# " BEHAVIOUR DETERMINED " DEMAND IN AN " ARTIFICIAL PRACTICE "

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MANY doctors feel that patients misuse their services. They also feel that the degree of misuse varies from innocent overuse to abuse arising from antisocial attitudes. This type of demand is based on the patient's behaviour pattern rather than his illness. I felt that this was worth systematic study. This type of investigation is difficult because many people feel that there are two irreconcilable points of view. The first is that much attention for Rank 2* illness is unnecessary and requested by irresponsible people. The second point of view is that this type of demand arises from an undiagnosed neurosis and that the patient's apparently trivial offer is a symptom of a neurosis which may be Rank 1* in its quantitative classification. When serious works are studied the two view-points are much closer than is generally believed. Thus the report of the G.P.A. on the problem of misuse in the Health Service agrees that a measure of overutilization is desirable in a properly organized service while Balint, who may be regarded as the most distinguished proponent of the psychiatric school, writes that people must be expected to accept a measure of anxiety and responsibility in managing their own illnesses, as a natural process necessary for their own normal development (G.P.A. study group 1965; Balint 1956).

In either event it is agreed that the demand for medical attention in certain circumstances is not explainable by the manifest clinical picture. I propose to call this type of attention 'behaviour determined' to distinguish it from the less controversial 'disease determined' demand. This terminology begs the question as to whether the demand is a result of antisocial behaviour, innocent lack of thought or innocent neurotic behaviour and covers both points of view.

The investigation requires recognition of items of service which are not appropriate to the type of medical attention mobilized. The first stage in the investigation was to construct a suitable scale for recognizing these items.

*See explanation of terms.

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## Construction of the scale

When one constructs a scale of this sort there are two possible approaches. The first is to assess the individual episode and decide whether the patient requires medical attention or not. The second is to assess each item of service and decide whether that particular portion of medical attention could be more appropriately delivered. The latter approach is easier to apply and hence I adopted it. The principle can be demonstrated best by the following common example. A patient has a cold for several days and obtains a domiciliary visit after 8 p.m. for purposes of N.H.I. certification. It is not necessary to decide whether such a certificate is necessary or whether medical attention is necessary, but since the attention could equally well be given during a routine round or in the surgery that particular item is not indicated by the patient's symptoms. I call this type of item 'not symptom indicated'. This expression can include items which are the result of neurotic behaviour or anti-social behaviour and, therefore, covers both interpretations for the origin of this type of work.

The second type of item is the 'symptom indicated' item.

The scale was constructed to diagnose 'not symptom indicated' items only, and it is assumed that if a given item does not fit the criteria in the scale it is 'symptom indicated'. The scale probably underestimates the total quantity of 'not symptom indicated' items in the artificial practice. This does not matter since the aim is to compare the frequency in the four patient groups. The comparison is valid since the four groups have been studied in an identical way. On the other hand, if the scale had been used in an operational study for planning purposes one would compensate for this discrepancy.

A number of common situations were gathered, defined and used as the standards for 'not symptom indicated' items. The result was the following scale.

## Criteria for 'not symptom indicated' items

*All non-urgent late calls*

The definitions for late calls and non-urgent late calls were those that I have used in previous work (Jacob 1963). This was because the field work of this investigation antedated "the general practice glossary" (Research committee of College of General Practitioners 1966).

*Requests for new domiciliary visits for the following:*

Afebrile upper respiratory tract infections; lesions of one upper limb; muscular sprains or strains not involving neck, back, chest or lower limbs; skin conditions; abrasions, bruises, scratches; partial skin thickness or superficial burns less than 3-in square; neurotic conditions.

*Consultations for the following:*

Coryza of less than one week's duration. Special consultations for alteration

of dates on M.P.N.I. certificates or private certificates. Linear scratches. Superficial burns and abrasions less than 1-in. Prolongation of M.P.N.I. certification for illness which is not Rank 1 beyond the period in which the patient has become stable or symptom free or in which the patient has residual symptoms and has resumed social and domestic activities but not work. Individual pimples.

Two other classifications were constructed simultaneously and independently, but were published after I had completed my study. The first, by Krass, is more detailed, but his groups 2B, 5, 8 and 9 and some of 4B and 6B contain criteria which are very close to my criteria for 'not symptom indicated' items (Krass 1965). The second scale which was used by the G.P.A. in its report quoted above is also in substantial agreement with my criteria and has the added advantage of including the results of a survey of a number of doctors' rule of thumb assessments. It is sometimes suggested that scales of this type cannot be used in interpractice work or are subject to observer error. It would appear from the similarity of the criteria in these three scales that the selection of standards is stereotyped. It is also worth noting that when I constructed a similar scale for use in late call work my results were duplicated by two independent workers (Richman 1965, Hardman 1966). This means that although the scale for 'not symptom indicated' items is experimental it is potentially useful for larger surveys.

## Results

The unit for this part of the study is the item of service because an episode may contain items which are disease determined and items which are behaviour determined. The results are given in table I.

TABLE I

NUMBER OF 'SYMPTOM INDICATED' AND 'NOT SYMPTOM INDICATED' ITEMS IN ARTIFICIAL PRACTICE

| *Patient group* | *Supramean multiple** | *Supramean A** | *Perimean A** | *Perimean multiple** | *Total* |
|---|---|---|---|---|---|
| No. of symptom indicated items | 3,069 | 866 | 410 | 651 | 4,996 |
| No. of not symptom indicated items .. .. | 871 | 119 | 47 | 211 | 1,248 |
| TOTAL .. | 3,940 | 985 | 457 | 862 | 6,244 |

$\chi^2 = 87.3$ degrees of freedom = 3 $P < 0.001$

This means that patients with multiple attendance patterns have a higher proportion of 'not symptom indicated' items. The highest

proportion (24.5 per cent) is in the perimean multiple group. When the proportions of these patients in the whole practice and the proportions of the work of the whole practice which they receive are calculated, these figures are equivalent to 18.12 per cent of the total work of the real practice.

These figures represent rates of 5.5 'not symptom indicated' items for each patient in the supramean multiple group and two 'not symptom indicated' items for each patient in the perimean multiple group so that although a larger proportion of the *work* in the perimean multiple group is 'not symptom indicated' the supramean multiple group have the highest individual demand for this type of service.

It is frequently argued that demand for 'not symptom indicated' items points to an underlying neurosis. A clear distinction should be drawn between a neurosis, which is a disease, and neurotic behaviour, which is the normal reaction of an individual with high neuroticism and who is not necessarily suffering from a neurosis (Eysenk 1947). This is a distinction which is frequently ignored.

The study of the relationship between neuroticism and demand will be left to a later part of this investigation, but it is pertinent to study the relationship between frank neurosis and the demand for 'not symptom indicated' items. One would expect that if this type of service indicates a hidden neurosis the diagnosis would become evident in a proportion of the people in the course of the observation year. In other words one would expect to find a 'neurosis/other illness cluster'.* While it was observed that 33 per cent of the supramean multiple group had from three to 11 other illnesses in addition to at least one neurosis, this is the proportion one would

TABLE II

ASSOCIATION OF OTHER ILLNESS WITH NEUROSIS IN SUPRAMEAN MULTIPLE GROUP

| | *No. of patients with no neurosis* | *No. of patients with one or more neuroses* | *Total* |
|---|---|---|---|
| No. of patients with 1–4 other illnesses | 47 | 25 | 72 |
| No. of patients with 5–6 other illnesses | 34 | 20 | 54 |
| No. of patients with 7 or more other illnesses .. .. | 21 | 11 | 32 |
| TOTAL .. .. | 102 | 56 | 158 |

$\chi^2 = 0.1$ degrees of freedom = 1 $P > 0.05$

expect from a chance distribution so that there is no evidence that the 'other illnesses' are symptoms of a neuroses (table II).

It should be remembered that neurosis does not confer immunity to other illnesses, so that as far as this investigation is concerned the high proportion must be accepted as fortuitous.

Another common assertion is that people with a high proportion of 'not symptom indicated' items prevent genuinely-ill people from seeking attention. The evidence here indicates that the people with the highest rate of 'not symptom indicated' items are also the people with the highest rate Rank 1 illness. This means that serious illness is associated with a demand for 'not symptom indicated' attention. If this hypothesis is to be established it has also to be shown that the lower demand groups have Rank 1 illness which is neglected. In this situation one must assume that the demand for medical attention is largely behaviour determined and that there is no morbidity difference between the different demand groups. While the lower demand groups may neglect less serious illness it seems unlikely that they would be able to neglect Rank 1 conditions over a whole year. It is possible to calculate the number of Rank 1 conditions one would expect to find in all groups if one assumes identical morbidity. The results of this calculation are compared with the observed figures in table III.

TABLE III

COMPARISON BETWEEN EXPECTED AND OBSERVED RANK 1 ILLNESSES

| | *Supramean multiple** | *Supramean A** | *Perimean multiple** | *Perimean A** | *Total* |
|---|---|---|---|---|---|
| No. of observed Rank 1 episodes | 126 | 30 | 20 | 32 | 208 |
| No. of calculated Rank 1 episodes | 126 | 26.6 | 84.4 | 85.1 | 322.1 |

$\chi^2 = 82.705$ degrees of freedom = 3 $P < 0.001$

This indicates that there is a real difference in the morbidity of the four groups as far as Rank 1 illnesses are concerned. Since Rank 1 illness may be regarded as one end of a continuous scale the results would imply a real difference in Rank 2 morbidity as well.

While one may expect that the lower demand groups disregard less serious illness the extent to which more serious illness can be ignored must be much less since the passage of time produces deterioration and imposes a need for medical attention. To accept equality

or similarity of morbidity between the four groups is to say that the equivalent of almost a half the perimean A group and 60 per cent of the perimean multiple group neglect a Rank 1 illness. This study shows that a high demand for 'not symptom indicated' items is associated with high morbidity with a high incidence of Rank 1 illness. It is wrong to say that this type of demand is a phenomenon arising solely from the patient's behaviour pattern.

## Discussion

It is difficult to interpret results in this type of study because of the inadequacy of pre-existing data and the abundance of prejudice (both tender and tough minded). It seems that there is a quantity of 'not symptom indicated' work in general practice which is sufficiently large to cause concern. While the estimate in this survey is a figure equivalent to 18 per cent of the work of the real practice, Krass (quoted above) found 25 per cent. This discrepancy may be the result of observation differences or differences in the way the investigations were conducted, but the figures are close enough to be explained by population differences. It would seem that the quantity of this type of work is of the order of 20 per cent of the total.

The figures in the morbidity study indicated that the demand for this type of service is associated with high individual morbidity and it may be that frequent attendance presents increased opportunity to require this type of service. It needs a flair for diagnostic accuracy on the part of the patient to ensure that the medical attention is obtained in its most appropriate form. Since most people are untrained the likelihood of error is greater the more often the patient meets a medical situation. Thus it is not necessary to construct a theory which relates the demand for this type of attention to mental disease.

It is difficult to reconcile the view that this type of service is abuse with the observation that those who need this type of service most are also those who have the most serious illnesses.

Neither does the evidence suggest that this type of service arises as a symptom of neurosis. This does not exclude the possibility that the demand may stem from neuroticism which is a behaviour reaction and not an illness. It must be remembered that such an association would imply an association between neuroticism and high morbidity. It is frequently argued that high morbidity for minor illness is a manifestation of neuroticism, but the observations indicate that the high morbidity groups have also a high incidence of serious illness. In this case it would be equally logical to argue that the neuroticism is a result of permanent ill-health since good health is essential for an individual's peace of mind. Further

speculation on the cause and effect relationship between morbidity and neuroticism will be constructive only after completion of the patient study. I have argued that the low demand groups could not ignore Rank 1 illness to any extent. It is known that there is a pool of undiagnosed disease in the community (Last 1963). This does not contradict the argument since the type of investigation which has demonstrated this 'iceberg' refers to a static situation. Most of the observations are based on tests carried out at a given point in time. Such conditions as diabetes, anaemia and others which have been found during screening are progressive and in a situation like the artificial practice, in which the patients are followed up over a period, it is reasonable to expect latent conditions to progress to a stage in which they are no longer symptomless. A further point is that one would have to assume that every second person has an undiagnosed Rank 1 illness if one were to argue that the expected figures in table III really represented the quantity of undiagnosed Rank 1 illness in the community.

For these reasons it seems that there is a fair quantity of work which is 'not symptom indicated' and however one explains this, it must be accepted that people who have frequent organic illness are more likely to need this type of service. If 'not symptom indicated' work is associated with behaviour the association must be a secondary rather than a primary association.

## Summary

It was calculated that the proportion of work which is 'not symptom indicated' in the real practice is 18 per cent.

It was shown that the highest demand for this type of work is in the group of patients with highest morbidity.

There was no evidence from the artificial practice that this type of demand is associated with a frank neurosis more often than one would expect by chance.

It is suggested that this type of demand is more likely to occur when a patient sees his doctor frequently and is therefore not necessarily indicative of pathological behaviour.

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### Explanation of Terms

1. *Describing patients*

*Supramean multiple*—a person whose demand for attention in the observation

year is 10 or more items of service spread over three or more episodes of illness.

*Supramean A*—a person whose demand for attention in the observation year is 10 or more items of service spread over not more than two episodes of illness.

*Perimean multiple*—a person whose demand for attention in the observation year is less than 10 items of service spread over three or more episodes of illness.

*Perimean A*—a person whose demand for attention is less than 10 items of service spread over not more than two episodes of illness.

2. *Describing illness*
*Rank* 1—serious or moderate.
*Rank* 2—mild or minor.
*Cluster*—group of illnesses experienced by a patient in a year.

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**An appointment system service for general practitioners. Its growth and present usage.** BRUCE CARDEW, L.M.S.B.A. *Brit. med. J.* 1967. 4, 542.

An appointment system service for general practitioners based on the special diary issued by Messrs Lloyd-Hamol Ltd., has now been in operation for seven years. Usage has grown from 250 doctors in 1961 to 7,840 in October 1967. Geographical analysis shows wide local variations in the proportion of practices with appointment systems but, over all, about a third of all N.H.S. practices are offering a complete appointment system to their patients. The present rate of increase suggests that within a few years the great majority of general practitioners will be seeing their patients by appointment.