60.1
7 - 9	-	16.7	20.7	22.9

The female patients do not follow the same trend as in Joslin's table, but this cannot be counted significant statistically because of our very small number in comparison with his group of patients.

The age at which an individual undergoes an experience determines to some degree the way in which he will meet it. The age at which diabetes is discovered also brings different problems for certain age groups. For the adolescent who develops diabetes when he is struggling to achieve independence and to make happy social relationships, a diabetic regime represents a handicap.

The older person finds that the responsibilities of home and family must be integrated with treatment. The onset of diabetes in the sixth or seventh decades of life may cause the patient considerable inconvenience and disrupt his daily routine. Frequently, it is another member of the family who takes responsibility for managing the diet and insulin.

Duration. -

Not only does the age at which a patient develops diabetes colour his response to treatment, but the length of time he has had the disease can also be significant. The length of time that the individuals in our group of patients had diabetes is shown in Table X.

Table X

Duration of Diabetes Mellitus in 25 Patients, Royal Victoria Hospital, 1942-43.

Duration of Disease	Number of Patients
Total Cases	25
Less than 1 year	9
Under 1 month	8
1 - 2 months	1
Under 5 years	4
1 - 2 years	3
2 - 3 "	1
3 - 4 "	-
4 - 5 "	
5 to 25 years	12
5 - 10 years	5
10 - 15 "	3
15 - 20 "	2
20 - 25 "	2

Change of financial status may occur years after the patient has developed diabetes and this may create a problem in the purchase of the diet. The diabetic may have his disease four or five years and still have severe insulin reactions or he may resist adhering to a careful diet regime. The three following chapters regarding the problems which can be associated with the diet, the insulin and the total effects of the disease itself give numerous illustrations of what happens to diabetics who have had the disease for a period of years.

In Table X it can be seen that there were 8 patients who had not had diabetes for longer than a month. They had been diagnosed outside the hospital and were then admitted for regulation of diet and insulin. The writer wishes to make special mention of the new diabetic here as he is usually anxious and insecure during the induction period at the hospital when he contemplates taking the responsibility for his insulin injections and the preparation of his diet. Case No. 12[1] is a case in point. The medical social worker can be helpful to the new diabetic by accepting his anxiety and insecurity, by encouraging him to express his fears and by finding ways to build up his self-confidence so that he is better able to manage the responsibilities he has yet to face.

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[1] - Infra, p. 76.

Previous Medical Treatment. -

Table XI indicates that four fifths of our patient group were under the care of the Royal Victoria Hospital for regular medical supervision of their diabetes. The fact that only two patients were treated by local physicians is not surprising as, in large cities like Montreal, medical care for diabetics is usually centered in hospitals.

Table XI

Source of Previous Medical Treatment of 25 patients with Diabetes Mellitus, Royal Victoria Hospital, 1942-1943.

Previous Medical Treatment	Number of Patients
Total	25
Total Hospitals	23
Royal Victoria Hospital	20
Other Hospitals	3
Private Physician	2

The significance of knowing the source of previous treatment is obvious. In the first place, if a patient has been instructed in a diabetic regime by another physician or in another hospital, it is important to discover what he understands about the disease and to find ways to supplement his knowledge with whatever new information is necessary. Of equal importance is the understanding of his attitude to previous treatment which may make him fearful of new procedures or resistant to a different regime. It may also be diffi-

cult for certain patients to develop a good relationship with the doctors at the hospital if they still have confidence in another doctor or hospital whose recommendations for treatment were not the same. Such was true of Case No. 9.

> This man, a 45 year old Jewish news agent, married and working for a railway, had been diagnosed previously at another hospital. He had treated his diabetes lightly and had disregarded the diet he was given. While it seemed obvious that little had been achieved at the other hospital in impressing him with his responsibility for his diabetic treatment, he had a high regard for the physician concerned. Hence, he had little confidence in our doctors, and he resisted the idea of insulin injections and making careful plans for his meals on the train as nothing like this had been asked of him before. Distrust of his new medical regime was augmented by the fact that the pains in his back and legs for which he was being treated also were not improving. Despite these feelings, he submitted to the prescribed treatment on the ward but he still had no conviction that our doctors knew how to treat his diabetes.

Symptoms. -

We have already listed the major symptoms of diabetes in Chapter II, but we are mentioning them again briefly here. Diabetes is not as well known as other diseases such as cancer or tuberculosis. Therefore, it is not surprising that some patients have symptoms of diabetes for years without recognizing the need to seek medical care. Perhaps one reason is that there is no pain involved and people generally tend to avoid going to the doctor until they have severe pain which they no longer can tolerate. However, there are those patients who feel weak and have increased thirst and urination over a period of time who do seek medical advice and find they have diabetes. It is most important for the diabetic to be taught the symptoms of diabetes because the same symptoms do recur

if his diabetes becomes uncontrolled. He then learns the specific danger signals and can report to the doctor when the symptoms are noted.

The list of the symptoms experienced by our patient group is shown in Table XII. Polyuria and polydipsia, polyphagia and loss of strength are the most common symptoms according to Joslin.[I] On the whole, our list of symptoms is one which would be expected in a group of diabetic patients.

Table XII

Symptoms of Diabetes Mellitus in I8[a] of 25 Patients with the Disease, Royal Victoria Hospital, I942-I943

Symptoms	Percentage of Patients
Weight loss	88.7
Polyuria	72.3
Polydipsia	66.7
Weakness	38.9
Polyphagia	I6.7
Skin Conditions	II.2
Pain in Extremities	II.2

(a) Seven of the patients' symptoms were not recorded in the medical history due to long duration of the disease.

Complications. -

The goal of diabetic treatment is the highest standard of health within a minimum of complications. If the diabetes is neglected, complications are certain to occur.

I - Joslin, op. cit. p. 272

Sometimes they occur despite good diabetic management by the patient and regular medical supervision. Table XIII indicates the complications experienced by our patient group.

Table XIII

Complications of Diabetes Mellitus Found in 25 Patients, Royal Victoria Hospital, 1942-1943.

Complication	Number of Patients
Acidosis	5
Gangrene	6
Without surgery	4
With surgery	2
Hypertension	4
Arteriosclerosis	3
Carbuncle	3
Infections	12
Foot	2
Toe	3
Finger	2
Hand	1
Thigh	1
Boils	3
Cataract	1
Thrombosis cerebellar artery	1

Complications as well as symptoms can lead patients to seek medical advice. As an example of this, several of our patients were diagnosed after seeking medical care for boils. Gangrene bears special mention because it is great-

ly feared by diabetics as it can necessitate the amputation of a part of the foot or a whole extremity. It is said to be due to the length of time without treatment and relates to age rather than to the severity of the disease. The loss of a limb is a serious handicap. Disturbances of vision such as cataracts and impaired close or distance vision, may prove trying for the patient, and they are serious obstacles to treatment if the person concerned cannot see to measure the insulin dosage. We have listed those complications which belong to the general group of vascular disease: hypertension, arteriosclerosis and thrombosis. If the diabetes is not kept under good control, the chance of developing one of these vascular diseases is increased. This is true for young diabetics as well as the old, as manifestations of these diseases develop in the early stages without the patient being aware of their presence. Acidosis is a result of extreme lack of control for which hospitalisation is always indicated. It occurred in one fifth of our patient group.

The medical social worker must be aware of the effect of complications on the lives of the patients. It may mean that she will need to help rehabilitate a diabetic who has the double handicap of his disease and an amputation, or one who is handicapped by poor vision. If she can help a diabetic to overcome his resistance to treatment or provide resources which make treatment possible, the medical social worker will also be helping to guard against the develop-

ment of unnecessary complications.

Other Diagnoses. -

Twenty of the twenty-five patients studied had diagnoses other than their diabetes to contend with. The list in Table XIV includes all illnesses which cannot be associated with diabetes but which exist alongside the disease.

Tabel XIV

Other Diagnoses of 25 Patients with Diabetes Mellitus, Royal Victoria Hospital, 1942-1943.

Diagnosis	Number of Patients
Dental Caries	5
Osteoarthritis	1
Suppurative Arthritis	1
Chronic Tonsillitis	1
Chronic Bronchial Asthma	1
Seborrhoeic Dermatitis	1
Splenomegaly	1
Chronic Nephritis	1
Early Prostatism	1
Renal Glycosuria	1
Pulmonary Tbc. (old)	1
Toxic Goitre	1
Bilateral Inguinal Hernia	1
Secondary Anemia	1
Fibroid Tumour	1
Constitutional Psychopathic Personality withReactional Depression	1

It can be seen that these illnesses are varied and that most of them at some time could be of major concern to the patients.

From the standpoint of treatment, it is important to know which illness is of major concern to the diabetic. While control of the diabetes may be considered the best thing which can be done for the patient medically, he may desire relief from another illness which is causing him pain and discomfort and for which he may have come to the hospital to be treated. As a consequence, the patient may not be greatly concerned about preparing to care for his diabetes better. Such an attitude will affect a patient's response to efforts made to regulate his diabetes or to teach him to take more responsibility for himself. Case No 1 illustrates this point.

> Patient was a 60 year old Syrian widow who had first come to our hospital in 1941, referred by a local physician with symptoms of weakness and weight loss. A diagnosis of Diabetes Mellitus was confirmed. At the same time it was found that she had generalised arteriosclerosis, hypertension and a skin condition known as seborrhoeic dermatitis. She was placed on diet and insulin, and it was thought that she understood how to manage both at the time of discharge.
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> In the interval before the present admission, she had remained indifferent to the idea of a diet and after one month had discontinued her insulin. She had not attended Diabetic Clinic because she said her knees were too stiff. The present admission had been necessary because of a painful swelling on the right side of her face following the extraction of a tooth. For the patient, this was the condition for which she wished to be treated. Of primary importance to her also was her painful, stiff right knee, which had bothered her the previous year. The knee pain was found due to osteoarthritis complicated by a chronic tonsillitis.
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> In appearance, the patient had an unhappy brooding expression offset by iron grey hair, high cheek bones, and

deep set eyes with drooping lids. She had a swarthy complexion and a discoloring dematitis around her ears. Before the patient was interviewed, the writer was aware that she had just been scolded on the ward for being "stupid" so that some resentment towards the hospital and the staff was expected.

This patient was resistant to having her diabetes regulated at the time as she had planned to come in to the hospital in the spring. She owned and ran a small restaurant and, as she felt her eldest son neglected it when she was away, she was anxious to return as soon as possible. The restaurant had become too great a burden for her so her plan was to sell the stock, close the store in the spring and then look after her health.

The writer discovered that this store represented a bitter disappointment to her as she had bought it for her youngest son who was her favourite. He had been sickly most of his life and he died of a blood dyscrasia in our hospital within a short time after the purchase of the store in June 1942. Since that time, the patient had grieved for her son and had neglected herself and her health feeling that life had very little in store for her now. She said: "I don't care what happens, living or dying, what is the difference". She also found herself more aware of her son's death in the hospital where he had died, so that she had no incentive to make an effort to learn more about her diabetes.

The patient thought she could take her insulin at home just as effectively as it was given her at the hospital. She disliked the enemas given at the hospital when she could regulate her constipation more comfortably at home with laxative pills. Afraid of infection in view of what had already happened, she wanted her two front teeth pulled. Her right knee caused her considerable pain at night especially, and this made walking difficult and uncomfortable. She had become discouraged with the medical staff because they were unable to ease this pain which to her was a far more incapacitating than her diabetes, and for which she primarily wanted treatment.

It is the writer's opinion that the patient's expectation in treatment and the amount of discomfort which another illness causes, needs to be understood by the social worker and the doctor during the treatment period. Then they may, together, find ways of helping him to understand the basic importance of diabetic control. It will be noted that the above-mentioned patient's personal and social problems had

left her with little interest in helping herself toward better health. This case, as well as other illustrations used later in this study, indicate that there is always more than one factor to be considered in understanding why a patient has not been able to manage good diabetic control.

CHAPTER V

Food is Life for the Diabetic

In the treatment of diabetes, the first and basic adjustment is in the diet which is modified to counterbalance the deficiency of insulin. Although the history dates back to approximately 30 B.C., it was not until Dr. Bouchardat (1806-1886) first suggested undernutrition that any attempt at dietary control was made.[1] In the late nineteenth century, diets were geared to partial starvation as the amount of carbohydrate given was limited to what the body could burn. A diabetic patient was a semi-invalid because the caloric content of his diet was necessarily inadequate. Vitamins and their importance in diet were not yet known. Mineral deficiencies were therefore marked because of the lack of milk, fresh fruits and vegetables. To-day it is t thought that the lack of growth in children of the pre-insulin era and the many complications were due to mineral deficiencies.[2]

While each individual has a daily food requirement for the maintainance of good health, Joslin says that the diabetic's diet should be not only equal to the diet of a

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1 - I.M. Rabinovitch, Diabetes Mellitus, (Toronto, 1933) p. 2.

2 - W.D. Sansum, "The Present Treatment of Diabetes Mellitus", American Dietetic Association Journal, (May, 1940) pp. 407-415.

healthy person but superior to it.[1] He also points out in the same study that the diet's components of carbohydrate, protein and fat should be selected from the best of their kind and that they should be balanced in relation to one another. These components should provide a full complement of amino-acids, of salts such as calcium to protect the bones, phosphorus which helps in the process of calcium metabolism, as well as iron and vitamins. The diabetic diet should contain more of each specific vitamin than a normal individual needs in order to avoid a condition known as avitaminosis which is a lack of vitamins essential to nutrition and normal body functioning.

To determine the diet, the doctor reduces the carbohydrate until there is no sugar in the urine and until the blood sugar reaches normal levels in proportion to the patient's own supply of body insulin. When the patient cannot produce enough insulin to allow for sufficient carbohydrate intake, then insulin is given to make this possible. The maintainance requirements have to be considered as well as the carbohydrate metabolism of the body. The three food constituents, carbohydrate, protein, and fat, vary for each individual and are calculated according to age, sex, height, weight and amount of activity. It is thought best for the diabetic to maintain himself at slightly below average weight. As much as ten per cent below the average is within the margin of safety. If the caloric value of the food intake is kept below normal over a period of time, it is found that the basal

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[1] - Joslin, op. cit. p. 212.

metabolic rate is lowered and hence the body's food requirement is decreased.[1] Calories are units of energy contained in foods. The number of calories needed for energy is well established but there are differences of opinion among physicians as to the optimum ratio of the three food constituents.

It is the practice at the Royal Victoria Hospital to admit all new diabetics and those whose diabetes is seriously out of control to the hospital for regulation. Before a suitable diet can be calculated, a number of laboratory tests are carried out. The urine is analysed for specific gravity, sugar, and the presence of diacetic acid. Blood sugar levels are determined at a specific time after a meal, or after a period of fasting, such as in the morning before breakfast. The blood is also examined for cholesterol which is usually higher than normal when the disease is not under control. Additional tests such as carbon dioxide combining power, and liver and kidney function studies are also part of the routine evaluation.

Testing the blood for sugar levels requires numerous blood samples which are taken from the veins in the arm. As a group, our patients found this daily procedure objectionable and uncomfortable since a needle is used as often as two or three times a day. Where the needle was inserted, painful bruises often occurred.

At the time of the study, in 1942-1943, a low fat, and high carbohydrate diet with a normal amount of protein

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1 - Frances Stern, Applied Dietetics (Baltimore, 1937), p. 197.

was used. An average discharge diet consisted of 250 grams protein and 50 grams fat. For those patients whose work required muscular activity and exercise, the caloric content was raised accordingly. Few patients were discharged on the average diet because the value of the three food components were shifted in order to control the diabetes and to maintain health.

In reviewing the components of the diabetic diet with the therapeutic dietitian at the time of revision in 1950, it was discovered that there were several changes worth noting. The diabetic diet used is still low in fat but the protein has been raised. An average diet now contains 90 grams protein, 50 grams fat, and 200 grams carbohydrate.[1] There are 20 grams more of protein a day which means an increased intake of meat. The carbohydrate may vary from 150 to 250 grams depending upon the activity of the patient. If the patient is under emotional stress, the carbohydrate is increased as the patient produces body insulin.

Such a diabetic diet contains all the necessary foods; milk, cereals, vegetables, fruits, meats, poultry, and eggs. A great variety of dishes is possible provided that the correct substitutions are made. No emphasis is placed upon the necessity of including these fruits, vegetables and cereals which supply the body with minerals and vitamins. Yet, it is considered that the diet given offers such a well-rounded selection of the necessary foods that the vitamin and mineral

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[1] - See appendix B, p. II8

requirement is taken care of. The present diabetic diet differs essentially from the normal person's diet in four ways only:

1. concentrated sweets are not generally used
2. gravies, fried foods and visible fat are avoided
3. definite portions of food are taken at regular hours
4. food is accurately measured

At the Royal Victoria Hospital, diabetic diets are usually geared to three or four meals a day. An approximate diet is used rather than a strictly weighed diet. In the approximate diet, average servings and standard measurements are used, such as a tablespoon or a cup, while the weighed diet is actually weighed on a scale to determine the exact number of grams of food. The weighed diet is used only for child diabetics or for patients with severe complications such as toxemia of pregnancy.

A. Dietary Instruction. -

Every diabetic needs to learn enough about his diet to understand food elements, their measurement, and how to substitute certain foods to add variety to his eating. The average person is seldom familiar with actual food values in terms of protein, fat and carbohydrate. Hence, it is most important that the diabetic be given the opportunity to learn the essentials of his diet so that he can follow the diet prescription correctly. The dietitian is the member of the medical team whose responsibility it is to find ways to

teach the diabetic and help him adjust his food habits to the diet prescription.

At the time of the study in 1942-1943, no nutritional history was taken at admission. Little was known, therefore, of the patient's daily average food intake at home or of his food habits. Individualised dietary instruction was limited to a review of the diet prescription in a brief interview at the time of discharge. It is the writer's observation that this is a poor time to attempt such instruction. The patient may be feeling quite insecure about how he will manage at home and so be unable to absorb factual data readily. The day of discharge is often a confusing time for the patient, because he is also confronted with instructions about insulin, follow up medical care and arrangements for travel to his home.

In 1942-1943, the main teaching was done by class instruction. Three one hour classes were held every week. All ward patients were required to attend, including those who did not prepare the food at home. The first class was devoted to cooking lessons with recipes for diabetic muffins, diabetic custard, diabetic mayonaise, and D-Zerta, a diabetic jelly with no food value. The second class included calculation of the diabetic diet and how food stuffs are classified as proteins, fats or carbohydrates. Their distribution during one day's meals and their conversion into calories was also part of this instruction. In addition the patients were taught what substitute foods could be used to give variety to the daily food intake. The third lesson was a review

of the second, with exercises in the choice of meals for an average discharge diet. Time was given at the end of each class for questions. As most patients remained in the hospital longer than a week, they had an opportunity for continued instruction. However, as the same classes were given each week, it meant that the same material was repeated.

Before the patient was discharged from the hospital, he was given mimeographed sheets on which his own diet requirements were carefully listed, a card indicating the carbohydrate content of various fruits and vegetables, and the utensils needed for the approximate measurement of his food at home.

There have been some improvements made in the teaching of diet which are important to note at the time of revision. More individualisation of the patient is now possible since an addition of a second staff dietitian to the special diet kitchen was made in October, 1949. Each patient is now visited on the ward by a dietitian twice a week. As yet, a nutrition history including the patients' eating habits and calculation of his total intake is not done as a matter of routine. However, a nutrition history is taken at the request of the doctor. Any difficulties the patient has in eating, such as those due to lack of teeth, are always noted along with his food likes and dislikes. If a patient is confused about measurements of food, a special demonstration is arranged for him in the diet kitchen. Three classes are given with a content which is similar to those already men-

tioned.[1] A series of menus for three weeks is used and repeated at the end ot this interval. The daily menus, which show the food served with the values in grams and calories, are taken home by the patients at discharge. As most patients remain in the hospital for three weeks, these meal lists provide a variety of ideas for menus at home. At discharge, each patient is given the dietitian's telephone number and he is encouraged to call if he is in difficulties at home. The preparer of food in the home is also given an opportunity to attend classes when this is arranged by the doctor.

Special instruction to those who ask for it is given it at any time during the patient's hospitalisation and at the time of the patient's discharge. In addition to the printed instructions already mentioned,[2] instructions are given to the patient on food substitutes for the usual carbohydrate, fat, and protein foods. Equivalents of one slice of bread are listed separately as they are especially useful in substituting carbohydrate foods.

Since the above-mentioned changes had not taken place when the writer's sample group was interviewed, her findings are applicable to the situation which existed in 1942-1943. However, we feel certain that the diabetics are still having the same kinds of problems now.

We found that the responsibility for following a diet was a major concern of the patients. The diabetic diet involves not only the correct choice of foods but it must also

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1 - Supra, p. 48

2 - Supra, p. 49

be eaten at certain specific hours, even if the patient has no appetite. There are times when he is uncertain of what to eat. Furthermore, he must judge how much he should eat of what the family happens to be having that day. Eating can be a constant reminder to the diabetic that he is not a physically normal person. In order to determine what the actual problems in following a diabetic diet were for our patient group, it seemed important to consider such factors as cost of diet,religion and cultural background, problems encountered with the preparer of meals and resistance to dietary management which could be attributed to the patient's attitude and personal problems rather than to a lack of accurate information concerning diet.

B. Purchase of the Diet. -

For the patient group as a whole, the cost of the diet did not appear as a typical problem. However, several patients whose incomes were limited, found the rising wartime food prices a strain on the family food budget. Case No. 20[1] was unemployed and depended on his family to provide his meals. With the increase in protein in the diet, in the late 1940's, the dietitian has noted that, at present, it is impossible for some patients to afford the extra meat required. This would be especially true of patients who earned a marginal income or who were receiving financial assistance through a voluntary or public agency. Cottage cheese, the best form of inexpensive protein, is suggested as a sub-

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[1] - Infra, p.92

stitute for the extra requirement of meat. If the dietitian becomes aware of a serious financial problem in the purchase of the diet, she can refer the patient to the medical social worker. If the family needs help with budgeting for the household expenses as well as the food, it might be helped by a voluntary family agency chosen by the medical social worker. For further help with the preparation and choice of low cost meals along with some supplementation of actual food needed, there is one diet dispensary available in the community.[1] When a special diet is involved and the patient is unable to work because of his diabetes, it is possible to secure a maximum of $45.00 a month through the local family agencies who are permitted by law to apply for public assistance money which is provided under the Quebec Public Charities Act of 1921.

Food restrictions in Canada as a war-time measure did not appear to present a problem to most diabetics in the sample group, but there were two exceptions. The daughter of Case No. 21[2] found it almost impossible to find fresh fruits or even the specially packed canned fruits. The latter, prepared without sugar for diabetics, were not often available in the stores. Case No. 23[3] also found the availability of those canned goods quite restricted in his neighbourhood.

A propos of food rationing during World War II, there was an interesting article written about food rationing for

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1 - The Montreal Diet Dispensary.

2 - Supra, p. 21

3 - Infra, pp. 62 and 63.

diabetics in the United States of America.[1] It was noted that diabetics disapproved of special rations for them if extensive food rationing had to take place since it tended to make them feel inadequate and different from the other members of their own families.

C. Need for Further Instruction. -

If the patient is isolated in a hospital setting, in which his eating habits at home are not considered, and is then discharged back home with little individualised help in the management of his diet, the chances are that he will not be very successful in following the diet. In order to highlight such situations, we have included such factors as cultural background, religion, education, the problems of the new diabetic and the diabetic of long standing, as well as those of the preparer of the food, either within the family or an institution. The information gained during interviews with the patient group, suggests to the writer that greater individualisation of the patient is needed.

Due to different cultural backgrounds, five patients had language difficulties which caused them to be confused about their dietary instructions although other patients were helpful in offering to interpret for them. Due to the thoughtfulness of the diabetic service, discharge sheets were printed in various languages. Despite these efforts to help, the patients still felt embarrassed about their inability

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1 - Mary E. Tangney, "Food Rationing for the Diabetic", American Journal of Nursing, (April, 1943) pp. 329-331.

to speak English fluently and thus were inhibited when they wished to ask questions. Two examples illustrate this:

> Case No. 6, was a Jewish woman, 56 years of age, who had diabetes for a number of years spoke little English. It was impossible for her to understand much of what the dietitian said unless some member of the family were called in for instruction or to help explain the necessary facts to her, the chances of her being able to manage a diet were negligible.
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> Case No. 15, was a widow, aged 63, with a large family of children, who came to our hospital with ulceration and gangrene of her right leg and a discharge from one of her toes. She had been hospitalised for one week when she was interviewed. Her limited formal education made class instruction very trying for her and yet she was anxious to learn as she had begun to realise for the first time, how important diet was in the treatment of her diabetes.

The latter patient's limited education prevented her from making good use of the teaching available and, as a result she felt insecure about how she would manage at home.

For patients with language difficulties or little formal education, more individualised help is needed. It is also important to discover what member of the family can be counted upon to learn the instructions which the patient cannot grasp. If the patient is a child whose mother has limited intelligence, or the patient himself is mentally retarded, it is essential to find another member of the family to take responsibility for the diet. Recently, on Ward K, the medical social worker recognised that the mother of a 4 year old diabetic had such a limited intelligence that she could not be expected to absorb diet instruction. It was then arranged for an older daughter to take the mother's place and individualised instruction was given to her by the dietitian.

The study did not give evidence that religion was a factor of any significance as a reason for poor adjustment to a dietary regime. In one instance religious custom was followed, but it was not a problem for the patient in the choice of foods.

> Case No. 5[I], a 56 year old Russian Jew, believed that his diet was well managed by his wife who did all the cooking. Although he was orthodox in his eating customs, and ate kosher meat, he accepted the food offered at the hospital on the basis of a Hebrew religious teaching which permitted a deviation under such circumstances. At home, he believed that he had made a successful adjustment to his diet without giving up his dietary customs. He did not take meat and milk at the same meal, but included both at some time during the daily meals.

While he is being inducted into the management of his diabetes, the new diabetic is often fearful and uncertain of how he will be able to carry out the dietary instructions when he is at home or at work. This was true in the following patient's experience.

> Case No. 17, a French Canadian widow, 48 years of age, was a new diabetic at the time of the study. In addition to her diabetes, she was experiencing menopausal symptoms of tension and emotional instability. A hospital was a strange and frightening place for her and English was spoken instead of her native French.
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> At first, she was reticent about asking questions in class concerning her diet but she did learn some of the basic information in this way. We found that she was quite disturbed about the small amount of food given her the first ten days of her hospitalisation. She was certain that she would not be able to return to her strenuous work of cleaning railway coaches with that small amount of food. The purpose of graduating diets as part of the procedure in establishing control had not been explained to her. Her food habits at home did not follow the pattern of the meals served on the ward. She prepared a lot of meat and soups at home which were not at all like those served in the hospital. How she would succeed in

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[I] - Supra, p. 25.

> disciplining herself to smaller meals at home and refrain from tasting her cooking was causing her to be quite anxious and insecure at the thought of returning home.

The writer helped this patient by giving her an opportunity to express her fears and by referring the specific problems related to an understanding of diet to the dietitian. In addition to further explanations, the dietitian was able to help her with the practical problem of choice of meals at home and lunches for work.

A diabetic of long standing as well as the new diabetic can experience real problems in managing a diet. Unless the patient has the opportunity to take his problems to the dietitian for sustained help, unfortunate errors in food intake may occur which are of serious import to the general health of the patient concerned. A case in point is the following:

> Case No. 19, a Jewish woman, 69 years of age had had diabetes for seven years and was under the supervision of our Out Patient Department during that time. It was not until April, 1942 that she began to feel ill. By December, 1942, she was admitted to hospital for control of her diabetes. She was quite concerned about being hospitalised as she had to look after her husband, a retired principal of a local Hebrew school who was a semi-invalid.
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> On this admission, it was discovered that she had actually been starving herself as she was afraid of eating too much food. She explained that she only took a small square of butter a day, or, if she had a potato, she did not take meat. As she gradually learned the variety of foods she could eat, she became much more encouraged about the future.

As this patient's problem was not known to the dietitian who was giving the classes, the writer referred it to her, and the patient was given more individualised instruction. As

the food she prepared at home was different in some ways from that served in the hospital, it seemed important to us also that these food habits should be known to the dietitian and substitutes suggested to enable the patient to fit her diet into the normal family food pattern. Now that the dietitians are able to give more individualised service to the patients such problems are probably uncovered by them. The medical social worker does not attempt to take anything which resembles a nutrition history, but if the patient's problem in following a diet is expressed during the interview, she will relay this information to the dietitian for handling.

It is important to know whether the patient or someone else in the family prepares the food. If it is someone other than the patient, his understanding of the diet and willingness to prepare the food needs to be evaluated. In most instances, among our patient group, the preparer of the food was willing to cooperate. One male patient whose wife refused to prepare his meals was Case No. 20.[I] Another patient described below was not following his diet because his wife did not understand the need for correct measurement of food served at meal times.

> Case No. 24, a 50 year old Ukranian, worked as a labourer for a milling company in the city. He had been diagnosed in the Out Patient Department of our hospital in 1940 and had continued his medical supervision there since. He was readmitted because of frequent insulin reactions in the morning and afternoon. His stay in the hospital was prolonged as his diabetes was hard to control.
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> While he was outwardly a complacent calm person, who had not become unduly anxious about his diabetes, he had

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[I] - Infra, p. 92.

begun to realise that diet was a basic part of diabetic control. He thought he knew what foods he should eat and in what proportion but he had not tried to keep on his diet. His wife prepared his meals and was willing to look after his diet. However, she did not understand English very well and was too self-conscious to attend the classes. As a result, she had little idea of the correct proportions and consistently gave him too much to eat. Rather than hurt his wife's feelings, the patient always ate the food she put before him.

This case illustrates how important it is to discover what help the preparer of the food may need to prepare the diet. The medical social worker can be of assistance in such a case by interviewing the patient's wife to help her express her resistance to coming for diet instruction. Given some interpretation about how she can be helped by the dietitian and the assurance that an arrangement can be made for her to see the dietitian foe special individual instruction, it is probable that she would come to the hospital to learn about the diet. As a similar situation could occur in other cases, the example just used points to a need for greater awareness of how the preparer of the food can be helped.

When the patient is an elderly person, the preparer of the food may need even more help from the dietitian to find suitable foods which the patient can eat. The old person may become irritable, difficult to please, revert to food likes and dislikes of youth and he often has the problem of a lack of teeth which makes mastication of other than soft foods impossible. Instruction given to the preparer of the food with good results is illustrated in the following ex-

ample.

> Case No. 3, an 80 year old Jewish woman, had generalised arteriosclerosis as well as diabetes. She was quite senile in her behaviour and unable to take any responsibility for the care of her diabetes. Her unmarried daughter who cared for her at home had not understood how to prepare her diet prior to this admission, but at the time of discharge, she had begun to understand the purpose of the diet and was greatly helped by suggestions for meals which the patient could eat.

The old diabetic with no family may have to be cared for in a nursing home or an institution. In Montreal there are insufficient nursing homes and those which are available and reasonable in price, cannot provide diabetic diets to meet the requirements of the hospital's diet prescription. The present institutions are overcrowded, and they have long waiting lists. In such circumstances, individualisation of the patient is an impossibility. It is a most discouraging experience for any patient to be in an institution where he knows that a diet cannot be provided. If it is necessary to come into hospital for regulation of the diabetes and the patient learns what good control by diet can mean for his continued well being, he is all the more discouraged and fearful of the future. Such was the experience of the elderly woman described below.

> Case No 13[I], a 72 year old single woman of German origin, aggressive, fractious and unwanted because of her unpleasant personality, was a permanent resident of an old people's infirmary. Her diabetes was badly out of control when she was admitted. However, she was quite resistant to treatment procedures and complained constantly about the care given. Because she was edentulous save for three teeth, soft foods were substituted to permit better digestion and the diet was increased to satisfy her appetite.

[I] - Infra, p. 91.

> Her institutional home had a poor standard of nutrition and no way of providing for individual needs. While an effort was made to provide diets on a more selective basis for the diabetics, no specific amounts quantitatively could be guaranteed. Part of this patient's resistance to treatment in the hospital stemmed from her knowledge that she was going back to the infirmary where the same kind of care was impossible, and where she was convinced that she would become ill again.

In such an instance, when no alternative care can be provided, the best that can be done is to provide the institution with as simplified a diet list as possible and to encourage its staff to secure as nearly adequate a diet as is possible.

D. Personality Problems in Adjustment. -

While it is essential to understnad the basic facts about diet to be successful in controlling diabetes, there is another aspect to this problem. Each new diabetic is faced with the problem of self-discipline, as carrying out dietary instructions demands that the individual take responsibility for it. Thus, the personality of the patient, his motivations and attitudes, determine the degree of adjustment to the diet.

In a discussion of the concept of responsibility, Grace Marcus says, "in the maturing process, the individual's prove capacity to use his own abilities and resources becomes the essence of his own personal worth and security. The essential continuing problem is one of accepting the necessity for this struggle and engaging in it. Each time the necessity arises for the individual to reorganise himself, he is faced with the pain of giving up the old and the outworn, risking the new and the untried, experiencing a loss of

balance and a sense of inner disorganisation, striving again for a new command and integration of himself".[1] The responsibility for a dietary regime is a new development within his environment with which the diabetic has to deal. In the process of making the new adjustment, the new diabetic especially, may feel insecure about his ability to succeed. This, we can observe to be true for the following patient.

> Case No. 22, a 46 year old man, recently married, was admitted to the Royal Victoria Hospital for treatment following a diagnosis of diabetes mellitus. A previous medical record in 1934 revealed that he had been admitted in an acute depression after an attempt to commit suicide. At that time, he was a heavy drinker and had become depressed over a broken engagement. He had also lost his job.
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> Since then, he had apparently made a better adjustment especially after his marriage. In the hospital, he resented having to attend classes as he felt he could cook practically everything and protested that his wife was already familiar with the preparation of meals for a diabetic sister. Nevertheless, he still felt insecure about his ability to stay on the diet when he returned home.

We can assume from his previous behaviour that this patient was not a very secure person and had feelings of inadequacy. Case No. 12[2] had a similar history. Considered of little consequence by his family, formerly a heavy drinker, and unemployed because of a lack of stability, he also doubted his ability to be consistently responsible for a diet. The new responsibility for his diet had disturbed his new-found sense of inner balance. The medical social worker can offer such patients acceptance and reassurance in a supportive case work relationship during the period of initial adjustment to

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1 - Grace F. Marcus, "Helping the Client use his Capacities and Resources", National Conference of Social Work Proceedings, 1948, pp. 251-259.

2 - Infra, p. 77.

help them regain self-confidence.

The first two cases cited in this section indicated that the management of diet for two individuals with past personality difficulties aroused former feelings of inadequacy and thus represented a major problem for them. The following case gave no indication, from the writer's interviews, that he had had any outstanding personality problems before diagnosis. With the additional responsibilities thrust upon him in managing his diet, he became preoccupied with his daily needs, overconscientious in carrying out his diabetic regime, and lost interest in his usual social pleasures.

> Case No. 23, a French Canadian widower, 53 years of age, was admitted to the Royal Victoria Hospital where a diagnosis of diabetes mellitus was made. After his wife's death, 15 years ago, he had remained alone in the comfortable home they had shared. Preparation of meals which had heretofore been little trouble for him, now assumed great proportions. An outline of the time spent preparing meals, shopping and housekeeping describes his problem graphically.
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> Arising at 5.30 A.M., he prepared himself and his food for the day and breakfasted at 6.30 A.M. Until he discovered that the cafeteria at the munitions plant where he worked served well balanced salads which he could eat, he prepared a box lunch for himself as well. He did his shopping after work and prepared his dinner during the time in which he formerly relaxed as he had to eat his evening meal at a specified time. Afraid of not being able to obtain the canned fruits and vegetables he needed and liked, he had been impelled to buy more than he needed. He deplored running water through the canned fruits and cutting off the fat from boiled ham, one of his favourite foods.
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> Formerly, this man had enjoyed parties with his friends and evenings at the theatre. Because of his early rising, he had formed the habit of going to bed early. The only recreation he permitted himself was a visit to a friend or to invite someone in for a meal.

> He considered that his diet limited the variety of foods to which he was accustomed and which he had served his guests. The patient had noticed that he was becoming preoccupied with himself and his daily needs as he had never done before. He was "particular" about all aspects of his diabetic treatment but especially the food.

An evaluation of how the medical social worker can help such a patient is given in a later chapter.1

In summarizing this chapter, it can be said that with one exception, the cost of the diet was not a reason why the patients could not follow the prescribed dietary regime. However, with the present increase in the protein content, those patients found to have insufficient incomes should be referred to the medical social worker so that she can determine what financial resources could be made available in the community and what other means of assistance need to be found, such as help with budgeting and supplementation with additional foods. With a few exceptions, war-time food restrictions did not create too much hardship for the patient group. Religious customs did not prove to be obstacles to the maintainance of a dietary regime.

The writer feels that the number of patients who were discovered to have misunderstandings about the nature and use of the diabetic diet was sufficient to indicate a need for more individualised instruction. This kind of help is especially needed by those patients who have a language handicap as they cannot use class instruction profitably. It also applies to those patients who have not had much formal education or who may be quite limited mentally. When it is impossi-

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1 - Infra, p. 93.

ble for the patient to grasp the instruction, an active effort should be made to find another member of the family who can substitute for him.

The new diabetic may be insecure as he wonders how he will be able to discipline himself to follow his diet at home. The diabetic who has had the disease for a number of years may feel equally insecure if he is unable to control his diabetes due to mistaken ideas about the amounts of food and the choice of meals permitted. An opportunity for continued interpretation and explanation by the dietitian would help to reduce such harmful mistakes of long duration.

If the preparer of the food is misinformed or unconvinced about the need to be accurate in measuring the food, she can make it impossible for the patient to maintain control. It is no less important for the dietitian to encourage those who prepare the food to come for instruction and to be able to give it on an individualised basis, if the person concerned cannot learn in class or attend at the time they are given. With the additional problem of old age, the food preparer needs special suggestions in order to keep the patient eating well. In most cases, the patients who are cared for in nursing homes or in institutions, have reason to be disheartened about the lack of facilities, for carrying out a diabetic regime. At present, little can be done except to send simple suggestions to the nursing home or institution when the patient is discharged.

Management of the diet is a real test of the patient's maturity and capacity for self-discipline. The responsibility

involved may serve to revive old fears and feelings of inadequacy, or, as we saw in one case, cause personality changes which were not previously evident. The medical social worker can help the patient by giving acceptance to his feelings of inadequacy and, by developing a supportive relationship, to regain a measure of self-confidence and subsequently make an adjustment to the dietary regime. She can be especially helpful to the new diabetic who undergoes considerable anxiety during the induction period. As we have already mentioned, there are community resources to which the medical social worker can refer those patients who have financial difficulties.

It has been pointed out that the dietitian does not take responsibility for arranging instruction for the preparer of the food. From the information that the writer has gathered, it has been demonstrated that a lack of interest or willingness to cooperate is not necessarily the reason why the preparer of the food does not come voluntarily for instruction. It is the writer's opinion that the dietitian could include an enquiry about the preparer of the food in her visits to the patients on the ward so that plans could be made to accomodate the person concerned in class or with individualised instruction during the patient's hospital treatment. As we have indicated, the medical social worker refers diet problems, which she discovers in the case work interviews, to the dietitian for her special consideration. Conversely, if the dietitian finds that the patient or the

preparer of the food is resisting diet instruction because of negative attitudes, or, that they need community resources to make the purchase of the diet possible, she may call upon the medical social worker for case work service.

CHAPTER VI

Insulin - Long Life for the Diabetic

While diet is the basic treatment for diabetes, insulin is a 'sine qua non' for those diabetics whose carbohydrate metabolism cannot function adequately with the available insulin in their own bodies. It can be said also that only the very mild diabetics can do without insulin and that the majority of diabetics do take insulin. Every patient in our study used insulin.

Before insulin was available commercially, the condition of diabetics was deplorable. The low caloric, low carbohydrate diets kept them listless and emaciated. Through the experimental work of Banting, Best and Collip, insulin was first produced in 1922 in the laboratories of the University of Toronto.[I] From that time, it has been possible to assure diabetics of a long and healthy existence providing that both diet and insulin requirements are met.

Insulin used commercially is prepared from the pancreas of various animals, principally the cow and the pig. The most chemically pure is the crystalline insulin but it only has an action which lasts eight hours after injection. The use of this kind of insulin often necessitated three in-

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I - Wilfred Oakley, "Diabetes Mellitus", The British Encyclopedia of Medical Practice, Vol. 3. p. 645.

jections daily before meals. In 1937, Hagedorn and his associates found that insulin could be absorbed by a protamine with a resulting twenty-four to twenty-eight hour liberation of free insulin. Later it was found that the insulin could be even more slowly liberated over a maximum of twenty-eight hours with the addition of a small quantity of zinc. The new kind of insulin was called protamine zinc and it has served to lessen the number of insulin injections because of its prolonged action.

Within the past few years, a third kind of insulin has been produced commercially. It is called globin insulin because the insulin is mixed with a simple protein obtained from haemoglobin, known as globin. It differs from protamine zinc insulin in that it has more available free insulin after injection and its maximum effect occurs during the day between the sixth and tenth hours after the morning injection. At the Royal Victoria Hospital, it is not used extensively. When used, it is usually given in the morning along with protamine zinc insulin, depending on the need of the patient. Past experience has shown that globin insulin can produce very severe, unpredictable, hypoglycemic reactions, including loss of consciouness and loss of memory. As yet, there is no method known of determining which patients will experience these severe reactions. The case illustrations in this chapter do not include any problems as a result of globin insulin as it was not in use during the time of the study.

The kind and proportion of insulin needed in relation to the food intake is worked out by the doctor during the hospitalisation for regulation of the diabetes. While the correct dosage is being determined, the patient is taught the essentials of insulin therapy to prepare him to take responsibility for his insulin injections at home. At the time of the study in 1942-1943, a doctor gave one lecture a week about diabetes and its treatment. Two classes a week on insulin therapy were given by the nurses. In these classes, the purpose of the two kinds of insulin was taught and instruction given in how to measure the correct dosage by a c.c. or an insulin syringe. The technique of sterilising the hypodermic syringe and the needle as well as the way in which the insulin was injected were also taught. At the time of revision, a few changes in method were noted. One nurse's class on insulin is given instead of two and further instruction at the bedside is given as often as necessary. At discharge, explicit instructions about preparation of the equipment and the procedure for measuring the insulin are given to each patient on a printed sheet. Along with these instructions, there are separate sheets on how to give the crystalline or the protamine zinc insulin.[I]

A. Insulin Reactions. -

No matter how well the food intake is balanced with the injected insulin, a diabetic does not have the same automatic balance of insulin with food as the person with a

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I - See appendix, B. p. 119

healthy functioning pancreas. Too much insulin for the body requirements may be present at any given time causing the condition known as hypoglycemia (low blood sugar). This phenomenon is well known to the patient as an insulin reaction. Such a reaction can occur if the patient takes more exercise than usual, or if he eats less than his prescribed diet. The symptoms of an insulin reaction are numerous and one or more may occur in any patient. These symptoms are: a sensation of hunger, sweating, trembling, and ultimately unconsciousness, if the reaction is not counteracted. There are other symptoms which are quite distressing for patients also: nervousness, weakness, double vision, dizziness, and, in some instances, irrationality.

Reactions should be treated with regard to the type of insulin which produced them. If the reaction is due to crystalline insulin, five grams of glucose or its equivalent, a quarter of a glass of orange juice, should be taken by mouth every ten minutes. The treatment for a reaction caused by protamine zinc insulin is the same required for crystalline insulin, at the onset and consists of five grams of glucose by mouth. But, if the symptoms persist, in ten minutes, the patient should take one half of a glass of milk and a small soda biscuit. If the patient is away from home, it is usual for him to carry glucose D tablets as a quick source of available glucose; he might also use a five gram glucose powder which is made up in small paper envelopes.

It is of great importance that the patient learn

how to recognize the onset of an insulin reaction in himself and that he know how to treat it without delay. Depending upon the type of insulin, he is instructed to lower his insulin dosage a specific number of units after the reaction is over. At discharge from the hospital, separate instructions for recognizing at what time insulin reactions may occur from either crystalline or protamine zinc insulin are given according to the individual patient's dosage. In addition, he is given a printed form on which is written his specific diet and insulin, when he is likely to have a reaction, and what he should do about it.[1] Instructions on when to test the urine are also included on this sheet.

Although learning about the use of insulin and the technique of giving it is less complicated than learning how to manage a diet, it is no less a vital part of treatment. Hence, it is important to understand what personal and social problems may arise for the diabetic in the process of taking insulin and as the result of insulin reactions.

B. Problems in Taking Insulin, -

1. Cost of Insulin. -

Every diabetic must have a supply of insulin on hand because it must be taken daily. Missing one or two day's injections can affect the control of the disease. The purchase of insulin for the diabetic is as essential to life as the basic necessities of food, shelter, and

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[1] - See appendix, B. p. 118

clothing. If any diabetic cannot afford to buy insulin and a supply of needles, rubbing alcohol, and absorbent cotton used in the process of injection, this should be known and some source of payment should be found.

It so happened that none of our patient group went without insulin because of inability to pay for it. Nevertheless, there are a number of patients who have been hospitalised at the Royal Victoria Hospital and who attend the Out Patient Department who cannot afford the cost of insulin and the above-mentioned supplies. In such cases, the hospital supplies these patients without charge.

One patient, Case No. 20[I] had gone without insulin for a week at a time on occasion because he was not earning the money for it himself. He was an immature person with limited intelligence who was striving to be financially independent. His family would have given him the money but he felt too embarrassed to ask, nor could he bear the sense of failure he had when he was out of work and hence, dependent upon his family for food.

The regular purchase of insulin and supplies for a diabetic who has has a limited income can represent a real sacrifice of small personal pleasures which any human being needs in his day to day living. Such was

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[I] - Infra p. 92.

the experience of Case No. 4.

This patient, an elderly man lived in a rooming house with his wife who was hopelessly crippled with arthritis. With untiring devotion, he looked after her daily needs. They lived on the old age pension which scarcely covered the cost of their frugal living expenses. He felt the help and understanding he gave his wife was mutual. As he said in his own words: "she helps me and I help her because we are both in the same boat". His acceptance of their small income and way of living he summed up in these words: "we haven't got much, but we have a room and a stove and a landlady who is kind to us".

> He loved to go to hockey games and wrestling matches but now he had to choose between buying his insulin and the recreation he enjoyed. Because he was convinced that he should continue regular injections without fail, he used the money for his insulin. He further justified his decision by affirming that he really did not like to leave his wife at home alone while he was out enjoying himself.

For such a patient, the medical social worker could try to find a small supplementary allowance from a community agency which would help to give him the opportunity for some personal pleasure to counterbalance the responsibilities and hardships of his daily living. In some social service departments there are funds available which can be used for this purpose. In any case, if such resources were available, their use would depend upon the patient's willingness to accept help.

2. Accuracy of Measurement. -

The kind of insulin used to control a patient, either crystalline or protamine zinc, is administered at different times during the day so that the maximum effect of each occurs at the best time for the patient. Of the patient's under stu-

dy, one half were using crystalline insulin which, with few exceptions, was given before breakfast and before the evening meal. The remainder of the patients used a combination of crystalline and protamine zinc insulin which for some, meant two daily injections; one before breakfast and one before the noon meal.

The instructions on measurement given to our group of 25 patients must have been effective as there was only one instance of inaccuracy and that was not due to lack of necessary information but it was an oversight due to absorption in a matter of personal importance. Case No. 24[I] gave himself twice the dosage of insulin in one day when failed to remember taking the first injection before an absorbing conversation with a friend.

3. Fear of Injections. -

For some diabetics, there is a great aversion to inserting the needle into their own bodies. A familiarity with the procedure and repeated injections after the initial trial period is over often lessens this aversion and those who thought they could never do it are surprised to find it becomes a routine and acceptable part of diabetic management. For some patients however, repetition of daily injections does not resolve this initial aversion. Case No. 7 depicts how an aversion to injecting the insulin and a fear of the reactions which ensued, resulted in one patient neglecting to take his insulin.

I - Supra, p. 57.

This man, a 62 year old French Canadian labourer,had been diagnosed and treated for diabetes at another hospital in 1941. Because of an infected finger, he was accepted at the Royal Victoria Hospital for regulation of his diabetes.

It was the writer's impression that this patient was quite immature and leaned heavily upon his wife for the care of his diabetes. He had a large family for which he had always been able to provide, despite his recent diagnosis. He had not followed his diet although his wife prepared the food according to the previous diet prescribed. He admitted with some embarrassment that he was afraid to give himself the insulin. His wife had done this for him also. Therefore, when his work shift changed the previous year, he had given up insulin injections altogether as he would have had to give himself the injections at work.

We can assume that this patient did not receive enough instruction about his disease and the part which diet and insulin play in treatment when he was hospitalised the first time. He learned with surprise how much was expected of him in taking responsibility for his diabetes. Despite the assumption that he did not have enough instruction about his disease, his past behaviour indicates that he had not accepted[I] the need for diet or insulin and this fact, along with his aversion to the injections, had resulted in a poorly controlled diabetes with complications.

Another way in which a patient may come to fear insulin injections is through previous misinformation about the effect of insulin on the body. Case No. 17[2] is a good example of the effect of such misinformation upon the new diabetic.

I - Non-acceptance is term used by the writer to mean negative attitudes to treatment.

2 - Supra, p. 55.

Just after a local physician had told her she had diabetes, this French Canadian widow came to the Royal Victoria Hospital for regulation of her disease. She belonged to a family who feared doctors and hospitals in general. She became quite disturbed when she found that she would have to take insulin. As she had not had time to experience the new strength and energy which could come with control of her diabetes, she feared the effect it might have on her because of what she believed had happened to two of her relatives who used insulin. In one instance, she understood that her sister-in-law's doctor had advised against taking insulin as it would do her no good and would not cure the diabetes which she would have for the rest of her life. The patient and her family also believed that a diabetic aunt had died because she took insulin.

While this patient did not want to inject herself with insulin, feeling the same aversion as Case No. 7[I], the main reason for her resistance to insulin therapy was previous misinformation. The value of a case work interview for a new diabetic is clearly shown in Case No. 17 as it gave the patient an opportunity to resolve some of her fears. She also needed time to develop confidence in the doctors on the Diabetic Service and to have continued interpretation from the doctors and nurses. A case worker's supportive relationship at such a time would serve to lessen a patient's anxiety and so free him to make the best possible use of the information given.

4. Fear of Insulin Reactions. -

The effect of an insulin reaction upon others at home or at work is always a primary concern of new diabetics who leave the hospital for the first time. The insecurity which a patient experiences is well illustrated in Case No. 12.[2]

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1 - Supra, p. 75.
2 - Supra, p. 61.

This single man, 39 years of age, had been newly diagnosed and was preparing to leave the hospital when he was interviewed. He was using two injections of insulin daily, one before breakfast and one before the noon meal. In the past, he had felt inferior socially and inadequate as a wage earner but, at the time he developed diabetes, he had begun to feel a new sense of achievement and manhood.

His self confidence was shaken as he felt that a dependence upon insulin to maintain his health and strength was new evidence of personal weakness. He knew he would have little chance for privacy to take his insulin at work before his noon meal. His boss would find out and he thought he would lose status with him and the other men at work. He took pride in working for that particular foreman as he wanted a "man's man" to do the job. He did not want to be asked to change his shift for that reason. As he had learned that increased exercise with same dose of insulin he was taking at the hospital might cause an insulin reaction on the job, he was fearful of appearing helpless before his fellow workmen. He also did not wish to lose time at work for financial reasons, as he was paid by the hour.

It is important that a new diabetic have an opportunity to express his fears about the effect of insulin, as an acceptance of these fears by the medical social worker can serve to lessen his feelings of inadequacy and enable him to be better able to manage his new responsibilities.

For those patients who have experienced insulin reactions for a number of years, the fact of knowing how to counteract them is not wholly reassuring. Such was true of Case No. 24[2] who had had diabetes for two years with numerous insulin reactions. He appeared to be a fairly well adjusted person who was not preoccupied with personal problems. As he continued to have severe reactions during his hospitalisation, it is not surprising that even he who appeared to

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[2] - Supra, p. 57.

a secure person, became fearful of the continued effect of insulin reactions when he returned to work.

5. Insulin Injections at Work. -

The problem of taking insulin at work has been expressed by several of the patients already mentioned. Most of the patients who went out to work were reluctant to take insulin before the noon meal and asked to have the dosage changed to morning and evening so that the procedure could be carried out in the privacy of their own homes. As it was not always possible for the doctor to do this, those patients who needed the noon dosage had to make the adjustment themselves. As the patient's attitude towards this adjustment determines his willingness to try, the reaction of Case No. 8 to a change of insulin which he thought would affect his work is used as an example.

> The patient, a vigorous young farmer, 22 years of age, had no intention of being admitted to the hospital at the time of the study. He was well known to the Royal Victoria Hospital as a child diabetic since 1931. He had come from his father's farm to find factory work during the winter and had come to the hospital to get a letter from the doctor stating that he was physically fit to work. Instead of getting the letter, he had been asked to come in the hospital as his diabetes was not under control. He had not really accepted the need for admission as he considered that he knew how to handle his diabetes himself and he felt quite well physically.
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> As his father's farm was quite isolated, the patient had some difficulty getting his insulin although the Junior Red Cross helped him pay for it. He had recently changed to crystalline insulin of double strength but continued to adjust his insulin dosage to the amount of work he did. In the busy haying season, he took no insulin at all for six weeks. Now, in the hospital, he had been given a much higher dosage of insulin from which he anticipated reactions after he found work. He was troubl-

ed about the added expense also. Then, when he was still resisting this change, it was decided to change his insulin from crystalline to protamine zinc. He had learned about this from the nurse instead of the doctor and he expressed to the writer his resentment at the doctor's oversight in not telling him personally or asking him what he thought about it.

The prospect of a noon dose of insulin besides the one in the morning also made him angry. Whether he worked on the farm or in the city, he would have to make a new adjustment which to him was undesirable as he did not want to take insulin before the other men. His defensiveness led him to question how he would be able to prepare the needle and syringe at work, although he admitted that he had never taken time to bother about this procedure anyway.

A resolution of his defensiveness and resentment was brought about in the process of the two case work interviews which the writer had with him.[I]

C. Non-acceptance of Insulin. -

Case No. 8 serves to demonstrate that the reason for poor management of diabetes is not always a lack of factual information but that it can be due to a non-acceptance of this information. The term non-acceptance, as used by the writer, means those attitudes or motivations which inhibit a patient from acting positively in any given situation. A further illustration from Case No. 8[2] indicates the extent to which attitudes of the patient play a part in his success or failure in diabetic control.

> When this young farmer expressed his reluctance to take insulin before his fellow workers, he explained the reason for this feeling. One night he had gone to visit in another farm house and had taken his insulin there. The family had seen him giving himself the insulin and had been convinced that he was a drug addict. Since

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I - See chapter VI.
2 - Supra, p. 78.

> that incident, he had felt very uncomfortable taking insulin with others present. This was the major reason why he was not willing to take a noon dose of insulin at work.

His experience is a most graphic example. Other patients in the group under study were embarrassed to have their fellow workmen see them take their insulin. This was particularly true of those who worked as labourers and who had no chance for any degree of privacy. Young patients of both sexes, particularly adolescents who are often hypersensitive to other people's opinion of them, have a tendency to feel that they would be considered socially unacceptable if their friends knew that they took insulin, even though they look the same as any young person of their age.

It is not only the young patients whose attitudes to treatment affect their success or failure to control their diabetes. Lack of any real understanding of the part played by insulin in treatment and misconceptions about its effect on the body can occur in any age group. Case No. 1[I] can be used as an example of non-acceptance of insulin by an elderly person.

> A month after discharge from the Royal Victoria Hospital in 1941 where she had been inducted into the treatment of diabetes, this aged Syrian widiw had discontinued her insulin. Her given reason was that the syringe had broken. She also said that she was a nervous person and when she returned home and became angry or upset, she assumed it was the insulin which affected her. A friend had also told her that too much insulin was harmful.

It was quite evident to the writer that this patient would

I - Supra, p. 40.

have made an effort to get a new syringe if she had been convinced that the insulin was needed. If her misconceptions about insulin had been understood during her first hospitalisation, it is our conviction that she could have been helped to overcome her negative attitudes in the process of continued case work interviews after discharge. To the medical social worker, the fact that she did not return to the Out Patient Department for regular medical supervision as recommended, was further indication that the patient needed case work help.

D. Affect on Personality. -

As we have already seen, no one aspect of the meaning of insulin to the patient is present as an isolated factor. The life experiences he has had, his own personality strengths and weaknesses and his actual experience with insulin have to be considered in gaining a full understanding of the patient and in order to find ways of helping him with his problems. Case No. 16 depicts the varied problems which can be associated with insulin therapy. During the study, this patient progressed beyond the help of a case worker as she was quite depressed and later developed delusions which convinced the psychiatrist who was consulted that she could no longer remain in the community. Nevertheless, we were able to discover that her past experiences with insulin could be counted as significant in the development of her psychosis.

> Our patient, a single woman, 43 years of age, had had severe insulin reactions during the nine years she had been a diabetic. Long periods of hospitalisation were needed to reestablish control. She felt insecure because it seemed that no doctor could find a solution

for reducing the frequency of the reactions. Every time she was hospitalised, she lost her job and had to look for employment in another private home as a domestic.

Since August 1940, she had been afraid of insulin reactions because of the effect they had had on her behavior. During one reaction, she had begun to memorise numbers without being able to stop. She first "lost her nerve" about insulin in the Women's Pavilion, Royal Victoria Hospital, when she found herself doing "silly" things on the ward such as, removing a patient's clothing from her bed and showing the other patients the Christmas gifts they had already seen. During one previous admission to the Diabetic ward, she had a reaction in which she laughed and cried hysterically.

Following discharge from our hospital prior to the hospitalisation in 1942, she had no way of getting an adequate diet and so had reduced her insulin dosage herself, fearing the consequence of an insulin reaction. She was admitted at the time of the study to have better control established and for reassurance about diet and insulin. The large amount of insulin given on the ward and the numerous reactions she continued to have helped to increase her depression and her conviction that she was beyond help. She had a feeling of worthlessness which often accompanies a depression.

In an attempt to give her some feeling of security despite the fact that her diabetes could not be well controlled, she was transferred to the Montreal Convalescent Hospital where a diabetic diet would be provided and her insulin dosage would be given as prescribed by our Diabetic Service. At that hospital, she became even more fearful as she thought that the nurse did not know how to measure the insulin correctly. With only one nurse at night for the two floors, the patient feared a reaction at night as administration of glucose by injection was sometimes necessary to bring her out of a reaction.

Gradually her fears grew in intensity. She developed delusions about the effect of insulin upon her. She believed that it was drying her up inside and that she would eventually be killed by it. She had begun to experience long periods of disorientation after her insulin injections. After the decision of the psychiatrist to recommend a transfer to St. Jean de Dieu Hospital, she became further disoriented. She was convinced that the insulin would poison her and that it made disfiguring marks upon her legs. She also thought that everyone was against her although the writer was able to maintain enough of the earlier positive relationship for her to permit us to take her to the mental hospital.

The writer does not wish to indicate that the above case proves that a patient's experience with insulin or insulin reactions usually results in a psychosis. However, this case does show how important a part serious insulin reactions played in precipitating personality changes which had taken place over a period of years and which resulted in a psychotic episode.

In summary, it can be said that insulin therapy does create problems for diabetics which affect them personally, socially and at work.

The actual cost of insulin did not constitute a problem for our patient group. It should be pointed out however, that there are patients who cannot afford to buy insulin and the supplies used in injecting it. Those patients who attend our Diabetic Clinic and have financial difficulties are given the insulin without charge when it is determined by the Clinic Admitting Office that there is no source of payment. For those patients whose income is so limited that the purchase of insulin causes personal deprivations, the medical social worker can direct her efforts towards finding supplementary allowances or outlets for reereation.

The patient't attitude to insulin injections varies, depending upon the length of time he has had diabetes. We found that previous misconceptions about insulin and an initial aversion to injecting a foreign substance into the body produced anxiety and resistance to the use of insulin in the new diabetic. But, these were also reasons for neglecting

insulin among those diabetics who already had the disease and had received instruction about it. Insulin injections at work were resisted by the old and the new diabetic alike. The fear of being ostracised socially or being thought physically inadequate by their fellow workmen was especially true of those diabetics who worked as labourers. Young diabetics, primarily adolescents, are self-conscious about taking insulin and fear being considered socially unacceptable by their friends.

Insulin reactions created insecurity in the new diabetic because he had not experienced them outside the hospital. He also feared them at work where a loss of job or loss of income due to absences might ensue. The anxiety experienced by diabetics who had recurrent insulin reactions was no less a threat to personal security, especially to those who were self-supporting. The devastating effects of continued insulin reactions in Case No. 16[I] emphasises the fact that insulin reactions do produce considerable anxiety and insecurity for diabetics. The medical social worker makes her contribution in the treatment process, either by helping the patient to make a better adjustment personally or, by providing him with community resources to strengthen his own effort to achieve diabetic control and a satisfying life.

[I] - Supra, p. 81.

CHAPTER VII

The Meaning of Diabetes Mellitus to the Patient

Because special problems arise which can be associated with the two major aspects of diabetic treatment, diet and insulin, the writer has surveyed them separately in the two previous chapters. An understanding of the diabetic patient would not be complete however, without considering what the total experience of having the disease means to him. The onset of diabetes may serve to accentuate personal and social problems which were existent prior to diagnosis or, to create new problems for those individuals whose adjustment to every day living can be considered normal.

Diabetes is a chronic disease which, although not always physically incapacitating, may cause the patient to feel that he is somehow different from his fellows. As does any other chronic illness, it imposes certain personal and social limitations which can be frustrating for the patient. Feelings of insecurity and inadequacy often result in the patient's resisting treatment, particularly if he is not mature enough to undertake the process of readjustment. Case No. 7[I], a French Canadian labourer, is representative of patients who react in this way.

Able to verbalise his feelings about diabetes, he

[I] - Supra, p. 75.

said, "its a funny disease, it is always with you and you never get rid of it". When his diabetes became uncontrolled, he recognised that he was quarrelsome with other members of the family as he felt cranky and irritable. Usually he was a lively, sociable person but he had had to curtail his simple pleasures which were formerly a source of satisfaction. One thing that he missed was eating hearty meals at home with his friends.

The patient had also found that his work had been affected by his disease. His aversion to giving himself injections of insulin was fortified by the fact that there was no privacy for taking the insulin at work, as he worked on the docks during the summer and on snow clearance for the city during the winter. He had lost some of his former physical strength and he blamed this on his disease as well as on advancing age. As a consequence of neglecting his insulin, he was losing time at work while he remained in the hospital for treatment.

Another patient who resisted following a diabetic regime was Case No. 5[I], a 56 year old Jewish labourer.

To this patient, diabetes was a "nuisance" as it interfered with his capacity to work steadily. He could not accept the fact that he had a chronic illness. As he prided himself on having physical strength and stamina, he chose jobs with these requirements. While he did not have to take insulin and his wife prepared his diet correctly, he scorned the strict rules of hygiene regarding care of the feet, admitting that he did not like to watch out for every little cut and scratch. His inability to accept the fact that these rules applied to him had resulted in his remaining at work until he could no longer walk on his painful inflamed feet.

Continuous medical treatment and repeated hospitalisations can create hardships for those patients who must support a family. Case No. 2[2] is a case in point.

This patient's financial security was wholly dependent upon his tailoring business. At 70 years of age, he still did the tailoring while his son did the pressing. The patient had to make enough profit to pay his son's salary as well as to pay for the current expenses of his home. He was one of the diabetics who had lived

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I - Supra, p. 25.
2 - Supra, p. 16.

> through the pre-insulin era but, despite the fact that insulin had prolonged his life, he had not been free of complications for which repeated hospitalisations were needed. His business suffered when he was not able to be there and the savings he had put aside for himself and his wife in their old age had been all used up in payment of his hospital bills.

Payment of medical care over the years had left this patient with no financial security in his old age. It is just one instance of how the cost of continuous medical care including frequent hospital admissions can cause diabetics to feel insecure about the future.

Those patients for whom diabetic control continues to be a perplexing and unsolved medical problem also experience feelings of insecurity as the result of being threatened by something extrinsic which they are powerless to control by their own effort. When repeated severe insulin reactions occur, diabetes can mean a loss of personal safety and may make it impossible to live a normal kind of life. Case No. 18 represents the experience of one patient who otherwise had every opportunity to enjoy a happy married life.

> The patient, a 20 year old married woman from the United Ststes, had come to the Royal Victoria Hospital for regulation of her diabetes. She had had numerous hospital admissions during the three years she had been a diabetic. The frequency and severity of her insulin reactions caused her to feel insecure about staying at home alone as she was unable to bring herself out of the severe reactions. On one occasion, she had been told that her husband saved her life by giving her glucose when he found her unconscious at home. It had become an effort for her to do her housework and she was fearful of venturing out to do her shopping as reactions sometimes occurred on the street. Her constant state of anxiety about herself had made it almost impossible to have any social life which was enjoyable or satisfying.

The writer found that she was extremely discouraged and inse-

cure as she had never had the experience of knowing that her diabetes could be controlled. The medical social worker can help by developing a supportive relationship at such a time which would serve to lessen her anxiety. It is also important for the medical social worker to share the patient's problems with the doctor to enable him to give the kind of interpretation and reassurance about diabetes which is needed.

The new diabetic may have preconceived ideas about the disease which stir up fears. These fears need to be expressed and substituted with new, reassuring information along with the positive experience of the physical improvement which can be afforded by proper treatment. Case No. 17[I] needed this kind of help.

> When she was interviewed several days after admission, she described her attitude to diabetes in these words: "I think it is not a nice disease, this diabetes". She was afraid that she was destined for an early death and that it would be hastened by the use of insulin. With the new knowledge of the benefits of insulin and a gradual return of strength, she lost much of her initial fear and became accepting of treatment.

Since a negative attitude and resistance to treatment can result from such fears, the writer feels strongly that every new diabetic should have the opportunity to express his feelings. In this way, he experiences a release of tension and is better prepared emotionally to make use of the instruction given. By understanding the patient's attitude and reason for his fears, the rest of the medical team are also better prepared to meet his individual needs. Because such an opportunity was afforded

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[I] - Supra, pp. 55 and 76.

Case No. 17, a marked change of attitude occurred which enabled her to absorb the instruction given and to embark on her diabetic care at home with some degree of self assurance and security.

For some patients, the advent of a chronic illness such as diabetes, with its accompanyint responsibilities and inconveniences, can represent a form of punishment. This is especially true of those patients who have unresolved guilt feelings about their past life. There was only one example of such a reaction to the disease expressed by Case No. 16[I] in her conviction that, "we all have our cross to bear and I suppose this (diabetes) is mine". This attitude can be significant in a consideration of a patient's general behavior and adjustment. In this case, the patient's guilt was an important etiological factor in the development of her depression and subsequent psychotic episode.

For the young patient who is striving to develop new friends and interests and to be socially acceptable, diabetes can carry with it a social stigma. This is true for both sexes. Case No. 8[2], the young farmer, had learned that his diabetes could make him socially unacceptable. The two youngest female patients of the group studied, felt that their diabetes could interfere with their social life. As their situation was similar, we have only used Case No. 10 for an illustration.

I - Supra, p. 81.
2 - Supra, p. 78.

A child diabetic known to the Royal Victoria Hospital since 1926, this 23 year old Jewish girl had absorbed past instruction given in diet and insulin therapy. As a youngster, she had found the diet restricting and at times she had neglected to follow it. Because of their long experience, she and her mother found no difficulty preparing the diet. The patient had come to pride herself on being able to judge the amount of food she could eat in restaurants or when she ate with her friends. To take insulin was just like a pin prick and she could say that it had become part of her daily routine.

Despite her apparent adjustment to a diabetic regime, her firm refusal to tell her friends she had diabetes was based upon her conviction that they would not accept her if they knew. She had to avoid any social occasion where she might have to take insulin in the presence of others, however, she had learned to invent some acceptable reason when it was obvious that she could not eat the same kind of meals as others.

It was the writer's observation that this patient was under considerable tension. Her matter of fact tone and boastful manner in describing her ability to manage socially were indications that she did feel inferior because of her diabetes. As case work treatment is predicated upon the patient's readiness to use help, the writer was unable to continue after the first interview because the patient thought that she had made a satisfactory adjustment to her illness.

For the older patient, one of the outstanding frustrations connected with diabetes is the loss of independence. Case No. 21[1], rebelled against his loss of status as the head of his family which was not in accordance with his conception of the Italian pattern of family life. As a fuller illustration of what loss of independence can mean to an old person, we have chosen Case No. 13.[2]

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[1] - Supra, p. 21.

[2] - Supra, p. 59.

This elderly woman had scorned to enter the institution for the aged where she finally took shelter until she was unable to manage her room and board independently. The institution had little to offer in the way of personal service or material comforts. With her resistance to this kind of care and the situation she encountered after admission, she was quite dissatisfied with her room, the restricted activity and the poor food.

She knew that she had diabetes before she went to the home but she refused treatment because she was "her own doctor". Against her wishes, the doctor at the home began to treat her diabetes. While she had formerly refused to accept the limits of a chronic illness, she became convinced in the hospital that it was possible to control diabetes. However, she feared that the home would not be able to give her the same kind of care and felt that she would die anyway and that the attempt to help her at the hospital was fruitless. Actually, the patient's apprehension about management of her diabetes at the institution was well founded.

It should be pointed out here that it would be impossible for the medical social worker to effect any change in this patient's situation while the standards of the home remained so poor. The problem of finding good facilities for care of the aged sick is still an acute one in the city as there is a lack of suitable nursing homes or institutions, and insufficient money to pay for the care needed.

As in any other chronic illness, the patient's response to treatment is affected by his past life experiences and the situation in which he finds himself when he develops the disease. In order to help him we need to understand his attitude to his illness and his way of responding to life experiences. We can then proceed to help him mobolize his personal resources or to find resources within the community to help him meet the new problems which he encounters as a diabetic. A true understanding of the patient cannot be

gained unless he feels accepted by the medical social worker and hence free to express his real feelings. The diabetic who feels inadequate because he is unable to solve the problems of every day living must be given acceptance if he is to be helped to assume more responsibility for his diabetic regime. A case in point is No. 20.

> As we have indicated before, this young Jewish patient was an immature person with a limited intelligence who had been unable to prove himself acceptable as a son, husband or provider.
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> He resented his family's attitude towards him as he had helped them financially as a youth by running a news stand without receiving much appreciation for his efforts. He felt constantly frustrated as they interfered in all areas of his life, advising him how to handle his wife and his work. He kept struggling to become independent but could not succeed as he was too immature.
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> He wished to have a home of his own and was bewildered by his wife's disinterest and rejection of him. She refused to look after the home or to cook the meals. He could not satisfy her sexually and so felt inadequate in this area as well, and believed that some physical defect in him caused both their children to die at birth.
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> Because of the persistence of the furuncles on his neck, he had been refused jobs as he appeared unsightly and employers feared they would cause him to lose time at work. If he told any prospective employer that he was a diabetic, he had to produce a medical statement certifying his fitness for work. As he already had poor vision and had found during this hospital admission that it was worse, he was quite apprehensive about losing his vision, aware of the kind of handicap it could be since his father had been blind for many years. Just prior to admission, he had secured a job at a munitions plant but lost it when he was admitted to the hospital. At discharge he would be faced with finding still another job.

This patient's poor personal endowment and intelligence were such that he could not be helped to make a better adjustment. While he had shown some capacity to work, his limited intelligence and inability to carry responsibility on an adult level,

along with the added responsibility for a diabetic regime, made it appear unlikely that he would be able to hold a steady job. Such a patient could best be helped by a family agency which would become a good parent, and provide financial assistance when he was out of work. Arrangements for free insulin could be made at the hospital when necessary. The medical social worker would then act as a liaison between the family agency and the doctor, to interpret new social problems to the doctor and the medical situation to the family agency. In the medical setting as well as in other areas of social work practice, there are always those who have not the capacity to function as mature people and take their place as members of society, nevertheless, as part of the community, they need services which will enable them to make as good an adjustment as possible in times of stress.

To Case No. 23[I], the onset of diabetes meant a reorganisation of his personal and social life.

> Since his wife's death 15 years ago, this 52 year old French Canadian had continued to live in the home they had shared together. He had been content to stay there alone as he had all the material comforts he desired. He was well satisfied with his job at a munitions plant although it was a new kind of work for him. Family relationships were cordial and his family was concerned about his well-being. For recreation, he enjoyed the theatre and parties with his friends. Before he knew he had diabetes however, he had become quite lonesome for companionship and had decided to remarry.
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> With the onset of diabetes, he began to consider himself a sick man who would have to reamin under medical care for the rest of his life. Dependence upon diet and insulin made him feel inadequate as a person and as a consequence, he decided not to consider remarriage.

I - Supra, p. 62.

He became preoccupied with his diabetic regime which had become the central activity of the day. The additional care of his home at the end of a work day he found time consuming and tiresome. As a result, he made a habit of going to bed at 8.30 p.m. and had given up the entertainment he formerly enjoyed.

At first, during his hospitalisation, he thought that he would sell his home, take a room and eat his meals in a restaurant. The writer was able to help him think more realistically about his needs and he later decided to keep his home and arrange for a couple to live with him to help take care of the house and the preparation of meals.

The medical social worker can often help those patients who are temporarily disorganised because of the new responsibilities imposed upon them by their disease. Case work treatment is then directed towards helping the patient to be aware of all the aspects of his problem so that he can make the best possible adjustment to his illness. Case No. 23 was able to use the writer as a sounding board by means of which he was enabled to find a better solution to his problems at home than giving up his home altogether. It could be expected that when this patient had some help with the housekeeping and the preparation of meals, he would begin to resume some of his former social activities.

In general, it can be said that the limitations which their disease imposes upon them, do cause some diabetics to feel frustrated and insecure. Continued medical care and repeated hospital admissions are costly and may interfere with the family's financial security, especially, if the patient is the wage earner. Poorly controlled diabetes arouses feelings of insecurity and anxiety and may even result in loss of personal safety as well as the disruption of normal family living.

For some patients, diabetes is a form of punishment. This attitude may be modified as the patient is given acceptance in the medical social worker's interviews and by the others in the medical team. It can also be an indication of more deep-seated personality problems which need to be recognized. For the new diabetic, fears can arise because of preconceived ideas about the nature of the disease. These fears need to be expressed and substituted with new and reassuring information and with a positive experience of physical improvement through treatment. Young diabetics may feel socially unacceptable because of their disease and so make a poor social adjustment. An attitude of superiority may be assumed to compensate for a feeling of inferiority.

For patient of all ages, resistance to treatment may result from a need to deny illness as they cannot bear the anxiety that physical impairment brings. The older diabetic may manage his illness poorly if he feels that it makes him dependent upon his family or upon an institution.

The diabetic patient's response to his illness is modified by the sum total of his past experiences and the situation in which he finds himself when the diagnosis is made. The new responsibilities involved in treatment can intensify the existent problems and make it most difficult for the immature and inadequate person to manage a diabetic regime. Even for the more integrated mature person, diabetes implies some degree of reorganisation of personal and social life.

As part of the medical team, the medical social worker

can play a part in diabetic control as her treatment is directed towards a modification of the patient's attitudes and feelings to free him to take responsibility for his diabetes. With her knowledge of community resources, she can also mobilize other services on his behalf when needed.

CHAPTER VIII

The Role of the Medical Social Worker in Treatment

In the preceding chapters the special problems of the diabetic patients in our study were described. It has been demonstrated that these problems occurred because of the nature of the disease and the need for continuous treatment with diet and insulin. The patient's response to treatment we found was dependent upon his attitude to his illness and his mode of adjustment to life experiences in general.

It is the purpose of this chapter to examine the role of the medical social worker as part of the medical team. Her unique contribution was well expressed by Eleanor Cockerill when she wrote, "the case worker's primary concern is not with the symptomatology of disease and the techniques of treatment because that is the physician's concern. Her focus is on the social factors which have helped to make the patient ill, the social problems which his illness creates for him and the obstacles which may limit his capacity to use what medicine has to offer.---The case worker's frame of reference is socially not medically oriented".[1]

The cases already presented illustrate, for the most part, the first step in case work treatment, namely, a social study of the impact of diabetes upon the patient. In the pro-

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[1] - Eleanor Cockerill, "The Use of Psychosomatic Concepts in Social Work", Bulletin, Johns Hopkins Hospital, January 1947.

cess of the social study, the case worker must be able to create an atmosphere in which the patient feels free to discuss his problems. He can then be helped to talk relevantly and to consider his problems more realistically. The first interviews with the patient should give him an opportunity not only to recognize his problem but also to learn how the medical social worker can be of assistance. He can then exert his right to choose whether or not he wants the kind of help which the caseworker can give. While much depends upon the ability of the case worker to develop a good relationship with the patient, the latter must also be motivated towards change and desire a better adjustment.

If the patient decides to use the medical social worker's help, then she can direct her efforts towards the next step in treatment, which is to help him to become clear about what issues are involved and to modify his attitude toward treatment. In any setting there are techniques in interviewing which can be used to help an individual in trouble. The patient's anxiety, guilt or resentment, is often relieved by universalising his feeling with that of others. The patient can also be helped by the case worker to clar fy his feelings and reactions so that he is better able to make decisions regarding his problem. The case worker must take the responsibility for helping the patient focus on the prob-

blem and for limiting the material under discussion to that with which the patient needs help.

Unlike case work treatment in a non-medical setting, case work treatment in a medical setting can only be integrated with medicine if the doctors want it for their patients. When the doctor considers that the patient's social problems are creating obstacles to treatment, he can consult the medical social worker for her evaluation of the problem. The subsequent plan of case work treatment will be centered around the illness and the shared thinking of the doctor and medical social worker so that there is a common goal in treatment.

At the time of our study, patients with social problems were referred to the Social Service Department by the doctors concerned. This is considered to be the best practice, although, with the agreement of the doctors on a particualr service, every patient may be interviewed by the social worker. Such a hundred per cent review not only can result in a less integrated working relationship with the doctor, but also in a case load which is too heavy to permit the case worker to do a good qualitative piece of work. For the purpose of this study, however, it was necessary to choose a patient group on a hundred per cent review basis in order to permit random selection. Because the 25 patients were carried as the writer's case load throughout the second year of field work, it was not essential to limit our consideration of the patients to a social evaluation as is usual in a study of this kind. Where a need for case work treatment was indicated be-

yond the first or second interview, it was given within the limits of the field work period. There were 18 patients carried during this time after the first interview.

We have chosen two interviews with Case No. 8[I] to demonstrate how the medical social worker can help modify the attitude of the patient towards treatment. In addition to a good working relationship to the medical staff, the medical social worker must be familiar with the specific illness and its treatment in order to be effective as a case worker. Our interviews are summarised as much as possible for the sake of clarity.

> We had not yet interviewed the young farmer who had been admitted for regulation of his diabetes when we discovered one afternoon that he had become quite disturbed on learning from the nurse that the doctors were contemplating a change from crystalline to protamine zinc insulin. He knew nothing of this new kind of insulin which he would have to take before his noon meal. As he was on the defensive and quite resistant to the idea of a change, we took the opportunity to see him immediately.
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> After explaining that, as a medical social worker, we were interested in knowing how he felt about his treatment and mentioned that we knew he was not pleased about what he had just heard from the nurse, he was quick to respond to this opportunity to express his feelings.
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> His first objection to taking the new insulin was because of the inconvenience of it on the farm. Out in the fields at noon he thought was no place to take insulin. All he ever had time for was the noon meal and he could see no way of sterilising needle and syringe or of waiting the half hour after the injection to eat. We acknowledged that a noon dose of insulin would be difficult under such circumstances. Given this verbal acceptance of his attitude, he felt free to express the resentment which he had been feeling towards the doctor at the hospital from the time of admission.

[I] - Supra, p. 78.

His purpose in seeing the doctor was to get a medical certificate for work in the city as he felt it important to earn some extra money during the winter. When the doctor had advised him to come into the hospital, he wanted to refuse but he was afraid he could not be insured at work without a medical dertificate. Now, with this proposed change of insulin, he wasn't sure he was going to stay any longer. Encouraged again to say why he felt so strongly about the change, he then said buying two kinds of insulin would be an expense and a bother to have sent to the farm. He was used to judging his own insulin dosage at home according to the amount of active physical work he did. He thought he had managed his diabetes well for the last ten years and he had never taken the amount of insulin he was on at present. He was also able to say that he did not follow a diabetic diet on the farm as he was always hungry for his meals. When we suggested that he would not have the same problem if he intended to stay in the city, he continued to talk about his dissatisfactions with his home and the lack of social life during the winter.

We learned that he was in conflict about what he should do about work. He felt a strong loyalty to his family although he had never accepted his step-mother in the place of his own. He had an older sister who had had tuberculosis and another who could not walk or talk. In a letter from home, he had just learned that his younger brother had developed rheumatic fever. On the other hand, he wanted to meet young people his age, earn some money and be independent of the family. Having decided to find work in the city, he resented the fact that medical treatment had interfered with his attempt at a solution.

We then refocused the interview on the problem of the insulin if he remained in the city. His main objection was that he did not think he could take a nonn dose in front of the men at work. Commenting that this could be embarrassing, he continued to say that he would be afraid they would think he took dope. He then recounted an unpleasant experience with a family in the country who had accused him of taking dope. Again, we agreed that such an experience could be embarrassing socially or at work and asked then if that was his real reason for objecting to the protamine zinc insulin. This led to a further expression of resentment at having the expense of another hospitalisation and of his resistance to having to stay a longer period of time to have the new insulin properly adjusted to his needs. When we said that he actually had a number of reasons for not wanting protamine zinc insulin, he was able to ask some questions about it and to

think that it might have some advantage for him. Then he expressed his resentment towards the doctor for not having consulted him about the insulin as he was the one who would be taking it. We agreed but pointed out that the doctor was not aware of how he felt about staying in the hospital or the proposed change. He continued to compare the doctor at the hospital unfavourably with the country doctors and said emphatically that if he thought he was going to get the protamine zinc insulin before the doctor explained it, he would leave.

We pointed out that he was free to walk out of the hospital at any time but we also thought that he would not want to do anything to harm himself and his chances for health. The patient hestitated and said he would not want to do that. We then asked him what he thought he should do about the change of insulin. After he asked us for an opinion, we said we thought he could choose what was the best for himself. He said he was really afraid the insulin would be changed and he would be stuck in the hospital. He agreed to stay until the next day when we offered to talk over his feelings with the doctor before wards rounds the next morning.

We were able to explain the reason for the patient's resistance to a change of insulin to the doctor and it was agreed that he should have an opportunity to talk it over with the doctor before the change was made. The doctor was able to convince him that the protamine zinc insulin was an advantage and that with exercise, he might be able to cut his insulin to one dose a day. He also promised him that he would be able to leave the hospital in three days.

At the beginning of this interview, the patient was so resentful and resistant to treatment that he was prepared to leave the hospital. Given acceptance of his feelings and encouragement to express himself freely, some of his resentment was drained off. This made it possible for him to bring out more of his feelings about his diabetes, diet and insulin and the present hospitalisation. His resistance to the doctor's authority was recognized and he was helped to see that he did have control of his situation as he was free to leave the hospital before finding out what the new insulin had to

offer if he so desired. While the writer focused the interview upon what he would do about his insulin and staying in the hospital, his ambivalence about what he should do to make a satisfying life for himself was noted. It would have been confusing to the patient to have attempted to help him make a decision in this area, as he did not recognize it as a problem and he had made his decision to stay in the city. At the end of the interview, he was receptive to learning more about the insulin and agreed to stay in the hospital until he talked it over with the doctor. We were able to interpret his feelings to the doctor who made a special effort to help him feel that he was being considered in the decision. We can say,then, that as a result of this interview the patient was helped to modify the attitude which blocked him from continuing treatment or considering change.

The following is a brief summary of the second and last interview with Case No. 8.

> Several days later we saw him again. He had no objection to staying in the hospital then as he was actually beginning to feel better and his insulin had been reduced to one injection before breakfast. He really didn't think he would have much difficulty purchasing the insulin. As for his diet, the quantities had been increased so that he felt he was getting ample food. He had decided to remain in the city until May at which time he would return to the farm because his father had asked him to return.
>
> As it seemed to the writer that the patient had acceptted treatment at the hospital and so had been able to resolve the problem with which we had helped him, we told him we thought he had been able to work out the difficulties he had when we first saw him so that we would not return to see him again. If he should feel he would like to talk over any new problem which might arise after discharge, we encouraged him to come to see us at the hospital. The patient said he

> would and added, "its a good job that I did talk over the way I felt the other day. If I hadn't I am not sure I would be here now".

When environmental pressures are beyond the patient's control, the medical social worker looks for resources in the community or directs her efforts towards modifying the family's attitudes to permit him to regain an equilibrium. This aspect of case work treatment is not part of the patient-worker interview. Modification of the environment however, is often the only way of helping certain patients who cannot make an adjustment entirely by their own effort. The medical social worker is aware of how the patient's problems may be met by the doctor, nurse or dietitian. But, she also needs a good knowledge of community resources. If another social agency can best give the service that is needed, the medical social worker can interpret the medical recommendations to the other agency. If joint service with the other agency is indicated, the way in which this can be done most effectively is usually through a case conference.

Case No. 16[I] was one of the patients in the group who needed help from the community. When she was first interviewed, it seemed that it might be possible to find a small institution which would afford her some security as well as supervision of her diet and insulin. Although she finally became too disoriented to be able to use the available community resources, careful planning had been done

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[I] - Supra, p. 24.

with the Catholic agency in preparation. The letter[1] summarising the case conference and subsequent developments illustrates that careful evaluation is necessary before community resources can be found to meet the needs of the patient. All problems involving community resources are not as complicated as those described in Case No. 16. Nevertheless, any resource which the medical social worker may find for the patient to meet a minor need or a complex situation, should be carefully chosen and interpreted to the patient.

In summary, the medical social worker makes her own unique contribution to the care of the diabetic patient by means of case work treatment which involves a social evaluation and a modification of the patient's attitudes which cause resistance to treatment. When the patient cannot be helped in the process of the interview, treatment is directed towards lessening environment pressures to strengthen the patient to function more adequately.

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[1] - See appendix, C. p. 122

CHAPTER IX

Summary and Conclusions

It is the writer's opinion that the findings of this study have indicated that personal and social problems for diabetics do exist because their disease makes exceptional demands upon them for material resources and for self-discipline, which in turn, create new problems and intensify existent ones.

When we considered our patient group of 25 in their social setting, we found that there were 13 males and 12 females of whom 11 males and 7 females were married or widowed. While it is usual to find more females with diabetes in a large sampling of diabetics, the number of patients used in our study does not provide enough statistical evidence for comparison. From Table 1[I], it can be calculated that the mean age for both males and females fell between the 45th and the 50th years. This bears out the fact that diabetes can no longer be considered a disease of the aged.

We found that the majority of the patients studied here lived in Montreal and that they came from sections of the city in which labourers, as well as business people and white collar workers live. If the location of the treatment centre is too far from the patients home or place of work,

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[I] - Supra, p. 14.

the distance may present an obstacle to regular medical supervision. The cultural backgrounds of our patients were varied. Although it cannot be said that ethnic factors were of great significance, it was found that five patients were unable to absorb dietary instruction due to language difficulties. In one case, one could attribute much of the patient's inability to cooperate in treatment at home to his unwillingness to give up Italian family life and Italian customs of eating. Religious beliefs and customs did not interfere with the diabetic regime for most of our patients. The exception was a Roman Catholic whose diabetes was consistently out of control and who had a negative attitude toward the Church and its teachings with resultant strong guilt feelings over her poor adjustment to life. The diversity of occupations are listed on Table VI[1]. The patients whose work interfered with a regular routine of meals, insulin, and rest, were primarily in business for themselves and so felt obliged to put service to customers first and their health second.

Certain general considerations were explored with regard to the patient's medical history. Only 8 of the 25 patients gave evidence of familial or hereditary incidence of diabetes. None of our patients studied had diabetic children. The age at onset of the disease for males and females bore out the already existant fact that diabetes does

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[1] - Supra, p. 24A.

not develop exclusively in old age. For both males and females, the majority develop diabetes between the fourth and sixth decades of life. Our statistics did not show this trend for the females but they did show such a trend for the male patient group. Eight of the patients were newly diagnosed. The remainder had had diabetes over a range of 1 to 25 years. Our patients had those symptoms and complications which one would expect to find in any group of diabetics. It was noted that complications of diabetes may be the reason why the patient seeks medical care, as the symptoms of diabetes are frequently not recognized to be serious enough to warrant medical attention. Additional social problems arise for patients who for example, have had an amputation, or whose vision fails as the result of poorly controlled diabetes and which may be more distressing and handicapping to the patients than the diabetes itself. At times, other diagnoses appear more significant to patients, especially if painful or debilitating, causing them to be disinterested in instruction available for better care of their diabetes. The medical social worker can be especially helpful to the patient who is handicapped by complications of the disease, if he is not making a good adjustment. She can also help to stimulate the patients who are more concerned about another illness to participate in their diabetic regime.

The writer did not find that inability to follow a diet could be attributed to its cost. It should be pointed out, however, that with the increase in protein in the pre-

sent diets, it is unlikely that all patients can purchase the necessary foods. War-time restrictions on canned goods created hardship for several patients but could not be considered a serious problem. Religious practices were likewise not significant as obstacles to the dietary regime.

Language difficulty, however, and little formal education, as well as mental retardation are factors which interfere with the patients ability to absorb class instruction. Special arrangements are needed for individual teaching or for another member of the family to be taught, in lieu of the patient, if the latter is unable. The new diabetic especially, needs the opportunity for continued diet instruction and interpretation but this is no less true for the diabetic of long-standing, as we found that some patients may continue making mistakes in diet for years, to the detriment of their health.

If the preparer of the diet does not understand it and has not received instruction, she will contribute to mismanagement of the diabetes, even though the patient has had some instruction. However, we cannot assume that the reason why the preparer of the food does not come to ask for instruction is always due to lack of interest. She may have language difficulties which are embarrassing or she may feel afraid of the hospital and of how she will be received. Special help from the dietitian may be needed to help the preparer of the food to find ways of interesting the old person in eating foods which can be included in his diet. For those

elderly diabetics who must live in institutions, the chances of maintaining a dietary regime are often quite poor. With a knowledge of the quality of care available in the institutions of the community, the medical social worker can offer some help by suggesting the kind of information that could be sent to the staff of a specific institution.

Because full participation of the preparer of the food is vital to the good management of diet, the writer recommends that the dietitian include an enquiry about the preparer of the food in her regular visits to the ward patients so that she can be certain of making plans for the person concerned to come for class or individualised instruction.

It appears from our study that the management of a diabetic diet is a real test of the patient's maturity and self-discipline, and that the new responsibility serves to accentuate old fears and inadequacies or to develop personality patterns not previously evident. This is particularly true of the new diabetic, who may feel insecure as he is about to be discharged from the hospital after his induction period. As case work treatment is geared to helping patients find a solution to problems which they do feel capable of solving alone, it can be useful to those diabetics, new or old, who, for some reason other than lack of instruction, are unable to manage a diet. She may be able to help the patient modify his attitudes or determine what community resources are needed, either to provide additional financial aid, budgeting service or supplementary foods.

Just as the medical social worker refers diet problems, which need clarification, to the dietitian for her special service, so it is recommended that the dietitian refer those patients or members of the family preparing the food to the medical social worker, when they need help to overcome resistance to the diet or they need access to resources in the community to make it possible for them to carry out the dietary instructions.

We discovered that the purchase of insulin was not a problem for our patient group. Arrangements are made administratively with the R.V.H. Out Patient Department to supply insulin to those who cannot afford it. Those patients who undergo deprivations in order to purchase the insulin themselves, may be helped by the medical social worker if supplementary allowances are available in the community or funds for such purposes are made available to the social service department.

A new diabetic often has an aversion to injecting a needle into the body. He may also have misconceptions about insulin which cause him to fear taking it. This was found to be true also of diabetics who had had the disease for a number of years, and who were poorly controlled. For the old and new diabetic alike, the injection of insulin while they were at work was most undesirable. Several patients discontinued their injections rather than face the possibility of being considered physically inadequate by their fellow workmen. This was especially true of labourers who had little

privacy for injecting the insulin. Adolescents are self-conscious about taking insulin because they have a growing need to feel independent and to be acceptable socially, and they may fear being ostracised by their friends if the truth about their disease were known. The fear of insulin reactions or repeated insulin reactions also constitute a threat to a patient's security and at times they threaten even his personal safety.

The writer believes that the findings in this study indicate that diabetes imposes limitations and added responsibilities upon those who have it. Continued medical care and repeated hospital admissions are costly to the patient and they are a drain on family finances. Preconceived ideas about the disease as well as continuous lack of control, create anxiety and insecurity. To some patients, diabetes may be considered a form of punishment because of guilt over sins committed.

As in any other illness, the diabetic's response to treatment is modified by the sum total of his life experiences and by the situation in which he finds himself at the time the diagnosis is made. It can be said of diabetics of all ages, that resistance to treatment may result from a need to deny illness, as they cannot bear the anxiety that accepting the presence of illness might bring. The immature, inadequate person finds that his additional responsibilities as a diabetic create a temporary loss of security and self-confidence. The more mature person also has the same reac-

tion but to a lesser degree. If he has a drive to be independent, the elderly patient may not follow a diabetic regime as it makes him more dependent upon his family for his needs.

The writer wishes to emphasise the fact that the medical social worker can make a contribution to treatment because of the problems already mentioned, which exist for the diabetic in the management of his illness. She can be of service when the obstacles to good diabetic control appear to be within the patient and due to negative attitudes, or, in social situations which are beyond his capacity to control. Hence, the writer recommends that all diabetics newly diagnosed, and those with persistent lack of control, admitted to the Diabetic Service at the R.V.H., be referred to the medical social worker by the doctor for social evaluation and treatment. If, after the first interview, it is detemined that the medical social worker cannot be of service, it is suggested that the present practice of preparing a written social summary for the doctor's use be implemented so that the information is included in the permanent medical record. The process of case work treatment for those who need it is then integrated with the medical thinking so that the doctor and medical social worker have a common goal in treatment.

APPENDIX A

SCHEDULE

I 1. Case No: 2. M.F. 3. S.M.W.D.Sep. 4. Age: 5. Religion

6. Address:

7. Birthplace:

8. Nationality: 9. Occupation:

10. Education:

11. Consort: Age: Occupation: Living: Dead:

12. Parents: M.
F.

13. Siblings: a.
b.
c.
d.
e.
f.
g.
h.

14. Children: a.
b.
c.
d.
e.
f.
g.
h.

II MEDICAL HISTORY

1. Other Diagnoses:

2. Duration of Disease:

3. Symptoms:

4. Previous Medical Treatment (Diabetic):

a) L.M.D. b) Other Hospital c) R.V.H. Ward

5. Complications of Diabetes:

6. Control by: a) Diet: b) Insulin:

SCHEDULE

III 7. History of Diabetes in Family:

a) Father
b) Mother
c) Siblings: a.
b.
c.
d.
e.
f.
g.
h.
d) Children:
a.
b.
c.
d.
e.
f.
g.
h.

IV Diet

1. Specific Diet:

2. Is purpose of diet understood:

3. Is importance of diet: a) accepted b) rejected

c) why

4. Is diet adapted to: a) Religion: b) Nationality c) Food habits

5. Does patient resist diet because: a) Uninteresting: b) Too limited

6. Diet prepared by: a) self b) family c) friend d) restaurant

7. Is preparer of food: a) capable b) incapable

c) why

d) interested e) indifferent f) irritated

8. Need for financial assistance with diet a) No b) Yes c) By whom

SCHEDULE

V INSULIN

1. Insulin prescription:
2. Cost per week: a) Insulin b) Needles c) Syringes
3. Patient finds payment for diabetes supplies: a) Difficult b) **Not** difficult c) Why
4. Patient assisted with insulin payments:
   a) Family b) R.V.H.SS Fund c) Other Social Agency
   d) Friend
5. Insulin given by:
   a) Self b) Family c) V.O.N. or S.I.V.
6. Regular injections considered: a) Troublesome b) Not troublesome
   c) why
7. Patient fears: a) Injections
   b) Lack of accuracy in number of units
   c) What others think of his dependence on insulin
8. Dependence upon insulin: a) discouraging b) Not discouraging
   c) why
9. Patient considers himself: a) Invalid b) Well person

VI CLINIC

1. Dose patient accept or resent
   a) Waiting period
   b) Clinic hours
   c) Necessity of regular laboratory tests
   d) Necessity of regular visits
   e) Necessity for testing urine in the home

SCHEDULE

VII ECONOMIC BACKGROUND

1. Income of patient 2. Total family income 3. Rent

4. Occupation in relation to maintaining diabetic regime:
   a) suitable b) not suitable

5. Difficulty in holding jobs because of diabetes

6. Ability to work regularly

VIII RELATIONSHIPS

1. Does diabetes affect relationships with
   a) Marital partner
   b) Siblings
   c) Children
   d) Friends

2. Is there any factor in patient's life which produces:

   a) Emotional crises
   b) Continued tension

3. Are patient's recreational outlets:

   a) Adequate
   b) Inadequate

APPENDIX B

ROYAL VICTORIA HOSPITAL

Montreal 2, Canada

Date.....19....

Diet For.....

APPROXIMATE VALUES: P.90 grams, F. 50 grams, C.H.O. 200 grams.

BREAKFAST:	Orange - 1 OR Grapefruit - 1 Egg - 1 Oatmeal (cooked) - ½cup OR Cream of Wheat (cooked) - ½cup OR Cornflakes - 1 cup Bread - 1 slice, 3½x3½x½ inches Butter - 1 piece, 1x1x1/3 inches Milk - 3/4 cup Honey OR Marmalade OR Jam - 1 teaspoon
10 A.M.	10% C.H.O. Fruit Juice - average serving
DINNER:	Lean Meat OR Chicken or Fish - any kind - 3½oz. One 10% C.H.O. vegetable - ½cup Potato - 1 average size Bread - 1 slice, 3½x3½x½ inches Butter - 1 piece, 1x1x1/3 inches Milk - ½cup One 15% C.H.O. fruit - average serving
3 P.M.	10% C.H.O. Fruit or Fruit Juice - average serving
SUPPER:	Lean Meat OR Chicken OR Fish - any kind - 3½oz. OR Eggs - 3½OR Cheese - 3½ounces Two 5% C.H.O. vegetables - ½ cup each OR one 10% C.H.O. vegetable - ½cup OR Salad made from two 5% C.H.O. vegetables Bread - 2 slices, each 3½x3½x½ inches Butter - ½ piece, 1x1x1/3 inches Milk ½ cup One 10% C.H.O. fruit - average serving
8 P.M.	Milk - 3/4 cup Soda Crackers - 2

NOTE: - All fruits canned in syrup must be washed in water before using.

ROYAL VICTORIA HOSPITAL.

DIRECTIONS TO PREPARE AND TO GIVE INSULIN.

PROTAMINE ZINC INSULIN.

1st. Note the dose carefully.

2nd. Boil syringe and needle in plain tap water for 5 minutes. Drain and dry before using. (Do not keep syringe and needle in alcohol.)

3rd. Invert the bottle carefully for 12 times before withdrawing the insulin. (Do not shake, this causes frothing.)

4th. Wipe off the rubber cap with 2½% iodine or alcohol.

5th. Draw into the syringe a volume of air equal to the volume of Protamine Zinc Insulin required. Pass the needle through the rubber cap; inject the air with the bottle upright, and after inverting withdraw the dose of insulin.

6th. Expell air from the syringe, measure dose carefully. (using the c.c. scale on the syringe.) Scrub place of injection with alcohol and inject the insulin.

NOTE 1. Protamine Zinc Insulin should not be heated. It requires no heating before injecting.

2. Protamine Zinc Insulin should be kept in a cool place, preferably a refrigerator.

3. Protamine Zinc Insulin is supplied in two strengths.

40 units to the 1 c.c.

80 units to the 1 c.c.

ROYAL VICTORIA HOSPITAL

Montreal 2, Canada

(WEIGHED OR APPROXIMATE DIET AND PROTAMINE ZINC INSULIN)

NAME: . . . . . .

1. DIET: Your diet is bases upon the values of: -

Protein: grams

Fat: grams

Carbohydrate: grams

2. INSULIN: Your Insulin dosage is.....units of Protamine Zinc Insulin taken before breakfast each day.

3. INSULIN REACTION: (Hypoglycemia); With one dose of Protamine Zinc Insulin a day taken before breakfast your lowest blood sugar will be before breakfast. Thus the time that a reaction might occur is from 3 A.M. to breakfast time. If you should develop symptoms of headache, nervousness, trembling, sweating, hunger or any unusual symptoms occurring at this time should be considered important. Treat mild symptoms. When the reaction is first noticed take 5 grams of glucose dissolved in water. If at the end of 10 minutes the symptoms still persist or disappear and return at a later time take ½ a glass of milk (100 c.c.) and a small soda biscuit. The next dose of insulin must be reduced by 4 units. This is a permanent reduction. Repeat the glucose and the milk and soda biscuit if the reaction still persists. Keep the diet the same.

4. SUGAR IN THE URINE: (Glycosuria): With one dose of Protamine Zinc Insulin taken before breakfast your highest blood is usually in the afternoon. Examine a specimen of urine collected in the afternoon for sugar each day. If the Clinitest turns yellow or orange on two consecutive days increase your insulin by 4 units. Do not change the insulin for a green colour. Keep your diet the same.

APPENDIX C

March 26th, 1943.

Rev. Father Director,
Catholic Charities,
MINTON.

Re: Mary O'Toole
R.V.H. # 43-7619

Dear Father:

We are writing to you to confirm our joint conference, concerning the above named patient, which was held at your agency 3-9-43 and to inform you of the final decisions which were made with regard to patient's medical care and treatment.

At the conference, Miss A. Brent, case worker, presented your agency's experience with Miss O'Toole, which consisted of supplementation and sustaining care in community agencies during her rather long period of convalescence following hospital admissions for her diabetes mellitus. The patient's chronological history, behaviour patterns with particular regard to her emotional difficulties and the affect upon the control of her diabetes were presented from material gathered over a period of medical social case treatment with patient during her last admission to hospital and her stay at the Minton Convalescent Hospital.

Patient was admitted to the Royal Victoria Hospital on November 27th, 1942 following a severe insulin reaction. Over a period of one month, patient was treated for her diabetes mellitus, during which time she became fairly well controlled. Within several weeks after her discharge patient was readmitted on 1-9-43 because she was fearful of giving herself incorrect dosages of insulin and felt her diet was not carefully measured. Because the medical control of her diabetes was considered to be affected by patient's constant state of fear, a psychiatric consultation was requested. Patient was noted "to seldom smile or be gay; stated that she worried all her life and is alone in the world without any friends." A diagnosis of constitution psychopathic personality with reactional depression, was made.

Case work responsibility for patient was assumed on 1-19-43 at the request of the psychiatrist and of the Chief of the Diabetic Service, which was as follows: that patient be transferred to the Minton Convalescent Hospital and that some recreation be found for her; a specific request concerning the resources available at the Y.W.C.A. was also made. Patient was interviewed regularly in an attempt to help her release her worries and fears to worker and a relationship was established which enabled her to do this and to talk about past experiences which concerned her.

Previously patient had always been withdrawn, introspective and felt inferior to others. Since the diagnosis of diabetes was made in 1934, she has been hospitalised many times in various hospitals in the City, both French and English-speaking. She always required an extended period of convalescence before returning to her work as a domestic. It was felt by your agency, which has supported her financially at these times of interim convalescence, that Miss O'Toole did have the initiative to find work and she was known to do excellent work wherever she was employed.

At the age of 13 years patient was sent to Canada with a group of children from a convent in England to be trained in domestic work. Patient states she was an illegitimate child. She worked as a domestic until she was 20 years of age and during that time she had several proposals of marriage but could not marry because her birth certificate indicated she had unmarried parents. Because, as she said, she had never had any sex instruction she found herself illegitimately pregnant at this time. There is a question as to the validity of this statement as a gynaecological report from the Woman's Pavilion, Royal Victoria Hospital, expressed the opinion that patient had not been pregnant. There is a possibility that part of her history is fantasy. Following the birth of the child patient "paid penance" for it over a period of 13 years in the Hospital of Mercy, where she said she felt she had really paid for her mistake. It was there that she received the disfiguring burn on her left hand. She left the hospital because she did not feel happy there and because she was ill. It was the following year, 1934, that she found that she had diabetes. Since that time Miss O'Toole has worked as a domestic between hospital admissions. She said she always had the courage to face people and to do her work.

Although Miss O'Toole had lived in institutions directed by religious orders and has associated closely with them, she did not seem to derive any comfort from her religion, yet she practiced the forms in an apparently mechanical way. She said she felt the particular worries she had now had been sent to her as a cross to bear for no reason as far as she could see.

While Miss O'Toole was at our hospital, she expressed something of what she felt within herself. She could not enjoy the company of other patients although she felt it a duty to help them in small ways on the ward. Her attention span was very short so that she could not concentrate on reading, knitting, or letter writing. Her whole day was spent worrying about herself. She said she could not sleep. She felt she was a nuisance at the hospital and a burden on

the city which was paying for her. She thought people were looking at her accusingly. Patient expressed a fear also that she was developing cancer. The incident of discovering the remarks in the nursing notes in her record was constantly on her mind. Patient seemed preoccupied with herself but she was able to talk logically about her past life and occasionally responded to humorous remarks directed toward her.

Worker felt with the increasing intensity of patient's symptoms, psychiatric guidance for the worker was necessary in order to determine what plans could be made to help patient in the best way possible. Before confering with the psychiatrist, a case work plan of treatment for managing patients in the community as requested by him was clarified at our conference:

1. The Sisters of God might be used as the only agency in which patient had confidence in regard to her diet in the past and where she could be given supervision.

2. The services of Father Burke, as Chaplain of the Sisters of God and as a psychiatric social worker would be available.

3. Co-operative case work treatment could be continued because Miss O'Toole would continue to come to the diabetic clinic of our hospital.

4. Those could be carried out only under the condition that psychotherapy be given at our hospital.

Patient was seen by the psychiatrist on 3-9-43 in our psychiatric clinic. He felt that patient could not benefit by psychotherapy and that she would be a risk placed in the community. His opinion was that she would be helped more in a mental hospital where occupational therapy would be provided. Therefore, after a telephone conference with you, alternative treatment at the mental hospital was decided upon and patient was finally admitted 3-20-43.

In the event of the patient's discharge from the mental hospital, we would again appreciate the opportunity of co-operating with you in planning for her re-establishment in the community, if necessary, utilising the plan which was agreed upon following our conference of 3-9-43.

Sincerely yours,

Director, Social Service.

Medical Social Worker.

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