A long-term follow-up of mental hospital admissions, from a rural community

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Ibstock

THE study of mental illness with any kind of statistical accuracy, is always made difficult by the problems innate in a psychiatric diagnosis. Differences of opinion, on the whole, become less as the gravity of the illness increases, and the agreement of two or more independent opinions can be taken as increasing the precision of the diagnosis. Furthermore, the longer the period of observation of any case after the diagnosis, the more likely is the accuracy or otherwise of the label to be revealed. For these reasons it seemed worth while to study mental hospital admissions recorded over a period of 22 years by a single observer in a static rural community, as a series such as this would include only patients who had been seriously ill, whose diagnosis had been confirmed by the general practitioner and at least one psychiatrist, and it included a group of patients who had thereafter been observed for periods up to 22 years.

This type of study will be less easy in the future as psychiatry assumes its proper place in the medical services, and psychiatric beds in district hospitals replace the obsolete Victorian mental hospitals. Even towards the end of this survey the scene was changing. Two factors were at work. Psychogeriatric units were being formed in mental hospitals and some patients were admitted there, who in the past would have found their way into a chronic sick hospital, or with luck into a general hospital. Secondly, day hospitals have been started, attended by some patients who would otherwise have had to be admitted to a mental hospital. This system complicates the issue in that some day hospitals have beds in which patients sleep during the week, and yet they are not eligible to count as mental hospital admissions. Both these new systems are a step forward in the psychiatric services. Nevertheless, it was felt that the optimum time to review the series had arrived.

Basis of the survey

The practice at Ibstock of three doctors has a relatively static population of just over 8,000 persons. The annual turnover is about three per cent so that over the 22 years under review, some 13,000 persons would have been under the surveillance of the practice. All the patients admitted by any partner to a mental hospital were included. Carlton Hayes took most of our admissions for mental illness, and the Frith Hospital at Leicester for cases of mental subnormality. A few mentally-ill patients were admitted to other hospitals. The practice has a central surgery in Ibstock, but the area covered contains over 25 villages, and we have a few patients in the urban area of Coalville, but most of the population could be considered as country folk. Every mental hospital admission since 1946 has been recorded, but the period under survey was from 1947 to 1968 inclusive, a matter of 22 years. The first half of 1969 was spent in following up the cases, and this period ended on 30 June 1969.

During these 22 years there were some 230 persons admitted to a mental hospital, or an institution for the mentally subnormal from the practice. There were 125 read-

missions over the years, making a total of 355 admissions. Eight of the persons involved were temporary residents, and they were excluded from the survey. Of the remaining 222 patients, ten, that is 4.5 per cent of the total, could not be traced, so they too were omitted from the final scrutiny, leaving 212 patients to form the basis of the study. Of these almost a third (31 per cent) had died but the progress to the time of death could be followed in most of the cases. Those still alive were known to me personally through routine work, or else enquiries were made either direct or through close relatives during the first six months of 1969. The fact that all but 4.5 per cent could be traced underlines the static nature of this rural community, and its value in observational research.

While the vast majority of the cases followed the expected course, there were a few surprises. The first case admitted in 1946 was a woman with a schizo-affective type of disorder. She is still alive 24 years later and still a similar psychiatric problem. On the other hand as long ago as 1931 a young woman was diagnosed as having schizophrenia; a bad prognosis was given and immediate admission to a mental hospital was advised. Some 38 years later she is now a woman of 54. She has spent very little of her life in a mental hospital and there is no evidence of any progressive mental deterioration. Her recurrent illness has been more in keeping with a manic depressive psychosis.* In 1961 an old batchelor of 77 went to pieces after the death of his old sister who had looked after him. He was rambling, unkempt, disorientated and quite incapable of looking after himself. He was admitted to the mental hospital as a case of senile dementia. During the follow up eight years later, he was found in an old people's home, a spry and mentally alert old man of 85. His breakdown at 77 was one of depression and not of dementia, and his diagnostic category for the final analysis was altered accordingly.

When the Mental Health Act of 1959 came into being, it was suggested that in time the mental hospitals would be abolished, and that long-stay patients would be a thing of the past. The people living in this area get a very adequate supervision as regards mental health, and every effort is made to treat as many patients as possible on a domiciliary basis. In spite of this the average admission rate over the years is tending to rise, and not to fall as the planners had suggested would happen.

* See Miss M.B. p. 86.

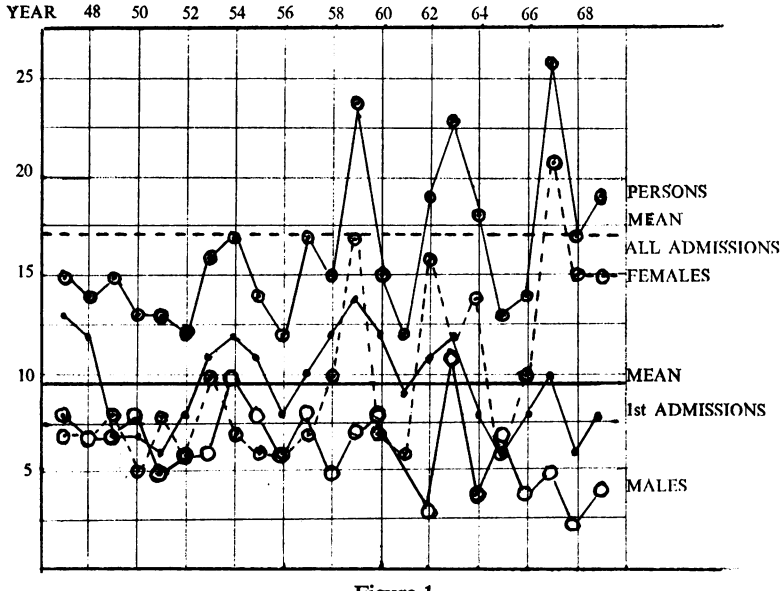

Figure 1
Persons admitted to a mental institution over the years by sex

The admission rate year by year is shown in figure 1. For the first ten years the admission rate for men was similar to that of women. In the second decade there were twice as many women as men. This difference is due to several factors. During the first period we had two male manic patients in the practice who each had one or even more admissions each year. During the second decade depression and the mental

TABLE I

Years	*No. of admissions*
1947–5C	57
1951–54	58
1955–58	58
1959–62	70
1963–66	68
1967–68 (2 years)	44

TABLE II

PERSONS ADMITTED TO A MENTAL INSTITUTION OVER THE YEARS BY SEX

Years	*Male*	*Female*
1947–56	71	71
1957–68	73	140

hospital were becoming more respectable and less feared, and this type of illness occurs more often among women, as does senile dementia, mainly because women tend to live longer than men. There were more admissions for both depression and dementia in the second half of the survey (table II).

Admissions to day hospitals have already been referred to. They were not included in the survey but figures from 1965 were recorded for the sake of completeness (table III).

TABLE III

PERSONS ADMITTED TO A DAY HOSPITAL OVER THE YEARS BY SEX

Year	*M*	*F*	*Total*
1965	1	4	5
1966	1	3	4
1967	2	2	4
1968	2	2	4

Of these 17 patients five had at some time been inpatients in a mental hospital. Some had graduated from the mental hospital to the day hospital, and others went to the day hospital during a new episode of illness. None had to be transferred from the day hospital to the mental hospital because of a deterioration in their illness.

Diagnostic categories

By far the largest category of cases was manic-depressive, accounting for 46 per cent of the series. The second category was the schizophrenic group which to conform with the classification of mental illnesses accepted on both sides of the Atlantic, contains the schizo-affective disorders. This whole group accounted for 22 per cent of the patients. The only other group of any size was that of senile dementia, and as will be shown later, this is a growing problem. There were 28 such cases. (*See* table IV).

What has happened over the years?

In the follow up of the patients there were three broad groupings, namely those who had recovered or improved, those in a chronic state, and those who had died. Each category had subgroups.

1. *Recovered or improved*
   (a) *Complete recovery.* This implied that no one, inside or outside the family would dispute the recovery.

(b) *Much improved.* A patient in this category looked completely normal to any outsider, but there were still doubts in the minds of the family or the family doctor. I had not seen one youth for eight years, and I knew from his records that he was

TABLE IV

NUMBERS OF PERSONS BY DIAGNOSIS AND SEX

Diagnosis	*M*	*F*	*P*	*Approximate percentage*
Endogenous depression ..	42	51	93	*44*
Mania	2	2	4	*2*
Schizo-affective disorders ..	3	13	16	*8*
Schizophrenia	16	14	30	*14*
Puerperal psychoses	—	9	9	*4*
Anxiety states and hysteria ..	5	4	9	*4*
Addictions	1	5	6	*3*
Epilepsy	3	1	4	*2*
Psychopathic states	2	1	3	*1*
Dementia	11	17	28	*13*
Mental retardation	8	1	9	*4*
Toxic confusional state ..	—	1	1	
TOTAL	93	119	212	

working consistently. When I called at his house his parents were at home. They said that he kept very well, but his mother added that she wished he would come and see me. It was clear that in her mind he was not a hundred per cent well.

(c) *Improved.* These people were much better, but they were also to a discerning eye, still disabled. They were socially recovered in that they were regularly at work.

2. *Chronic sick*

(d) *Chronic state-employed.* These people were quite clearly eccentric or mentally ill, sometimes still having treatment, but they were able to work consistently, even if, to a complete stranger, they looked a bit odd.

(e) *Chronic state, and unemployable.* These were the same as the above, but they were unable to hold a job down in the community, or if at home, they could not run a house very well.

(f) *Longstay hospital patients.* These patients seemed likely to spend the rest of their days in hospital because of the chronic nature of their illness, and inadequate facilities to help them in the community.

3. *Patients who had died*

(g) These were patients who had made a good recovery from their mental illness but who had died at home of some other complaint.

(h) These were patients who had died of some organic disease, while still mentally ill. They had died at home.

(k) This small group died at home as a direct result of their mental illness.

(l) These patients died in hospital and the cause of death was not known.

On 30 June 1969 when the follow-up ended, there were three patients resident in the acute wards at Carlton Hayes. These had either to be excluded from the survey, or given a prognostic category. They all had previous admissions, and a long history of mental instability. They were therefore admitted to the survey with a predicted category.

One was put into the much improved section, and two were classified as chronic sick at home.

The outcome of the survey is shown in table V.

TABLE V

PERSONS ADMITTED TO A MENTAL HOSPITAL BY SEX AND DIAGNOSIS SHOWING RECOVERY RATES

Diagnosis	*Sex*	*Recovered*	*Much improved*	*Improved*	*Ill but able to work*	*Ill and unable to work*	*Long stay hospital*	*Died but recovered M.I.*	*Died: still mentally ill*	*Died of mental illness*	*Died in hospital*	*Total by sex*	*Total persons*	*Approximate percentage*
Endogenous	M	9	8	—	3	4	—	5	8	4	1	42	93	*44*
depression	F	20	8	6	6	1	—	4	4	1	1	51		
Mania	M	1	—	—	—	—	—	1	—	—	—	2	4	*2*
	F	—	—	1	—	—	1	—	—	—	—	2		
Schiz. affec.	M	1	2	—	—	—	—	—	—	—	—	3	16	*8*
disorders	F	2	5	2	2	1	—	—	—	1	—	13		
Schizo-	M	2	2	2	2	3	2	—	2	—	1	16	30	*14*
phrenia	F	1	1	2	1	2	5	—	1	—	1	14		
Puerperal psychoses	F	6	2	—	1	—	—	—	—	—	—	9	9	*5*
Anxiety	M	2	2	1	—	—	—	—	—	—	—	5	9	5
states	F	2	1	1	—	—	—	—	—	—	—	4		
Alcoholic	M	—	—	—	1	—	—	—	—	—	—	1	5	*2*
addiction	F	—	—	1	—	—	1	—	—	1	1	4		
Amphet. addiction	F	1	—	—	—	—	—	—	—	—	—	1	1	
Epilepsy	M	—	—	—	—	—	1	—	1	—	1	3	4	*2*
	F	—	—	—	—	—	1	—	—	—	—	1		
Psychopathy	M	—	1	—	—	1	—	—	—	—	—	2	3	*1*
	F	—	—	—	—	—	1	—	—	—	—	1		
Senile	M	—	—	—	—	—	1	—	4	—	6	11	28	*13*
dementia	F	—	—	—	—	3	—	—	2	—	12	17		
Mental	M	—	—	—	—	—	4	—	2	—	2	8	9	*5*
retardation	F	—	1	—	—	—	—	—	—	—	—	1		
Toxic confus. state	F	1	—	—	—	—	—	—	—	—	—	1	1	
TOTAL		48	33	16	16	15	17	10	24	7	26	212	212	
Approx. percent.		*23*	*16*	*7*	*7*	*7*	*9*	*5*	*11*	*3*	*12*			
TOTAL		46			23			31						

Endogenous depression

This was by far the largest category accounting for 44 per cent of the series. Some 30 per cent of the group had died. Of the survivors 70 per cent had recovered or were much improved, nine per cent had improved and 21 per cent were in a chronic state of depression, a figure close to that of Watt.[1] There were no long-stay hospital patients. Of the 28 patients who had died, nine (almost one third) had recovered at the time of their death. The causes of death were:

Cerebrovascular accident	3	Coronary thrombosis	2
Pneumonia	1	Cancer, stomach	1
Accident	1	Not known	1

Five patients died as a direct result of depression, three by suicide and two of inanition.

These two were men who had recovered from an attack that had taken them into hospital. The illness had recurred and they had refused to go back for further treatment. This type of death is very traumatic for both the patient and the family. Even today it is not uncommon among old people, and in my wider survey[2] I felt that it was probable that as many died from inanition as died by suicide.

The suicide rate in our practice has fallen over the years, as is shown in figure 2. The numbers are too small to be of much statistical significance, but they do seem to indicate that adequate attention to the problem of depression can lower the suicide rate.

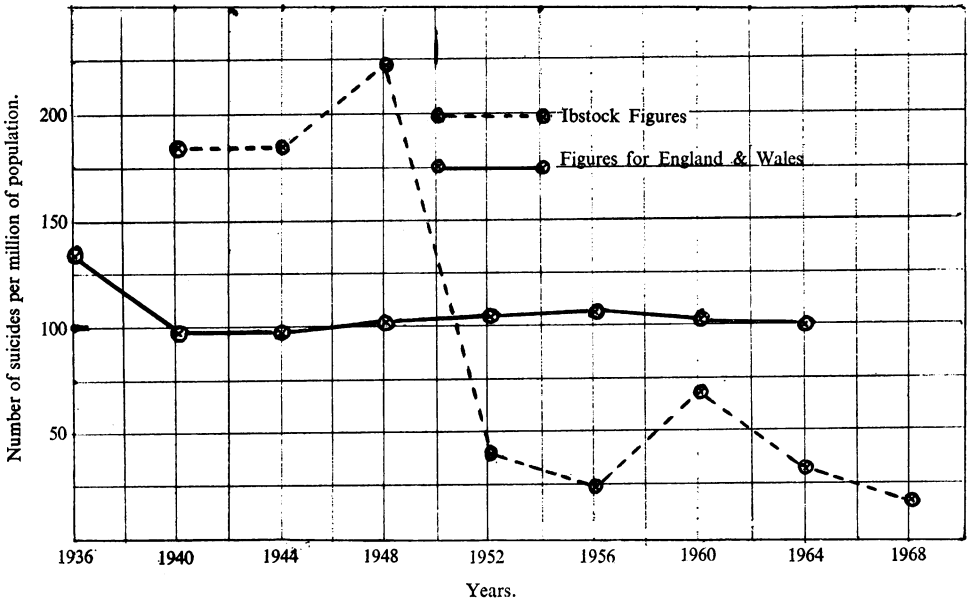

Figure 2
Suicide rates over four-yearly periods showing the trends in Ibstock as compared to England and Wales in persons per million

A few of the patients who were taken into hospital care were found to have left suicide notes ready at home, revealing their intent.

Twelve persons died at home in a state of depression from the following causes:

Cerebrovascular disease	5	Cancer all forms	4
Heart failure	2	Chronic bronchitis	1

Re-admissions

Among the 42 men, 15 re-admissions occurred and with the 51 women there were 51 re-admissions (table VI).

Almost two thirds were only admitted for one attack, and recurrent episodes of depression are more frequent among women. The fact that a patient had only one hospital admission, is not synonymous with one single episode of depression. Many of these people had had other attacks which had been treated at home, a few had many such episodes. The number of patients in the series alive and well today who have only had a single recorded attack of depression amounted to 14 (six men and eight women); that is about 20 per cent.

Mania

This condition is comparatively rare. There were only four patients in the series,

but in three the recurrent attacks were very frequent. In the two men, an episode requiring hospital care was almost an annual event. After some 20 admissions in as many years one died at home of a cerebral haemorrhage. The other patient left the area ten years ago, but was traced during the follow-up. He had never had another attack; it appeared that at 58 years of age the illness had burned itself out.

Schizo-affective disorders

This is not a popular diagnosis among psychiatrists. Henderson and Gillespie[3] suggest that it creates more difficulties than it solves. Mayer Gross *et al*[4] agree with this

TABLE VI

NUMBER OF ADMISSIONS PER PERSON BY SEX

No. of admissions	*M*	*F*	*Total*	*Per centage*
1	30	30	60	*64*
2	9	7	16	*17*
3	3	7	10	*11*
4	—	5	5	
5	—	1	1	*8*
5+	—	1	1	

TABLE VII

RECOVERY RATES IN CERTAIN DIAGNOSTIC CATEGORIES AMONG PATIENTS ALIVE IN JUNE 1969

Diagnosis	*Recovered or improved*		*Chronic*	
	No.	*Per centage*	*No.*	*Per centage*
Manic-depressive disease	52	*77*	16	*23*
Schizo-affective disorders	12	*80*	3	*20*
Schizophrenia	10	*40*	15	*60*

statement but add that the manic depressive features of this group carry a fairly good prognosis, and this suggestion is borne out in this study. The diagnosis was made in a small group of 16 patients, and although this number is too small to allow for any firm opinions there were three distinct subgroups:

(1) Periodic schizophrenia with a complete remission of symptoms and no mental deterioration over the years.

(2) Chronic schizophrenia improved by drug therapy and well maintained over the years. Mental deterioration was slow but evident.

(3) Manic-depressive illness disguised as a schizophrenic process.

Endogenous depression is the great imitator, and schizophrenia is not immune from such simulation. These three types are well illustrated in the following case histories.

Periodic schizophrenia. Mrs W had her first attack in 1938, and she was ill enough to be admitted to a mental hospital. She had a second severe attack after the birth of her only child in 1944. She was a quiet schizoid type of person, introverted and difficult to befriend. I first saw her in 1950. She was withdrawn, and thought-blocking made conversation difficult. She had ideas of reference, felt people were talking about her and so on. Again she was admitted to hospital where she recovered and was home in about three months. The next attack in which I saw her was a few days before Christmas in 1958. Her husband ran a small shop, and he felt that he just could not cope with her at home during such a busy time. I pleaded with him to let me try a new drug called chlorpromazine which had just come out. Her response was quite dramatic and she was fit enough to cook the Christmas dinner. She has had four attacks since then, and always makes the same satisfactory and rapid response to drugs. She needs them for about two months and then is able to carry on. There has been no mental deterioration over the years.

Chronic schizophrenia. Mrs B H was first seen by me in 1946. She was a mixed-up person who felt that either she or a member of the family had done wrong and the police were after her. People in the street called her bad names and she used to wander off. She was admitted to a mental hospital at the age of 52, where she had ECT and came back a bit better, but the improvement did not last. She was readmitted in 1949, and again in 1959. During the latter stay in hospital she was given chlorpromazine and this helped her a great deal. As long as she took the drug she was well, but if she missed it she deteriorated. Once on holiday she forgot her tablets and narrowly escaped a fourth admission to a mental hospital. After ten years of the drug she is still a strange person, her queer ideas never far away. She is 75 and

but for the care of her husband she would have to be in a mental hospital. There has been a slow insidious deterioration over the years.

Manic-depressive type. Miss M B started her troubles at 14 and she is now 54. She has had countless attacks of mental illness over the years, and was diagnosed as a case of schizophrenia by no less a person than Mapother, as well as by many other psychiatrists. When she is ill she can appear as the complete schizophrenic, at other times she is a typical depression who is suffering because she has committed the unforgivable sin. When her illness is in remission she is a jolly extrovert, with none of the deterioration one would expect after 40 years of a periodic schizophrenic-like illness. She was seen at the Cassel when she was free from symptoms, and the authorities there suggested that manic-depressive disease was a more appropriate diagnosis. She is not an easy person to keep in a state of remission, but a combination of lithium and amitriptyline give most help. Phenothiazines have been disappointing.

This long term study of this small group suggests that on the whole the illness is more akin to manic-depressive syndrome than to schizophrenia. This point is illustrated in table VII and figure 3.

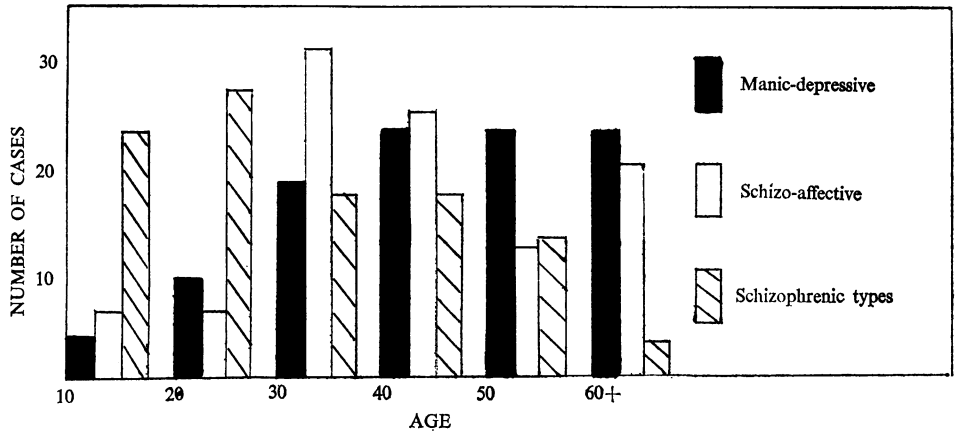

Figure 3
The age of onset by percentage of certain diagnostic categories

The age of onset was taken from the patients' histories. and this is not an entirely accurate guide, but the histogram does show that whereas the onset of schizophrenia occurs most in the early decades, depression is most frequent from 40 onwards, and the schizo-affective group from 30 onwards. It resembles depression in that it is not uncommon in the senium, and like depression occurs more in women than men.

Schizophrenia

This was the second largest category, but with only 30 cases of true schizophrenia, it is a less significant sample of the population than the depressive group, only 14 per cent of the total series. If the schizo-affective cases are included, then in the course of 22 years about 0.4 per cent of the population at risk had been in a mental hospital because of a schizophrenic disorder. It is well known that quite a lot of mild and simple schizophrenics get by without ever seeing a psychiatrist, and if they were added this percentage would be nearer to the one per cent quoted by Huxley *et al.*[5] Five of the patients had died leaving only 25 for the follow-up; there were some 13 men and 12 women.

Nine patients were admitted once only and five of these became long-stay patients. The mortality among the schizophrenics was about 17 per cent as compared to 27 per cent among the depressive group. This was in part due to the lower age range of the former. Four of the series died of natural causes and one was shot dead by an irate father-in-law. There were no suicides. The recovery rate was about half that of the depressive group,

about one third became chronic sick at home and 28 per cent even today remain as chronic long-stay patients. The recovery rates are shown in table X.

TABLE IX

NUMBER OF ADMISSIONS PER PERSON BY SEX

No. of admissions	*M*	*F*	*Total*	*Per centage*
1	9	5	14	*47*
2	2	4	6	*20*
3	3	4	7	*23*
4	—	1	1	*3*
4+	2	—	2	*7*

TABLE X

RECOVERY RATES OF SCHIZOPHRENIC PATIENTS BY SEX

Recovery rating	*M*	*F*	*Total*	*Per centage*
Recovered ..	2	1	3	*12*
Much improved ..	2	1	3	*12*
Improved	2	2	4	*16*
Ill, at work ..	2	1	3	*12*
Ill, off work ..	3	2	5	*20*
Long-stay patients	2	5	7	*28*
TOTAL	13	12	25	*100*

Three patients, while still obviously schizophrenic, were able to hold down a job of work, usually a low grade type of employment. For instance the son of a professional person who had had a grammar school education was a dishwasher in a transport cafe. The mental deterioration was obvious in these patients. If this small group is included among the social recoveries, the figures suggest that about half the schizophrenics who have had a hospital admission, are able to live and work in the outside world; and with earlier diagnosis and more enlightened treatment, this number is likely to improve, but there will always be some chronic cases. Recovery which returns the schizophrenic back into the community, raises the problem of family life. The total group of 30 schizophrenics are known to have produced some 18 children, that is 0.6 of a child per patient. The depressive group had produced 2.1 children, a figure close to that of the census for 1961. Married women aged 25 and over averaged 1.96 children.[6] The low fertility of the schizophrenic group is providential, in view of the high familial incidence of the disease.

Mental illness in the family

An attempt was made to assess the amount of mental illness in the families of 97 depressed patients as compared with the 30 overt schizophrenics. For this purpose one mark was awarded for a parent, sibling or child who had had a serious mental illness, and half a mark for more distant relatives such as grandparents, uncles, aunts or cousins. The depressed patients scored an average of 0.31 relatives per patient, and the schizophrenics 0.65, more than twice as much. The schizo-affective group of 16 had a low score of 0.06 per patient.

Senile and presenile dementia

This group of 28 patients was only slightly smaller than the schizophrenic group. It is a growing problem, for not only are the patients living longer, but their family are getting smaller. The old tradition that a large family is the best insurance against old age has long since past. Demented old people are some of the most difficult patients to cope with at home. There were 11 men and 17 women, and the series included two married couples. The mortality rate as one would expect was high; some 86 per cent of the series.

One strange and unexpected finding of this small series was violence in some of these patients. One man a presenile dement of 55 years killed a neighbour's wife in order to steal some money, as he wanted to buy a dog. This man will spend the rest of his life in Broadmoor. Another man of 73 did his best to pull the gas piping off the wall so

that the whole family "could go home together". This is a depressive symptom, but the overall picture was one of dementia, and there was no response to drug treatment.

It is the senile dementia group which poses the greatest problem in psychiatry today. The admission of these old people to mental hospitals is one of the factors

TABLE XI

RECOVERY RATES OF SENILE DEMENTIA BY SEX

State of recovery	*M*	*F*	*Total*	*Per centage*
Helpless at home..	—	3	3	*11*
Long stay, hospital	1	—	1	*4*
Died at home ..	4	2	6	*22*
Died in hospital ..	6	12	18	*64*
TOTAL	11	17	28	*100*

TABLE XII

LONG-STAY PATIENTS AND PATIENTS WHO DIED IN A MENTAL HOSPITAL IN ELEVEN YEAR GROUPS

Years	1947–1957	1958–1968
Long-stay patients	8 (0)	9 (1)
Died in mental hospital ..	11 (5)	15 (11)
TOTAL	19 (5)	24 (12)

The numbers in brackets are patients suffering from senile dementia

making the admission rate rise over the years. It is these old persons who are bolstering up the numbers of long-stay patients.

Puerperal psychoses

This small group of nine patients makes a happy contrast with the last category. Six had made a complete recovery, and two were well but still needed drugs. One had left her husband and her home and could well have been on the way for a relapse. None had become chronic.

Other diagnostic categories

Anxiety states. This type of patient is rarely ill enough to demand a mental hospital admission. If he cannot be dealt with at home, the tendency today is to send him along to the day hospital; some 4 to 6 patients from this practice attend a day hospital each year.

Alcoholic addiction. Numerically this is not a big problem in this area. I am quite sure that many people in the practice drink far too much, but only a small minority come our way asking for help. There were only five patients in the series, and another three had left the district, and could not be traced and so were not included in the series. There was a high proportion of women. The prognosis for these people is poor. One of the women patients seems to have settled down to a regular and moderate dose of beer, after for years drinking large amounts of sherry or spirits, with bottles hidden all over the house. The reason for this state of comparative sobriety is obscure. After reading the excellent paper on alcoholism by Edwards,[7] it is obvious that we in our practice have failed to identify 90 per cent of the alcoholics on the list, and I do not cavil at this suggestion.

Epilepsy. One case was admitted because he was difficult to manage, and the other two because there was no one to care for them at home.

Psychopathy. There were only three cases. Two are chronic, but the third a young man of high IQ appears to have grown past an awkward phase in life.

Mental retardation. There were nine cases in this category, eight of them males. Mental subnormality causes little trouble to the family doctor, because as soon as these patients become social problems, they are 'put away'. The community is only prepared to cope with and accept in its midst, good-natured and harmless aments.

Toxic confusional state. This was a woman of 45, and she was admitted to hospital

while I was on holiday. The basic cause of her upset was never discovered, and she has remained well since her discharge. With adequate nocturnal sedation and massive doses of vitamin concentrates, most of these patients make a dramatic recovery, and as a rule can be treated at home. The spectacular improvement is a source of great satisfaction to both the family and the doctor.

Summary

The figures for mental hospital admissions from a static population have been kept over a period of 22 years. All but 4.5 per cent of 222 patients could be traced. Endogenous depression was the most common cause for admission. About 20 per cent of such cases have only a single attack, and a similar number become chronic. Schizophrenia is still a sinister illness. While half made a social recovery and were able to work in the outside world, 28 per cent remain in hospital as chronic long-stay patients. Schizo-affective disorders seen over a long period of time fall into three groups. Some are true schizophrenics, but others run a benign course, some as a non-deteriorating periodic schizophrenia, and some are more likely to be endogenous depression masquerading as schizophrenia. The unsolved and growing problem of psychiatry today is that of senile dementia. These patients, together with the growing respectability of depression and of mental hospitals, are causing an increase in the admission rates over the years. Contrary to expectation, there are more admissions to mental hospitals today from this practice than there were ten years ago.

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The second principle, which is an extension of the first, postulates that all diseases have multifactorial aetiology. This contention is in flat contradiction to Bretonneau's Doctrine of Specific Aetiology which has dominated academic medicine and research for over a century, which might be renamed here and now as one of several Doctrines of Disastrous Oversimplification. There are no diseases which are completely explained by single agents or agencies—not even lead poisoning; some one has to put the lead where it should not be, and then some one else has to keep ingesting it and ignoring early warning symptoms. In talking of a disease, an accident, or any change in a state of health, we are always dealing with a complex situation in which attitude, behaviour, location, environment, and a time factor are usually no less important and often much more important than the so-called aetiological agent—even impressive agents like micro-organisms, poisons and automobiles. This hypothesis postulates also some revisionist thinking about causation and about the solemn preoccupation known as fundamental research. Is absolute or relative shortage of insulin really the cause of diabetes, or is it a key manifestation useful for replacement therapy, just as nicotinic acid is a key factor in pellagra? A cause has to be something without which a given consequence never results—and few if any specific aetiological agents come into this exclusive category. Remember, John Snow revented cholera and earned his name as the Father of Epidemiology, not by dealing with the cholera bacillus, which had not then been discovered, but by removing the handle of the Broad Street pump; a supreme if simple act of causal prophylaxis.

Lancet 1970, **2,** 115.