



**PROGRESS IN  
MENTAL HEALTH**

# PROGRESS IN MENTAL HEALTH



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Cover:

THREE PATIENTS PLAY A SONG *during a music therapy session in a large mental hospital. The patient playing the violin made it himself in the hospital workshop.*

Photograph by John Brooke

## CONTENTS

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FOREWORD	Lord Balniel	Five
NEUROSES	H. Gwynne Jones	Eight
PSYCHOSIS	Dr Hugh L. Freeman	Eighteen
THE COST OF MENTAL CARE*		Twenty-eight

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\* Revised from O.H.E. Report No. 15 first published in February 1965.

# FOREWORD

LORD BALNIEL, M.P.

Chairman of the  
National Association for Mental Health

In becoming aware of the size and severity of the problems of mental illness it is easy to overlook the great strides forward which have been taken in the lifetime of many of us towards the goal which I believe we can and will reach. That goal will be reached on the day when we shall have won against mental illness a victory as splendid and as much to the credit of mankind as the victory we have now won over tuberculosis – that adversary which for so long seemed unconquerable.

I should like to draw attention to some of the great twentieth-century landmarks in the history of this crusade. In 1915 the Maudsley Hospital was opened in London. Its founder, Dr Henry Maudsley, had given the London County Council the sum of £30,000 on three very important conditions. The conditions were that it should deal exclusively with early and acute cases of mental illness – cases, that is, where there was most hope of effective treatment; that it should have an out-patient department where a man or woman suffering from mental illness could go for help without taking what then seemed the desperate step of actually entering a mental hospital as an in-patient; and that it should provide for teaching and research.

By this generous and far-sighted gesture, Dr Maudsley outlined what was to become the plan of campaign of his many successors who have fought for the same principles: to treat the mentally ill rather than simply to keep them in custodial care; to avoid segregating them from the rest of the community; and to explore the possibilities of understanding the causes of mental illness, and ultimately, of curing – or, better still, of preventing – the conditions responsible for it.

It is significant, also, that especial parliamentary sanction was given to the new Maudsley Hospital to admit patients without certification. This sanction was subsequently extended to all mental hospitals by the Mental Treatment Act of 1930 – another honourable landmark in our history. For the first time, psychiatric hospital treatment could be sought voluntarily, and in good time, by those who were mentally ill. Mental hospitals came slowly to be regarded as hospitals like any others, and not as places of confinement and despair.

It is during the last thirty years, however, that the most heartening advances have taken place. They are described in detail in this publication, so I will mention them only briefly.

There have been, for instance, the great discoveries of physical treatments, which, while not always curing, have mercifully alleviated the suffering of thousands of people. I am thinking especially of electro-convulsive therapy, and of the newly discovered tranquillising and anti-depressant drugs which have enabled us to control the extremes of irrational behaviour – leading to violence or complete incapacity – and have thus made it possible for psychiatric patients to be treated without the humiliations and affronts to human dignity involved in physical methods of restraint. Leg-locks and strait-jackets are now looked on as savage emergency measures of the past and no longer shame the mental hospitals of our time. Even locked doors are widely looked on as relics of a past age.

These medical discoveries have led to a rapid rise in the number of admissions to mental hospitals of people who know now that they can look



for help and not a life-sentence. During the 1950s first admissions to mental hospitals rose by 50 per cent. But the rate of discharge has, however, been even more rapid. During this same decade the number of people discharged after less than one week rose four-fold; and those discharged after stays of less than two months rose three-fold. The average stay for those entering mental hospitals now is not more than six weeks. Moreover, many people – particularly those suffering from the milder forms of mental illness, the neuroses – can be helped at out-patient clinics, by the local authority services and by their family doctors. Those with more severe, but fluctuating illnesses, can live independent lives in the community except during the periods when they are in positive need of hospital treatment. One third of the hospital beds in this country (about 130,000) are occupied by the mentally ill, but there are twice as many people receiving treatment and support in the community.

It is, sadly, true that we cannot yet claim to have discovered any certain, infallibly lasting, cure for all the many and varied forms of mental illness which are known to exist. But which of us who has been restored to reasonable health after a physical illness can feel absolutely confident that he will never fall ill again. Which of us is not grateful for the periods of health which we enjoy between illnesses, however frequently these recur.

I would stress, however, that we cannot, and we must not, allow ourselves any complacency. We have gone a long way towards making it possible for mental illness to be treated on a par with physical illness. We have gone a long way towards educating ourselves of the need to reach out towards the mentally ill with compassion and understanding and patience. We are at least trying to rescue them from the loneliness and isolation which are the most destructive and unbearable consequences of their illnesses. That most enlightened piece of legislation, the 1959 Mental Health Act, embodied the principles and policy which had developed and been tested out by the great pioneers – both doctors and laymen – who had had, in the previous decades, the vision to foresee the changes which were necessary and could at last be made.

We are learning slowly how to help the mentally ill to take their places again in the community by enabling them gradually to learn or re-learn working skills and by encouraging them to face again the demands and difficulties of our modern world: the discipline of factory and office routines, the impersonal unconcern of urban society; the intimidating complexities of public transport, and of providing oneself with the necessities of life – food, lodging, and affectionate companionship. We know now that, given support and tolerance, people suffering from, for instance, schizophrenia can, and want to, work. Today, increasing numbers of them are at work, and in so doing they are not only helping themselves but they are also making a valuable contribution to our economy.

We know that mental illness nowadays is not simply an insoluble problem: it is a challenge, and one that we must meet. But, as H. Gwynne Jones tells us in his lucid account of the neuroses, 'research has only scratched the surface of the problem,' though 'valuable points to fruitful lines of approach have emerged, and *if these are followed up*' (the italics are mine) 'there is hope of rapid advancement in the understanding of these conditions.' What Gwynne Jones says of the neuroses is as true of the graver forms of mental illness about which Dr Hugh Freeman writes with frankness and great understanding: manic-depressive illness, and schizophrenia, for instance, which, together, account for 35 per cent of admissions to mental hospitals today.

More research is desperately needed. I cannot stress this too much. In this field, as Gwynne Jones emphasises, conflicting theories abound, and several promising methods of treatment have yet to be studied and proved. We do not know exactly how much money is currently being spent. We do know that only 8 per cent – £709,000 – of the Medical Research Council's last annual budget was devoted to psychiatric research. The

Mental Health Research Fund raises by public generosity some £30,000 a year – but this represents only one-tenth of what is given for cancer research. The pharmaceutical firms allocate a creditable proportion of their revenue to research. But, whatever the total amount that is being spent, it is plainly nowhere near enough.

To my mind it is not a matter of what we can afford to spend on medical – and social – research into psychiatric disorders. It is a matter of what we can afford *not* to spend. This booklet describes the costs of today in terms of human suffering; but it is not only these costs of today which could be reduced. The benefits of any research we undertake now will, of necessity, be long-term benefits. The consequences of our failure to make such long-term investments will be tragedies for some of our children and grandchildren. It has been calculated that one among every nine girls aged six now will enter a mental hospital at some time of her life; and so will one among every fourteen six-year-old boys. We have it in our power to prove these horrifying calculations wrong.

We are, I feel sure, on the right lines at last. Mental illness is now a matter not for resignation or despair but is a field in which one can feel hope. However, as the late Lord Feversham – my greatly revered predecessor as Chairman of the National Association for Mental Health – once said, Government legislation cannot secure 'the full benefits which Parliament intended for the mentally disordered unless the man-in-the-street plays his part in bringing about a new, hopeful era of development and understanding for the sick in mind.'

If we, as a people, insist that mental illness must be wiped out, and if we are resolved, every one of us, to play our part in whatever way we can, we shall not be defeated.

A handwritten signature in black ink, appearing to read "Basil". The letter "B" is large and stylized, with a long vertical stroke that loops back to the right. The name "Basil" is written in a cursive script to the right of the "B".



# NEUROSES

*extreme anxiety and irrational behaviour*

H. GWYNNE JONES

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## Mental Disorder

Apart from the avoidance of war, mental illness is probably now the greatest social and economic problem in advanced countries. The conquest of many traditional diseases has certainly left it as the most serious current medical problem, costing the National Health Service about £140 m. a year. About half the hospital beds provided by the Health Service are occupied by psychiatric patients, and almost one-third of these are occupied by patients suffering from the disease of schizophrenia. Neurosis and related disorders, which are the subject of this paper, are even more common but, as the manifestations of neurosis are less extreme than those of schizophrenia, the majority of neurotic patients carry on with out-patient treatment, treatment from their general practitioners, or no treatment at all. However, their enjoyment of life and their social and working efficiency are greatly impaired. Looked at in terms of sickness absence alone, anxiety conditions, psychoneuroses and disorders of character, behaviour and intelligence are responsible for the loss of about 17 million working days in Britain each year.

A group of psychiatrists recently surveyed an entire region of the United States, and estimated that at least 57 per cent of the population showed genuine psychiatric symptoms, although 70 per cent of these were considered only to be mildly or minimally impaired. A war-time survey of light engineering factory workers in Britain showed that 10 per cent had lost work during the previous 6 months because of temporarily disabling neurotic illness and a further 20 per cent had suffered from milder neuroses during that period. More recently, an investigation of the incidence of psychological illness in a British general practice showed that about 10 per cent of adult patients on a doctor's list will seek treatment in any one year for an unequivocally psychiatric complaint. The inclusion of patients with symptoms for which no physical cause can be found and those considered to suffer from 'psychosomatic' or 'stress' disorders raised this proportion to above 50 per cent. Only a small proportion of these patients are referred by their doctors to psychiatric clinics but, even so, patients with neurotic and personality disorders constitute some two-thirds of all the patients seen at clinics of this type. Thus the immensity of the problem is clearly evident.

In relation to mental disorder, problems of definition and classification frequently arise. Even the primary concept of mental abnormality may be defined in several ways. A statistical definition refers to patterns of behaviour which are uncommon or, in a quantitative way, deviate markedly from the average. Alternatively, abnormality may be defined in socio-cultural terms, forms of behaviour considered strange, disapproved of, or recognised as a threat to a particular society being considered abnormal. A third type of definition implies a concept of ideal psychological development leading to an ideal state of emotional maturity and personal-social adjustment. By this criterion, abnormality is indicated by unjustified feelings of anxiety and other emotional distress, impaired social relationships and lowered efficiency. In practice, all three types of criteria enter into psychiatric assessments of psychological abnormality.

Mental illnesses are subdivided into two broad categories, the psychoses and the neuroses, or psychoneuroses. The patient with a psychotic illness is usually severely disturbed, his personality is disorganised and he is unable to carry on with his work and social life. He may be out of contact



with the world as we know it and lose his orientation in space and time, but yet not recognise that he is ill. He will almost certainly require special treatment as an in-patient in a hospital. The organic psychoses are those which are known to result from injury to, disease of, or chemical interference with the brain, caused by such agents as head-injuries, tumours, vascular disease, infections of the central nervous system, and the toxic effects of drugs and other chemicals. The functional psychoses are so-called because there is no identifiable organic change in the brain or nervous system, although subtle biochemical changes may be suspected. Heredity is considered to be important in these illnesses and they may develop with old age, as senile psychoses.

Psychoneuroses or neuroses are the most frequent type of mental disorder. Although causing a great deal of suffering, they are usually less severe than the psychoses and the patient remains in contact with reality and is aware of his illness. Neurotic behaviour in many ways constitutes no more than an exaggeration of tendencies which may be observed in any normal person. Anyone who feels that he must touch wood or throw salt over his shoulder, is plagued by some thought which he cannot get out of his head, who had to return to check whether he has locked his door or shut off the gas, who feels uneasy at the top of a high building or in a dense crowd or an enclosed space, who is ever shy in social situations, who feels inferior or unworthy, or cannot decide between two courses of action, is in a small degree experiencing the anxieties of a neurotic patient and exhibiting neurotic behaviour. For most people these anxieties and little irrationalities of behaviour are normal. However, for the neurotic patient they have assumed such proportions that they no longer allow him to live or work effectively.

Anxiety and related forms of emotional distress are characteristic of, and central to, almost all forms of neurosis. The neurotic patient may also be excessively sad or depressed. According to the dominant symptoms, neurotic illnesses are classified into four main categories, but many patients show a wide range of symptoms and cannot easily be placed within any one group. The first category consists of the anxiety neuroses. In this condition, intense prolonged anxiety or dread of a diffuse type, not necessarily attached to any particular external events, is accompanied by physical expressions of this anxiety such as palpitations, sweating or nausea. These, and excessive muscular tension, can produce a great variety of physical symptoms, such as tremor, diarrhoea and fainting attacks.

The second are phobic reactions. This term implies that the anxiety or fear is related in an unrealistic or exaggerated way to specific events, objects or situations. A great variety of morbid fears of this type are commonly observed. Some, like claustrophobia and fears of common animals, such as spiders or cats, are gross exaggerations of very common fears of normal people. Others, such as the fear that one's heart may stop beating, appear absurd or bizarre. Phobic anxiety is often related to parts of the body or the health of the patient, as in fear of cancer, and patients are often pre-occupied with the idea of death. Aspects of sexual relationships may also be feared, leading to complaints of impotence or frigidity.

Thirdly, there are the obsessive-compulsive neuroses. These include two main reactions which frequently co-exist. The obsessive reaction is characterised by the persistent recurrence of absurd or unwelcome thoughts, which are often superstitious in nature. The compulsive reaction produces irresistible urges to repeat some act in a stereotyped and ritualistic way. A common form is the compulsive urge to wash one's hands repeatedly after coming into contact with everyday objects which are believed to be contaminated. More rare are the anti-social compulsions, such as kleptomania and pyromania. The obsessive-compulsive patient is aware that his behaviour is irrational but, if he resists the compulsion, his tension mounts until the impulse is granted expression. Obsessive-compulsive disorders can interfere seriously with normal activities. A patient with rituals connected with his

toilet and dressing, for example, may need several hours of preparation after waking before he can leave the house. Such patients frequently fear that they are 'going mad' but, in fact, neurotic patients do not become psychotic to a greater extent than other people. To a certain extent, obsessive-compulsive disorders tend to occur in people of a particular personality type, described as obsessional. Such people tend to be meticulous, scrupulous and very orderly, but the possession of these traits by no means implies that the person concerned is likely to become neurotic.

Finally, there is conversion hysteria. Although anxiety is considered to play an important part in the development of hysteria, in the fully developed form of the illness emotional distress is characteristically absent, and the patient is surprisingly indifferent to his condition. This usually involves the loss of some physical function without evidence of physical disease. Typical hysterical symptoms are blindness, paralysis, fainting fits or loss of memory. Hysteria is more common in women than in men but, in its classical gross form, is now comparatively rare. Like obsessive-compulsive neurosis, hysteria is to some degree related to a personality type. People of this type tend to be extraverted, excitable, histrionic, and impulsive. Again, possession of these personality characteristics does not imply that a person is especially likely to become neurotic and, even if he does, it does not necessarily follow that the type of neurosis will be consistent with the personality.

Another psychiatric category generally classed with, and considered to be related to, the neuroses is that of the personality disorders. People falling into this category, while not displaying the clinical symptoms characteristic of neurosis, have certain attitudes, trends of behaviour and motivation, and characteristics of personality so deviant from the norm that they cannot make satisfactory adjustments to life. Social relationships are particularly difficult for them, they are considered odd by their fellows and fail to meet the demands of close interpersonal relationships as in marriage. Their vocational adjustment is also often very poor. When Society, rather than the individual, is affected by their abnormality, they are often described as psychopathic, but there is no valid distinction, other than this, between psychopathy and personality disorder. Included in this group would be the eccentrics, the unstable drifters, the abnormally aggressive, the emotionally cold, and perhaps the sexually perverse, and those likely to become addicted to alcohol or narcotics.

A final category, also sharing features in common with the neuroses, is that of the psychosomatic disorders. Psychosomatic patients have a definite organic illness with associated physiological abnormalities, but it is believed that psychological factors initiated the disease process. The gastro-intestinal system appears to be particularly vulnerable in this respect and one of the main disorders considered to be psychosomatic in nature is peptic ulcer. Such an ulcer develops in response to chronic hyperacidity of the stomach but there is evidence that psychological stress can be the main cause of this acidity. Certain diseases of the skin, cardio-vascular and other systems may also be psychogenic.

Whilst there is ample evidence that specific genetic mechanisms are of direct importance in psychotic illness, the same is not true of neuroses. The relatives of neurotic patients are more liable to neuroses than the general population, but relatives may develop quite different forms of neurotic illness, and usually in response to some environmental stress. Examination of the genetic evidence suggests that non-specific factors related to several genes determine an individual's pre-disposition to neurotic illness, i.e., his neuroticism, but an actual breakdown is precipitated by environmental factors which also partially determine the form the illness will take.

Contemporary views concerning the nature of the disturbances of normal psychological development and functioning which can lead to neurotic illness have developed during the course of this century mainly from ideas and methods of study which originated towards the end of the last. At that time, academic psychology was just emerging as an experi-



mental science and shaking itself free of its philosophical ancestry. It was mainly concerned with what appeared to be elementary psychological phenomena such as sensory judgment, reaction time and similar functions. These appeared only remotely relevant to the complex problems of personality and emotion which faced the student of psychological medicine. Not surprisingly, therefore, psychiatrists and neurologists tended to provide their own psychologies. In particular, Freud's psychoanalytic theory became extremely popular, not only within the field of psychiatry itself, but also in the popular culture of Europe and America. For this reason, most present-day accounts and explanations of neuroses are couched in terms of the concepts of psychoanalysis.

Despite this popularity, criticisms of psychoanalysis have thrown doubt on its validity and logical integrity. Freud's emphasis on the importance of unconscious mental processes contributed enormously to the recognition of their importance in abnormal behaviour patterns. However, since his time, many psychoanalysts have tended to adopt dogmatic attitudes to the subject, rather than applying critical scientific assessments to their own theories and results. Thus, although many of Freud's concepts have undoubtedly found a permanent place in psychiatric teaching and practice, the theory as a whole, while still flourishing in the United States, has tended to lose ground in Europe.

More recently, some striking advances in psychological knowledge and theory have stemmed from the behaviourist approach to the subject with its emphasis on objective experimentation. This paper deliberately concentrates primarily on these newer theories and techniques which have developed alongside Freudian psychoanalysis. The term behaviourism is generally associated with the name of J. B. Watson, who coined the word before the First World War. Watson confined his study to observable behaviour which could be measured objectively. At that time, many were growing impatient with introspection and embraced behaviourism with excessive enthusiasm, carrying it to such extremes as to make it into a cult. The evidence of conscious experience was denied, all behaviour was related to environmental factors, and heredity was ignored.

This is a far cry from contemporary behaviourism, to which Watson's main contribution is the description of behaviour in terms of stimuli and responses. Theoretical explanations are still anchored to observable events but consideration is given not only to overt behavioural responses, but also to covert responses involved in thinking and feeling. Also, most modern behaviourists are prepared to postulate many processes intervening between a stimulus and a response. An *O*, representing the behaving organism, is inserted within the traditional *S-R* (where *S* is the stimulus and *R* the response) formula of early behaviourism, making it into *S-O-R*. The particular response evoked by a particular stimulus depends not only on the nature of the stimulus, but also on the state of the organism at the time of stimulation. Various theoretical concepts have been elaborated to describe that state.

Probably the most important of these are the group of concepts relating to learning and habit-formation, and the group relating to motivation. The central position of habit concepts has led to the intensive experimental study of learning, and modern behaviourist theories are often referred to as learning theories. Learning is essentially the modification of an organism's behaviour resulting from its interaction with a changing environment and, in any learning process, the actual nature of the change in behaviour will be partly determined by the organism's genetic constitution. It is reasonable to suppose that learning processes may be important in the development of neurotic illness.

This argument is certainly plausible when applied to relatively simple and isolated symptoms of a physical nature. For example, there is ample evidence that allergic reactions such as asthma can become learned or conditioned responses to a wide range of stimuli in the absence of allergens.



Similarly, exposure to certain types of stimulation when in a state of sexual excitement may lead to the acquisition of perverse tendencies in a young person who has not acquired normal patterns of sexual behaviour. Other symptoms may result, not from learning a maladaptive response, but from failure to learn an adaptive response. A normal child, in the course of maturation, learns to control his urination, first by day and then while asleep. The bed-wetter fails to achieve this degree of skill, or his learning breaks down relatively early.

Most neurotic symptoms, however, are not discrete phenomena of this type but are partial aspects of a widespread and complex disorder. Even so, they may be learned. Like Freud, the learning theorist considers anxiety to be of prime importance in the development and persistence of a neurosis. He thinks of anxiety as a learned or conditioned fear reaction with emotional and physical components. As a distressing emotional state, it motivates the sufferer to seek ways of evading disturbing situations and so reducing his anxiety. If these avoidance responses are maladaptive, they become neurotic symptoms. More directly, the experience of anxiety, through its disturbing effects on the nervous, hormonal and muscular systems, interferes with normal activity, especially in demanding situations. An experimentally well-validated psychological principle, the Yerkes-Dodson Law, which is also borne out in everyday experience, describes the relationship between levels of anxiety and efficiency of performance. In any particular situation, increasing anxiety up to a certain optimum level tends to increase efficiency but, beyond that level, efficiency declines. Furthermore, the greater the complexity of the task an individual has to carry out, the lower is the level of anxiety which is optimal.

Although some relevant experiments have been carried out with human beings, this behaviourist theory of neurosis is largely based on the results of experiments with animals. In an experimental situation, an animal will soon learn an adaptive response to avoid or escape from a painful situation, such as an electric shock. If the electric shock has been associated with some other stimulus, such as light, the animal will learn to take avoiding action in response to the light even when it occurs without the electric shock. These animals have adapted normally to these new factors in their environment. If, however, the animals are given no way of avoiding or escaping, marked disturbances of their behaviour may occur and persist even once the painful situation has ended. Such disturbed behaviour can also be induced if the task which the animal must perform to avoid the pain becomes too difficult for it. It is therefore postulated that human beings may respond in a similar way, adapting normally to avoid a painful situation, or things associated with such a situation. Neurotic behaviour patterns develop where something has gone wrong with the normal process of adaption or adjustment.

A behaviourist analysis of neurosis does not exclude the possible importance of psychological processes of which the individual concerned is not consciously aware. Many experiments have shown that a response may become associated with an external stimulus, without awareness of any connection between them. Thus, a topic of conversation, or even certain modes of thinking may acquire danger significance and come to be unconsciously avoided, in a way analogous to an experimental animal's avoidance of a conditioned stimulus such as a light. The notion of unconscious avoidance is very similar to the Freudian concept of repression, and, although expressed in a very different language, the behaviourist theory of neurosis comes very close to psychoanalytic theory at many points.

In human development, of course, many stressful situations other than direct painful stimulation are commonly experienced. Many of these derive from social training in childhood in which socially unacceptable aspects of behaviour, which are often strongly motivated, produce punishment from parents and the formal agents of society such as teachers. The conflicts between powerful but incompatible response tendencies involved in these

situations may be important in the generation of stress.

Like many psychological concepts, stress is difficult to define in any precise way. To explain what is meant by the term, it is first necessary to say something about concepts of motivation. For the psychologist, the basic motives are the innate, physiologically determined, primary drives of hunger, thirst, sex and escape from pain or injury. These drives, which are clearly adaptive, derive from states of physiological deficit or excess. They influence behaviour both by energising the organism, stimulating it to action, and, by steering its activities into channels appropriate to the drive. The most obvious behavioural manifestations of a drive is consummatory activity such as eating, drinking or copulation.

These primary drives are characterised by being unlearned, biologically based, and universal within a species. Even so, their expression particularly in human beings, is greatly affected by experience and training. It is also clear that certain motives are actually acquired by learning processes. These are the secondary or acquired motives or drives. In civilised human society, where, except possibly for sex, satisfaction of the primary drive is fairly readily achieved, these secondary motives become extremely important. They form the basis of many of our fears and anxieties, but also of our ambitions, values and attitudes.

Many of the most important acquired motives are social in nature and refer particularly to an individual's social status. Not everyone necessarily wishes to be a leader, but all seek the approval of their fellows and recognition of their worth. Physiologically determined motives may be considered as being concerned with biological survival, social motives with the preservation of status. Everyday examples, such as that of the genteel old lady who suffers malnutrition rather than apply for National Assistance, as well as examples of nobility and heroism, illustrate that social motives may be more powerful than primary drives.

In general, the pattern of learning and behaviour consists of repeated anticipatory adjustments. These are guided by the flow of information from a changing environment indicating how desired goals can be achieved, and undesirable situations avoided. In normal circumstances an individual is well in control of the changing situation and his predictions are sufficiently accurate to modify his responses in an appropriate fashion to allow him to make progress towards his goal. It is when this control begins to break down, owing to failure to anticipate events with any degree of certainty, or when the predictions made imply a threat of failure that he may be said to be under stress. A common stressful situation occurs when one has to work at a very fast pace or to meet an early deadline. This is usually linked with some implied threat of punishment or criticism if the deadline is not met. In our particular form of society the emphasis on inter-personal competition enhances the stress.

One type of stress is that described as frustration. This occurs when some obstacle or barrier, which may be circumstantial, physical or social, prevents progress towards a desirable goal, or lack of reward when the goal is achieved. An individual's own physical and mental limitations may prevent the achievement of unrealistic ambitions, but most human frustration is social in origin. Many barriers and restrictions are imposed by those in authority and the formal rules of our society. Disciplinary frustration is imposed particularly heavily on young children by their parents and others, so that they become reconciled to obeying these rules. Other social frustrations are more subtle in character and depend on the structure of society and the nature of social groups. Social class, racial and religious groupings are obvious examples of social barriers which can lead to frustration. Conflict situations form a special class of frustrating circumstances. They occur when an individual cannot decide between two or more mutually incompatible courses of action, each of which is associated with a high level of motivation.

There are three basic general reactions to stress. Each of these are part



of normal behaviour, and it is only when they become exaggerated that they indicate a neurotic state. Withdrawal from the stressful situation is one of these, which may be a rational response in line with the realities of the situation but may also reflect neurotic tendencies. Aggression is the common reaction to frustration. A man, or an animal, when prevented from reaching his goal, strives harder and tends to attack the apparent obstacle. The more desirable the goal the greater his display of aggression. A series of minor frustrations can build up to motivate a major burst of aggression, possibly in response to an apparently trivial stimulus. Social training, however, involves the punishment of aggressive behaviour, and aggression, particularly if directed against other people, may be shown in various indirect ways. The third general stress-reaction is the development of anxiety, which is a prominent and extremely important feature of neurosis.

These reactions to stress imply that the individual has no adequate response to the situation in which he is placed. In such situations, other more specific and frequently inadequate responses tend to occur which, because they avoid the source of stress, or help to reduce the anxiety experienced, have been called defence mechanisms. All again may be recognised in the everyday behaviour of normal people, but may dominate in an exaggerated way the behaviour of neurotic patients. They include the tendency to regress to earlier forms of behaviour, for example those strongly established in childhood; aggression may be displaced when it cannot be directed against the appropriate person; withdrawal may take the form of retreating into an unreal world of fantasy; undesirable personal traits may be projected onto other individuals; and rationalisation is another form of defence mechanism commonly employed in everyday life.

For many people, even prolonged and severe exposure to stress does not necessarily create an overt neurosis. This is presumably because their 'psychological toughness' gives them an ability to withstand stress, in the same way as people with a strong physical constitution are less predisposed to many physical illnesses. Nevertheless, such people may suffer from psychosomatic illness, whose causes are, at present, being investigated by animal experiments.

#### Treatment of Neurotic Conditions

In times gone by severe mental illness and psychotic behaviour was shunned by the public; its victims were more often punished than treated. To some extent this applied also to the deviant behaviour patterns which are now recognised to stem from neurosis. However, the attitude towards mental illness and its treatment has changed substantially during this century. In Britain the realisation during the 1914-18 war that otherwise normal and sane men could develop 'shell shock' under the stresses of the battlefield, helped to remove the stigma previously attached to neurotic behaviour and to encourage the idea that treatment should be possible.

The principles of Freud and his followers had provided an early basis on which treatment could be attempted, and psychoanalysis became an accepted method. During analysis, the patient learns the technique of free association, speaking his unguided thoughts while in a relaxed state, and gives accounts of his dreams. The analyst interprets this material in terms of Freudian theory, and hopes to contribute to the patient's insight into his repressed motivations and the causes of his illness. Frequently, the patient forms an intense emotional relationship with the therapist, spoken of as a transference because analysts consider that it represents and re-enacts an earlier relationship, say with the patient's father, which was important in the development of his neurosis. The analyst manipulates this relationship so as to modify the earlier patterns of emotional response and, as new patterns emerge, these are worked through, under the guidance of the therapist, in the patient's external relationships with members of his family and others.

In more recent years, following theoretical criticisms of psychoanalysis, its therapeutic claims have also been scrutinised. In a famous review paper, Eysenck concluded, from published reports, that two-thirds of patients



showed improvement. This proportion appeared to be no higher than that achieved by briefer forms of therapy, such as discussion and sedation. The achievements of psychoanalysis must also be set against the time and cost involved in its practice. Patients may be expected to spend an hour a day with their psychiatrist, five days a week, for as long as three years. However successful it can be, it seems to be an unwieldy technique to attempt to introduce generally for all neurotic patients, and it seems unlikely that there would ever be the resources to carry this out. This problem might be, to some extent, overcome by the development of adapting methods of individual psychotherapy to the treatment of patients in groups. In group psychotherapy there is a particular emphasis on social adaptation – the ability to interact effectively with other people.

However, despite the supposedly sound theoretical basis of psychoanalysis, it began to be clear in the 1950s that empirical methods of treatment could often get as good or better results. Electro-convulsive therapy, which had been introduced in the late 1930s, sometimes seemed to bring about substantial improvements in the condition of neurotic patients. In this treatment a low voltage alternating current is passed for a few seconds between the patient's temples, while he is medicated to produce anaesthesia and relaxation of his muscles. The mortality from the procedure has been reported to be about one in 3,000 cases treated. Surgical procedures, severing the nerve fibres between the frontal region of the cortex and the lower centres in the thalamus, had some logical basis and were also found to be of some value, especially in intractable cases of anxiety or obsessional neuroses. This is known as leucotomy.

In the early 1950s, French pharmaceutical research workers were investigating a group of compounds chemically related to the highly sedative antihistamine promethazine. Their work led to the development of the first 'tranquilliser' chlorpromazine. More recently, other chemically related compounds have been developed, with greater potency and fewer 'side-effects'. The discovery of the tranquillisers was followed by that of groups of medicines which were apparently able to alleviate depression. Encouraged by this empirical success, pharmacological research has been pursued along more logical lines, by both academic and industrial research workers. The hope is to discover some underlying biochemical mechanism of psychiatric illness, which could then be corrected with special medication. Meanwhile, the tranquillisers and antidepressants, whose mode of action is still unknown, have proved of value in practice. At present, they provide an important approach to treatment, either alone or combined with psychotherapy. Most mild and acute neurotic disorders are treated in out-patient clinics with a regimen of medication combined with periodic interviews, during which the psychiatrist gives the patient reassurance, simple explanations of the nature of his illness, advice concerning his problems, and guidance concerning changes in his mode of life.

Whilst these empirical methods of treatment, mainly with psychotropic medicines, have become well established in practice, a new theoretical method of treatment is emerging based on the behavioural explanation of neurosis. Behaviour therapy aims, in real life, to apply what has been learned about processes of learning and unlearning in the laboratory. With neurotics, all therapy is concerned with the modification of behaviour in its broadest sense: the unlearning of old behaviour and the learning of new. Whatever the course of events leading to the development of the unwanted behaviour, its removal should, to some extent, involve the processes investigated by students of learning. One characteristic, then, of behaviour therapy is that it is applied learning theory. Another is that it is symptomatic therapy. In terms of the Freudian theory of neurosis this makes it, at best, an accessory tool of limited usefulness. In terms of behaviour theory, however, no treatment can be other than symptomatic as the symptoms constitute the neurosis. It is, however, necessary to distinguish between two categories of symptoms; the first are the emotional responses

to stress, the second are the maladaptive avoidance responses. If only the second are 'unlearned', relapse or the development of fresh symptoms is likely, as a result of the continuing existence of their underlying cause.

As to the actual techniques of behaviour therapy, there is no single method, but many, and more are likely to be developed. As has been said, behaviour therapy is applied learning theory, and experiments on learning have shown a variety of ways in which responses may be changed, diminished or eliminated. Each of these suggests an analogous method of treating neurotic symptoms, but this account will be restricted to two methods which appear in many ways to be the most promising and, between them, of the widest applicability.

The first method is that of the strengthening of incompatible responses, or Reciprocal Inhibition as Wolpe, its chief advocate, refers to it. According to theory, the neurotic symptom is a response which will be linked with some identifiable stimulus situation. If some new and incompatible response is linked with the same stimulus and this new connection progressively strengthened, the probability of evoking the old response decreases, and ultimately becomes zero.

When, however, the abnormal response involves a strong emotional state, it is extremely difficult to introduce and sustain alternative behaviour. Even if it were possible, intense conflicts would be set up which might engender additional anxiety. It is then necessary to apply what learning theorists call the generalisation principle, which is an abstract academic statement of the everyday principle of gradualism. A simple example would be that of a child who, afraid of dogs, is given a puppy. The puppy is sufficiently unlike a grown dog to elicit the fear to a slight degree only. Its antics create pleasurable responses and, as day by day the puppy grows into a dog, this attitude spreads or generalises to all dogs.

The second method to be described is the aversive type of behaviour therapy, commonly applied when the symptom to be treated is some form of behaviour, such as a sexual perversion, which, although offensive to society provides gratification for the patient. Unpleasant stimulation is applied while the patient behaves in the undesirable manner, or is exposed and responding to stimulation associated with the symptom. It is discontinued when the behaviour ceases, or the relevant stimuli are removed. The unpleasant stimulation, which must precede or inhibit the gratification, establishes a conditioned aversion to the act and associated stimuli, and any behaviour which leads to the removal of these stimuli, and hence the avoidance of further discomfort, is reinforced. Thus, aversive behaviour therapy applies the techniques of escape and avoidance conditioning, described earlier. Laboratory experiments demonstrate the great importance of the time-relations in these techniques. These are more easily controlled when electric shock is used as the painful stimulus than when pharmacologically induced nausea, another convenient source of discomfort, is employed. These time relations are not observed in normal processes of social punishment, which are notoriously inefficient in controlling behaviour of this type.

As yet, only the simpler generalisations of behaviour theory have been applied in behaviour therapy, and there are many practical difficulties in its application. The literature now contains reports of the behavioural treatment of a wide range of neurotic conditions. The majority, however, are concerned with the treatment of relatively isolated symptoms, or related groups of symptoms, in highly co-operative patients, whose anxieties and symptoms could be readily shown to be reactive to manipulable aspects of the environment. Few accounts exist of the behavioural treatment of all the ramifications of the neurotic personality. Some behaviour therapists, notably Wolpe and his colleagues, claim a very high rate of success even with complex cases, but, although they report on extensive series of patients, adequate control is generally lacking, patients dropping out early in therapy are not included in the failure rate, and follow-up information



was not usually collected in a systematic manner. Thus it would be unjustified to claim that behaviour therapy has proved superior to other techniques for the treatment of neurosis, but it does represent a promising new approach to psychiatric therapy.

#### Conclusion

Any review of the current status of knowledge concerning the causes, nature and treatment of neurosis must end with a statement of the need for further and more intensive research. This is a field in which conflicting theories abound, and the methods of treatment remain to be validated. As yet, research has only scratched the surface of the problem. Nevertheless, valuable pointers to fruitful lines of approach have emerged and, if these are followed up vigorously, there is hope of a rapid advancement in the understanding of these conditions.

Even if this hope is fulfilled, the nature of neurotic illness is so complex that its treatment is likely to remain a difficult problem for some considerable time to come. Indeed, theoretical advances might make a greater initial contribution to prophylaxis than treatment. Despite the payment of a great deal of lip-service to the ideals of mental health, little is really known about such matters as the way of bringing up a child which is most likely to lead to psychological stability in maturity. Far more is known about factors which can upset that stability but research now needs to be also directed towards the factors involved in what is sometimes called 'positive mental health'.

In the field of treatment, far greater research effort is required in two directions. Firstly, in relation to its efficacy, large-scale controlled studies need to be carried out to show which of several types of treatment are effective with different types of patients, and the durability of these effects. Subsidiary questions concern the characteristics of patients which make for a favourable prognosis, and the characteristics of therapists which are favourable or unfavourable in general or in relation to specific techniques or types of illness. Secondly, an important field of research concerns the actual processes of change in the patient, taking place during the course of various types of therapy.



# PSYCHOSIS

*The layman's idea of madness*

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Psychosis, or severe mental illness, is the medical term corresponding to the layman's idea of madness. Its leading feature is a break in the understanding of reality, which means that behaviour or thought become irrational by normal standards.

Psychosis is divided into two main types – organic and functional. The organic psychoses are the ones which result from known changes in the brain, and these changes are due to the same disease processes as occur elsewhere in the body. They include injury, infection, tumours, poisoning, and disease of the blood vessels supplying the brain. The most important group of organic psychoses are those associated with old age, either through arterial disease or through degenerations of one type and another.

Changes in the incidence and treatment of organic psychoses in recent years have followed the pattern of medicine as a whole. For instance, with the greater expectation of life, senile psychosis has become more frequent but mental changes due to infections (such as tuberculosis or syphilis) are much less common. Trauma – particularly the head injuries of road accidents – takes an increasing toll of younger people, although only a relatively small percentage of patients with head injury develop psychoses. In general, in the functional psychoses, no definite changes can be detected in the structure of the brain tissue, or in its metabolism. It is believed that biochemical disturbances are present but knowledge of the metabolism of the brain is so incomplete that we can only speculate as to its nature. The results of research have been inconclusive here, though there are suggestions of the kind of processes which might be involved, such as an abnormal metabolism of adrenaline. Vast research effort will be needed before the answers are found to these riddles. Family history has an important bearing on the functional psychoses and it is believed that the two main groups are genetically distinct, though there are cases which seem to show features of both.

These two main categories of functional psychosis are based on the work of Kraepelin who made a sharp distinction between 'manic-depressives', whose disease tends both to abate and recur, and dementia praecox, now called schizophrenia, which tends to lead to progressive deterioration. In both groups Kraepelin noted an absence of 'clearly defined tangible cause or structural change'. Together they are responsible for about 35 per cent of admissions to mental hospitals. In their typical forms, they are clearly identifiable and their incidence can be determined. But in many cases the diagnosis is difficult. This had led some modern workers to think not in terms of two distinct diseases but of two contrasting reaction tendencies which may occur in the same patient. Thus many disease syndromes can occur, ranging from clearcut manic-depressive psychosis to clearcut schizophrenia with intervening mixtures of the two, depending on the proportion of one reaction tendency to the other. These factors have an important bearing on epidemiological surveys and on attempts to investigate the psychoses through the statistical study of large groups of patients. One cannot always be sure that the same criteria have been used by different doctors in different places to define these illnesses. Schizophrenia, for example, is often diagnosed in the United States in conditions which would be regarded in this country as personality disorders or severe neurotic

## The Functional Psychoses

illnesses. It is perhaps helpful to describe well-known characters to illustrate the type of mental state in typical manic depressives or schizophrenics. King Saul provides an excellent example of the former, Ophelia of the latter.

It is worth looking briefly at the natural history of the two functional psychoses, to understand the social and economic aspects of each illness better.

### Schizophrenia

Schizophrenia, in its typical form, begins in late adolescence or early adult life; three-quarters of cases have their first breakdown by the age of 25. There has often been a falling off in performance at school or work for some time before the illness is recognised, a withdrawal from social contacts and a lack of normal emotion and affection. The illness usually proceeds by a series of acute episodes, and hospital admission is likely to be needed then because of disturbed behaviour. Each relapse is said to cause 'scarring' of the personality, so that when it is over, the patient does not quite return to his previous level of functioning, and the result is a steady deterioration. On the other hand, some patients never have a further attack after the first one, and others may become stabilised at any point later on. It is estimated that about 1 per cent of the population suffer from schizophrenia.

Before the era of modern treatment, a schizophrenic was very likely to become a permanent mental hospital patient, unless his family had enough resources to nurse him at home for long periods. This might even happen at the first admission, and the likelihood of becoming chronic increased with each breakdown. (A 'chronic' patient is one who has been in hospital at least 2 years; this term refers only to length of stay, and not to the severity of the illness.) One reason for the pressure towards chronicity was the influence of the mental hospital regime itself, which will be discussed later.

It has long been known that a high proportion of schizophrenics tend to come from the lower social classes, and the conclusion was often drawn that the disease resulted from bad social conditions. But a recent study has shown that fathers of schizophrenic men have a range of occupations similar to that found in the population as a whole. In other words, schizophrenics show a downward drift towards less skilled work, which is the result (not the cause) of the condition, and which becomes more marked as the illness goes on. This process used to be made worse by the prolonged inactivity and apathy which patients experienced during their admissions to mental hospitals. But in any case, the schizophrenic's work history is likely to be one of unfulfilled promise, and many will drop out of regular work altogether, unless they are intensively supervised.

Although schizophrenia is a deadly and socially crippling disease, it is rarely fatal. This means that medical or nursing care may be needed – intermittently at least – for the greater part of adult life. In undeveloped societies, this care is provided (in a rudimentary form) by village communities, particularly within the structure of the patient's extended family. With industrialisation and rapid social change, this becomes no longer possible, and the burden is then placed on the public medical services. Even in countries where almost all medicine is privately practised, there are public hospitals for disturbed psychotic patients, because no other arrangement is economically possible. The better these hospitals are, the more patients will come forward for treatment, who would otherwise have been retained by their families without specialised care. In fact, the frequency and natural history of schizophrenia must result in it becoming a marked economic burden to any community with public services, and one that is likely to grow as these services improve.

The cause of schizophrenia is still unknown, though theories are numerous. Inheritance certainly increases the risk, but even then, most relatives of a schizophrenic do *not* develop the disease. What is transmitted may be a 'biochemical weakness', and the result will then depend on how this is influenced by the circumstances of life. Family relationships, particularly with the mother; hormonal changes, such as puberty or childbirth;



## Depression

sudden stresses or changes of environment – these are some of the factors which may tip the balance one way or the other. But we have still only the most approximate ideas as to how these may operate, and preventive efforts cannot yet be founded on any clearly established causal relationships.

The most important of the psychotic depressive illnesses is manic-depressive psychosis. This is essentially a condition that proceeds in cycles, which may have a regular pattern over many years. The episodes of illness may be all of one type – i.e. of depression or manic excitement – or the two types may appear at different times in the same patient. Before modern treatments, relapses might continue without improvement for long periods, and even for years. This psychosis usually begins later in adult life than typical schizophrenia, and it is rather more common in women. Family history is often positive, so that there is probably an inherited tendency to develop the illness. The cause is no more understood than that of schizophrenia, but there have been some interesting findings of changes in water and electrolyte balance in the body, at different times in the cycle of illness. A biochemical disturbance of some kind is probably involved.

Unlike schizophrenia, manic-depressive psychosis causes no deterioration of the personality. Attacks may be separated by many years of normal health and performance, though some patients have a 'cyclothymic' temperament, with a tendency to rapid changes of mood. There is a risk of suicide, but this is almost always preventable if the depression is noticed by others and treatment is begun. Even before present-day treatment, affective psychosis never presented the same economic problem as schizophrenia, and chronic illness from this cause is now rare. Very few of these patients have to spend long in hospital today, and treatment can often be entirely on an out-patient basis, if home circumstances are suitable. There is relatively little need for supportive or rehabilitation services.

Manic-depressive psychosis represents only one end of a spectrum of depressive illnesses, most of which are milder. However, there are other forms of psychotic depression, such as that occurring in later life, which is usually marked by restlessness and agitation. Many of these patients also respond well to modern treatments, unless the situation is complicated by senile changes in the brain. The great majority of depressive illnesses are not psychotic, though opinions will often differ about the type of depression in any particular case. In fact, it is very difficult to find generally accepted criteria which will reliably separate severe (psychotic) from milder (neurotic) depression.

## How Psychosis has been Treated

The management of psychotic illness has always involved issues of religion and of law. Many primitive societies have regarded psychosis as evidence of possession by evil spirits, and the same was true in Europe until comparatively modern times. Old women who confessed to the practice of witchcraft were almost certainly suffering from depressive psychosis, with delusions of guilt and unworthiness, in many cases. These sort of beliefs resulted in the appalling cruelty towards the mentally ill, which was designed to drive out the devil by making his bodily abode too unpleasant. It is illustrated by the treatment of Malvolio in 'Twelfth Night'. These practices fitted in well with the deeply rooted fear and horror which psychotic behaviour has always aroused.

The law has been concerned in several ways. Firstly, because the disturbed conduct of psychiatric patients has often resulted in them harming others in the community. Secondly, because many were unable to look after themselves or their property. Thirdly, because safeguards were required to stop people being unjustly detained; this abuse was something which happened particularly in private madhouses towards the end of the eighteenth century in this country. Justices of the Peace were involved in the certification of the insane until the Mental Health Act of 1959 came into force. This was only in part a safeguard of liberty; it was mainly an historical survival of the time when magistrates administered the counties, and were therefore responsible for running the county asylums.



Towards the end of the last century, there was much public agitation about the danger of non-psychotic people being detained in asylums. This had a great influence on the Lunacy Act of 1890, most of which remained in force for seventy years. The piling on of 'safeguards' against illegal detention (which by then was very rare) meant that patients could not be admitted to mental hospitals until their illness was far advanced. This correspondingly reduced the chance of helping them, and the situation remained unchanged in this respect until voluntary admission was introduced in 1930. The Mental Health Act of 1959 swept away the old jungle of legal restrictions. It allowed psychiatric patients the same informality of admission and discharge as medical or surgical cases, but when compulsory admission was still needed, it was to be left entirely in medical hands. This victory of the therapeutic outlook over the legalistic one was largely the result of successful modern treatment methods. But the idea that psychiatrists are not wholly to be trusted persists among the public.

Here, it must be remembered that the mental hospital was founded on a completely different basis from the general hospital, and was not designed as a place for investigation or treatment in anything like the modern sense. There was a brief period, at the beginning of the nineteenth century, when a number of enlightened men operated asylums on humane and optimistic lines. The best known of these was William Tuke, of the Retreat at York. But in the middle and later part of the century, this enlightened view was not generally accepted, and the mental hospital system that we know came into being. These enormous buildings, serving every part of the country, represented a very large volume of public expenditure for a *laissez faire* era. We are still living on this capital investment, which seems likely to have to serve for many more years yet, and which shows many similarities to our railway system in its economic aspects, as well as in its age.

The asylums, then, were places where psychotic people were confined, because their behaviour represented a problem to society. This function was expressed in their situation – usually well away from large towns, and sometimes quite remote. Here, the hospital formed a community of its own, which in some ways was similar to the general community outside, but there was practically no contact between the two. It was thought to be economically desirable for the asylum to be self-supporting as far as possible, and most had farms, gardens, workshops, tailorshops, boot-repairers, etc. We would regard these now as excellent means of rehabilitation for patients, but in fact they were not. The hospital's artisan staff was assisted by a small elite of patients, who would remain in the same work situations for years. Generally, they did not progress from these to outside work, and other patients did not have the chance to move from idleness on the wards into these situations. The hospital found it convenient to leave these 'good' patients undisturbed, with the result that their chances of return to the outside world gradually withered away. This arrangement was also thought to save money, but it would have been even more economical to have discharged these recovered patients early on.

Another feature of this period was that the asylums grew enormously in size, so that they often came to house several thousand patients. There were a number of reasons for this growth, which are worth considering. Firstly, a profound pessimism developed in relation to the treatment of mental illness, which was really a by-product of the progress occurring in other branches of medicine. The new sciences of pathology, bacteriology and genetics discovered the causes of a number of types of organic psychosis, such as that due to syphilis. From this, it was assumed that all other mental illnesses were also caused by irreversible structural changes, which had not yet been identified. In that case, there seemed to be no point in trying to treat them.

It was also assumed that most psychoses were hereditary, so that the best way to prevent them, and to protect society, would be to stop the mentally ill, as far as possible, from reproducing themselves. Both these

### The Changing Pattern of Treatment

erroneous views resulted in patients being confined in the asylums for very long periods, or even for life, and the institutions had to become correspondingly large.

Another factor was the hard-headed business outlook of the time. It was assumed by the Committees which ran these hospitals that patients maintained at the public expense must be cared for in the cheapest possible way. It was also assumed that the larger the institution, the cheaper would be the cost per head. In many cases the superintendents were given incentives to keep their costs as low as possible. Of course, considering the appalling living conditions of much of the working population outside, food and shelter of any kind was something to be thankful for. But the whole policy was based on medical and economic fallacies (though these still hold sway in many parts of the world). It is quite unrealistic to think of the cost of a patient per week, when his hospital care may go on for thirty years. The only figure that has meaning is the total cost of each patient's illness. These enormous institutions, with their low discharge rates and prolonged lengths of stay were, in the long run, very expensive for the community. A recent comparison of three psychiatric hospitals showed that the one which spent most on medical care was able to discharge its patients most quickly, and had the lowest cost per patient-illness for recent admissions. In the period we have been describing, there was no treatment at all for organic psychosis, and none for functional psychosis except to try and protect the patient from harm until the illness took a natural turn for the better. Of course, this did not always happen, and whilst the patient remained in hospital he was exposed to many influences which we have recently recognised to be anti-therapeutic. In a vast ward, stripped of his identity by a regime of crushing institutionalism, a patient might lose his symptoms without anyone noticing, and might have already become too apathetic to make this change known. The law demanded that his mental state should be reported on at least once a year, and these reports might be scrutinised by the Central Board of Control\* (which was a surprisingly progressive body, though one with little power to enforce its recommendations). However, these examinations did not achieve their intended purpose, as they were perfunctory and stereotyped on the whole. This situation resulted from the policy of keeping many patients in an institution whose running costs per head and whose ratio of doctors to patients were kept to the minimum.

The first advances in treatment were better sedatives – particularly the bromides and barbiturates – which helped to control psychotic patients who were likely to injure or exhaust themselves, and further reduced the need for mechanical restraints. These drugs, however, were two-edged weapons, which, when misused, could add further to patients' apathy and withdrawal. It was really the discovery of fever treatment for the psychosis of syphilis by Wagner-Jauregg in Vienna which marked the first step towards curative measures. This was a method of limited use, and one now virtually extinct but it was perhaps its effect on the morale of mental hospital staffs which was most important. At last, it was possible to treat some patients in an active and positive way.

Artificial fever was the first of what are usually called the 'physical methods of treatment' in psychiatry. But it was in the latter part of the 1930s that the modern era truly began, with the discovery of insulin coma (by Sakel in Hungary), of electro-shock (by Cerletti in Italy) and of leucotomy (by Moniz in Portugal). In the case of the first two at least, it later turned out that the theory behind them was quite mistaken, but this did not reduce their value at the time. Through this group of treatments, psychotic patients were for the first time restored to health in great numbers, or had their symptoms so reduced that they could live a reasonable life.

Insulin coma was introduced as a treatment for schizophrenia, and was considered particularly suitable for young, acute cases. Electro-shock (E.C.T.) revolutionised the treatment of depression, and was also found

\* The Board of Control was the successor to the Lunacy Commission, which was originally set up under the Lunacy Act of 1845. This had the job of ensuring that the provisions of the Lunacy Act were observed, and of encouraging higher standards by advice, consultation and information. The Commission was reorganised under the Lunacy Act of 1899, but continued to have powers of visiting all institutions and inspecting all patients who were certified as insane. The Board of Control was actually set up under the Mental Deficiency Act of 1913, and all powers and duties of the Lunacy Commissioners were transferred to the Board. In addition to the mentally ill, the Board supervised and controlled all mental defectives who were registered under the Act. The Board of Control was reorganised under the Mental Treatment Act of 1930 and in 1948 became part of the Ministry of Health. It was abolished by the Mental Health Act of 1959.



useful in certain forms of schizophrenia. Leucotomy (an operation which severed connections between the frontal lobes and the rest of the brain) restored calm to many patients who had long been severely disturbed, and also relieved cases of intractable depression or obsessional illness.

Some twenty years later, a second burst of discovery – beginning mainly in France – produced two series of potent new drugs, the tranquillisers and the antidepressives. The effect of these has been even more far-reaching than that of the earlier treatments, since they can often be used outside hospital, and have allowed very many patients to be treated at home who would previously have required admission. The major tranquillisers – particularly that chemical group known as the phenothiazines – were found to be the most effective treatment so far in schizophrenia. So much so that insulin coma, which had always been a difficult procedure and one associated with some danger, rapidly fell into disuse. (It is still a matter of dispute whether tranquillisers actually cure the schizophrenic process in some patients, or merely suppress its manifestations, but this is largely an academic problem.) The antidepressive drugs have replaced E.C.T. to a large extent – though by no means completely – and are certainly the treatment of first choice for milder depressive states. It is the physical methods of treatment which have allowed psychosis to be treated in general hospital psychiatric units. When these were begun, they tended to take only a restricted group of neurotic patients. However, present-day treatments can be applied to almost the whole spectrum of psychiatric illness in general hospitals, providing the unit is of a reasonable size.

#### Changes in Atmosphere

Some time before insulin coma was replaced by drugs, a psychiatrist in New Zealand had made the provocative suggestion that the whole treatment was a 'myth', and that insulin had no definite action in schizophrenia. An ingenious study tested this challenge by comparing two groups of patients. The first received insulin coma in the usual way, but the second group had similar periods of coma produced by barbiturates, and were revived with a stimulant drug (instead of sugar, as in the insulin cases). The two groups were then followed up, and it was found that those who had undergone coma with insulin did no better than those who had received barbiturate. Insulin as a specific drug was indeed a myth, and yet for twenty years, experienced psychiatrists had been in no doubt that innumerable patients had benefited from treatment in insulin coma units.

What was the explanation for this? To some extent, it was due to selection of patients, since those considered 'suitable' for insulin treatment were the ones likely to have done best in any case. (This is a factor which often has to be watched in assessing medical treatment – particularly psychotherapy.) Even more important was the fact that the insulin patients were usually a small group in any large mental hospital, and formed a privileged elite. Their accommodation and conditions were the best available, and the medical and nursing staff were specially selected. The whole unit had a high morale, with a confident expectation that the patients would improve. Such optimism was usually lacking in the greater part of the hospital, where most patients remained chronic.

The rise and fall of insulin drew attention to the fact that the general atmosphere and regime of a hospital were vital in the treatment of psychosis. The mental hospital system had developed quite separately from the main stream of medicine, and tended to grow even further away as scientific medicine and surgery advanced. Encouraged by the rigidity of the law, each mental hospital was run as a strict hierarchy, with a medical superintendent at the top. A stifling authoritarianism discouraged change of any kind, and hospital life had a peculiar culture of its own, affecting staff as much as patients. This situation, similar in many ways to that of a prison, was described as a 'total institution'.

The first real change in this situation, as far as Britain was concerned, was with the beginning of the National Health Service. For the first time,



mental hospitals became part of a national hospital system, and the status and salaries of their medical, nursing and administrative staffs were fixed by national scales, which were the same as in general hospitals. The new attitudes were typified by the change of title which had already become 'hospital' instead of 'asylum'. Consultant psychiatrists began to be appointed to mental hospitals, but it was only when the Mental Health Act came into force in 1960 that they finally secured full responsibility for their own patients. The pyramidal system of power in the hospital was abolished (at least in law), and there was no legal requirement any longer to have a medical superintendent. At the same time, hospital administration passed fully into the hands of lay administrators, who, like the nursing staff, were then directly responsible to the Hospital Management Committee. This was the system of 'tripartite administration', which had always existed in voluntary general hospitals, and which was adopted by the National Health Service.

These changes were not merely of professional concern, because it was only when the rigidly centralised system of responsibility began to break up that patients could be really freed from the pressures of institutionalism. The undesirable changes imposed on patients by long stay in an old-fashioned mental hospital have been thought of as a secondary disease in themselves, which has been called 'Institutional Neurosis'. This was most significant in the case of schizophrenic patients, because they were usually the ones who stayed in hospital longest. There was perhaps a time of over-optimism, a few years ago, when it was felt that preventing long stay in hospital, together with modern treatment methods, would solve most problems with this disease. But it now seems clear that a significant number of schizophrenics deteriorate because of the disease, even when they are protected from any institutional effects.

#### The Open Door

The most important single change in the milieu of the psychiatric hospital was the opening of doors. From the middle of the nineteenth century, most doors in all such hospitals were locked. It was shown by several enlightened doctors – in different places and at different points in time – that this was not necessary. But these individuals could make no impression on the, by now, traditional habits of asylum staff. Each hospital that opened its doors was firmly locked up again before very long. It was only after voluntary admission began in 1930 that it became usual to have at least one or two open wards in each mental hospital. But these were privileged enclaves and it was still assumed that psychotic patients in general must be kept behind locked doors.

After the end of the war, a few pioneers began to reject the whole concept of the closed hospital. They were encouraged by the introduction of new treatment methods, and by the admission of greater numbers of patients who were not severely disturbed. But even more important was their belief that locked doors were an affront to the human dignity of patients, and a serious obstacle to recovery in most cases. Bell of Melrose, Rees of Warlingham and Macmillan of Nottingham were the first to show that a psychiatric hospital could function safely and effectively without any ward being locked. To achieve this, patients had to receive prompt treatment, and efficient nursing care, and be able to participate in a full programme of activities. Much of the random disturbance which had provided an excuse for locked doors in the past was in fact due to boredom, and to the effects of the repressive hospital milieu.

From this beginning, the Open Door movement has steadily grown, so that many other hospitals are now completely open, and most doors in nearly all psychiatric hospitals are unlocked. In this respect, Great Britain is probably ahead of any other country. It has now been shown that psychotic patients in general do not need any measures of physical security, just as it was recognised in the Mental Health Act that they do not usually need any form of legal compulsion. Out of the whole range of psychiatric patients, only a handful require security precautions, and these are mostly

problems of personality disorder, rather than psychosis. The opening of doors in this country has been greatly helped by the existence of the Special Hospitals (including Broadmoor), where such patients with criminal propensities can be concentrated. It has also been helped by the steady growth of psychiatric units in general hospitals, where there have never been locked doors. Getting rid of clanging doors and jangling keys has been one of the most tangible signs of progress in the treatment of psychiatric illness.

#### Rehabilitation

The decline of authoritarianism and the opening of doors were the background to a further change in psychiatric hospitals. This was the replacement of traditional idleness and apathy by planned programmes of occupation. Occupational therapy, based mainly on handicrafts, was the first step in this process, though in many hospitals, the service tended to be for a fairly selected group of patients. These pursuits were always more appropriate to women than to men and in the last few years there has been a strong movement towards 'Industrial Therapy', with a realistic economic basis.

Unlike the work situations of the old mental hospital, this is not designed to provide a permanent, sheltered niche, for a few patients. Its purpose is to restore the habits and values of normal work in the community, and so help the patient back to a place in open industry or commerce. In occupational therapy, time was irrelevant and the product only had to give satisfaction to the patient who made it. Industrial therapy, on the other hand, demands the acceptance of industrial discipline, and a product of economic value, whose quality must meet normal commercial standards. Patients who take part in this work must receive the normal rate for the job, if they work at a normal standard. However, the jobs are often unskilled, so that the normal rate for them will be relatively low; at the same time, many psychotic patients are extremely slow, and will therefore only earn a fraction of the usual rate. Earnings have to be calculated separately for each patient, and so provide an incentive for his performance to improve. Industrial therapy has been so obviously successful that few psychiatric hospitals are now without some facilities of this sort.

Patients can often go straight from hospital industrial units to normal work outside. But this step is too difficult for many who have spent long periods in hospital. Further help is needed, in the form of intermediate facilities, which help the patient to gain a further degree of independence at each stage. The model of these is the Industrial Therapy Organisation, which established a training factory at Bristol in 1959. Patients come to it from hospital industrial therapy units, and those who then reach the required standard pass on to individual jobs in open industry, or to specially supervised groups in outside factories. Similar facilities are being developed in other areas, and a number of patients have also benefited from the Ministry of Labour Industrial Rehabilitation Units, though they may not be able to remain there as long as is needed. However, schizophrenia in particular still causes enormous losses of working time and potential. Apart from those in hospital, many thousands of former patients remain at home, unoccupied for years. Their rehabilitation for work would be an enormous task, but it is one which has not even been attempted yet. The cost to the nation of their prolonged idleness must be immense.

Rehabilitation does not consist only of resuming work. It also involves a return to normal social living in the community, and long-stay patients in the traditional mental hospital were steadily deprived of the skills needed for this. The increasing complexity of modern urban life means that as much help may be needed with the social aspect as with that of work. Again, there must be a series of graded steps, through which the patient assumes more and more responsibility for his own affairs. Within the hospital, patients progress through wards with diminishing nursing supervision, and may then go on to a hostel, and from there to relatives, to lodgings or to accommodation on their own. In this process, they must not



### Flexibility and Integration

be lost sight of, and must receive continued support from the hospital or local authority, through out-patient clinics, visits by social workers, therapeutic social clubs, etc. One of the most important pieces of social psychiatric research in recent years has shown that schizophrenic patients may deteriorate quickly when they return to relatives who create an atmosphere of high emotional involvement in the home. They may do much better in the neutral surroundings of lodgings or a hostel, where they receive unobtrusive support. This seems to be a promising avenue for further research.

Modern treatment methods are only one aspect of the present-day care of psychosis. Equally important has been a breaking down of rigid habits of action, and an opening up of means of communication. Within psychiatric hospitals, this has meant an attack on the traditional pyramidal system of power, responsibility and communication. Different types of staff could only communicate with each other through stereotyped channels, and an iron curtain separated the male wards (and staff) from the female ones. The freeing of means of communication has been the basis of a new type of hospital organisation known as the Therapeutic Community, which works mainly through group meetings. This was developed by Maxwell Jones for the treatment of personality disorders, and it is by no means established that the fully developed form is appropriate to other conditions such as psychosis. However, it has drawn attention to many features of the traditional hospital regime which were undoubtedly anti-therapeutic.

The same considerations apply to the relationship of the hospital with the outside world. The old-style psychiatric hospital was a closed system; patients and staff were either absorbed entirely within it, or were entirely excluded. Like most closed systems, it tended to regard outside organisations with hostility, and to be regarded with similar hostility by them. New means of treatment have meant that the care of psychosis has spread out to involve general practitioners, public health services and general hospitals, as well as psychiatric hospitals. Channels of communication must be opened up between these different agencies, and they must act as different aspects of a single programme, rather than as independent and competing organisations.

These aims are achieved by establishing a community mental health service, which is an integration of all forms of medical and social care which serve a defined population. The tripartite structure of the National Health Service (hospitals, family doctors and public health services) puts administrative barriers in the way of such a service, but a number of areas have shown that with goodwill, these barriers can be overcome. There is also a need to establish integration within individual services – e.g. between general and psychiatric hospitals, or between health and welfare departments of local authorities. In this way, the whole resources of a community can be manipulated in a flexible manner for each patient, as his needs change. He is not regarded as being the problem of only one compartment of the health or welfare services, which is left to carry the burden alone. A community mental health service therefore accepts continuing and final responsibility for patients, whatever the stage or length of their illness.

A service of this sort can make the most efficient and logical use of modern treatment methods. Current planning (particularly the Ten Year Hospital Plan of 1962) assumes that the focus of treatment will be shifted steadily away from the older mental hospitals to new general hospital units and community services. Serious objections have been raised to many aspects of these proposals, and there is little evidence so far that enough capital will be available to finance them fully – even over a much longer period than ten years. The problem centres mostly around schizophrenia, since it is not yet firmly established that modern treatment methods have materially improved the long-term course of the illness for many cases. It seems that handicapped schizophrenics will continue to accumulate, and if the number of mental hospital beds is drastically reduced (as proposed in the Hospital Plan) then they will need sheltered work and accommodation

in the community on a very large scale. Some psychiatric hospitals might be best suited to providing this type of care, in the long run.

However, it must be remembered that the history of present methods for treating psychosis does not extend back for more than about fifteen years. Even greater advances may occur, both in actual treatment methods and in administrative and social aspects of the care of psychosis.



# THE COST OF MENTAL CARE\*

Expenditure by the National Health Service in England and Wales on patients suffering mental disorders currently exceeds £140 m. a year, about one-eighth of the total health services' expenditure. This large amount spent on mental disorder is only one side of the picture. The cost of treating diseases must be set against the cost of not treating them. More effective and expensive medical procedures may in fact reduce the total costs of sickness. The total cost of sickness comprises not only the direct costs of medical care, but also the indirect costs of incapacity borne by the patient and his kin.<sup>1</sup>

This paper estimates and discusses the expenditure by the health and welfare services on mental disorders, in relation to trends in patient care. Through changes in policy and advances in therapeutics the pattern of care has altered, allowing the psychiatric services to be used by a greater number of patients. This trend has raised the amount spent on mental disorders. The benefits the community receives from this greater expenditure are, however, not capable of being measured precisely. Far more needs to be known about the impact of the changed pattern of care on the current life of the mentally disordered and their kin and on the prognosis of the diseases. The extended scope of the services is bringing psychiatric care for the mentally ill to more people at a far earlier stage than previously. The closer integration between the psychiatric services and the community may possibly alter the outlook for mental illness. In this case the full benefits may not be realised until several decades have passed. The foundations of mental health are laid early in life, and so the improvement from greater understanding and more effective medical care takes only one step forward with each generation.

Historically, the direct costs and problems of mental illness have been largely the long-term custodial care of the severely ill patient. Currently, costs involve both this and the further costs arising from expansion of the scope of medical care. If prognosis improves in the future as a result of this expansion, costs of mental care will involve a diminishing part of long-term custodial care and a greater element of specific effective therapy.

## History of Mental Care

The history of most common diseases over the past two hundred years is generally the story of clinical progress from empirical observation of symptoms, descriptions of morbid anatomy, the identification of causative agents leading eventually to the discovery of effective means of prevention, cure or control. The history of mental disorder is different: it is largely the story of the patient's status and his legal and social standing in the community. There are exceptions where clinical progress in understanding certain physical illnesses has radically influenced what once were considered 'mental conditions', as with syphilis and 'general paralysis of the insane', with thyroid deficiency and cretinism, with phenylketonuria and mental subnormality. But these do not represent the broad advance in knowledge of mental disorders. For the most part – at least until recent decades – progress in patient care has been social, administrative and legal rather than clinical.

The landmarks in the history of mental disorders are five Acts of Parliament, the Lunatics Act, 1845, the Lunacy (Consolidation) Act, 1890, the Mental Deficiency Act, 1913, the Mental Treatment Act, 1930 and the

\* Revised from O.H.E. report No. 15 first published in February 1965.

Mental Health Act, 1959. The evolution of the titles summarises the changing outlook of the community on mental disorder over the century separating the Acts of 1845 and 1959.

Before the industrial changes of the first half of the nineteenth century, the problems of mental disorder could be dealt with casually but effectively in the small, mainly rural communities.<sup>2</sup> The growth of industrial towns and cities, however, made the problems acute. There were a small number of refuges under a variety of control and administration, such as Bethlem in London or the York Retreat, run as charities by trustees, or private asylums, only some of which were subject to public inspection; also a small number of county asylums, built under a permissive act of 1808 and managed by committees of magistrates. The majority of the mentally disordered remained in workhouses or prisons or lived as 'single lunatics' under the care of a guardian.

The Act of 1845 marked an era of reform. It crowned the early work of Lord Ashley (the seventh Earl of Shaftesbury). As Chairman of the Lunacy Commission, established by the Act, his humanitarian care and concern for the individual had a nation-wide effect. The Act covered all the mentally ill except those confined privately in their homes. The Lunacy Commission had powers of inspection and laid down minimum standards, but more important, it was able to encourage higher standards by advice and consultation through spreading information about new methods and experiments.

Matching these administrative reforms, there developed a new approach to care and treatment. The old physical methods of treatment and restraint – bleeding and purging, leg-locks and strait-jackets – were generally discredited. The asylum doctor began to acquire professional standing. An amending Act of 1853 among other things eased the processes by which a county asylum (thereafter public asylums) could be established. These buildings were smaller and more personal than those usually associated with Victorian institutions. In 1850, 24 public asylums had an average 297 patients. Experiments were initiated in the education and rehabilitation of the mentally ill. Under Shaftesbury's guidance, the Lunacy Commission worked to secure easier methods of admission for early treatment and discharge.

The hopes of the Commission were not fulfilled. Public concern over the dangers of improper detention and infringement of the liberty of the subject, aroused by sensational stories like the novel *Hard Cash* by Charles Reade, published in 1863, and fostered by a notorious law suit, *Weldon v. Winslow* (1884), led to the Lunacy (Consolidation) Act, 1890. Under it the Lunacy Commission became the Board of Control. The main provisions of the Act concerned admission and certification. It established stringent regulations to safeguard against any possibility of wrongful detention, of unjustifiably depriving a man of his personal liberty.

In effect, however, it meant that asylums could take only certified patients, and patients could not be certified until their condition was blatant. Asylums became a place of last resort, and they provided little diagnosis or treatment in the early stages of mental illness. They became divorced from progress in understanding of mental illness. With isolation came an increase in size. The barrack-like structures in use today were the products of the late Victorians: by 1900 the 77 public asylums averaged 961 patients. The work was routine, and doctors who wished to specialise in psychiatry avoided a sphere where there was little room for improvement. New techniques by-passed the asylums completely.

The 1890 Act also applied to mentally subnormal patients. Separate institutions for mentally subnormal patients such as Park House, Highgate (now Earlswood Hospital) supported by charitable donations and the Northern Counties Asylum for Idiots and Imbeciles (now the Royal Albert Hospital) were founded in the mid-nineteenth century. These institutions came under the supervision of the Lunacy Commissions but



voluntary bodies played a larger part in the work for mentally subnormal than they did for mentally ill patients. These voluntary bodies, principally the National Association for the Care of the Feeble-Minded (later amalgamated to form the Mental Health Association, the forerunner of the National Association for Mental Health), dealt largely with case work and ascertainment. Their activities and agitation led to the passing of the Mental Deficiency Act, 1913. Although this Act was concerned with the definition, certification and detention of the mentally subnormal, it contained provisions under which local authorities were empowered to establish special mental deficiency committees, whose responsibilities included the care of 'mental defectives' living in the community. This was the germ for the development of community care for all the mentally disordered.

Many local authorities, under the Act, financed voluntary mental welfare associations which had sprung up in the last few years, rather than appoint officers of their own. The Central Association for Mental Welfare was formed to co-ordinate the work of local bodies and to encourage the implementation of the Act. The responsibilities of local authorities for training and occupation were increased by an amending Act of 1927, which also broadened the definition of mental deficiency to recognise that injury or diseases such as encephalitis and meningitis result in arrested development.

The isolation and segregation of the mentally ill, as a result of the 1890 Act, took longer to break down. The stimulus came from outside the existing administrative structure. In 1907, Dr Henry Maudsley offered the L.C.C. £30,000 to found a new mental hospital on three conditions: it was to deal exclusively with early and acute cases; it was to have an out-patients department; and it was to provide for teaching and research. The hospital was completed in 1915 and parliamentary sanction given for it to admit patients without certification.

The principle of voluntary admission was extended to all mental hospitals by the Mental Treatment Act of 1930. The Act also reorganised the Board of Control, gave official sanction to the establishment of out-patient clinics and observation wards and abolished the terminology of the Poor Law. The Act, however, was really no more than a circumvention of the 1890 principles; nor did it make provisions for community care of the mentally ill. This came eventually in 1959.

Between the 1930s and the 1959 Mental Health Act progress in medicine went far to make it possible for the mentally ill to live in the community and for mental hospitals to become places of treatment rather than custody. Techniques of physical treatment, particularly electro-convulsant therapy (E.C.T.), were introduced, while from 1955 new tranquillisers, particularly chlorpromazine and reserpine, and later the anti-depressant and other psychotropic medicines, reduced durations of stay and brought hope for the long-stay patients. Within the hospital, tranquillisers could bring the agitated patient under control without massive sedation. Hospitals could open many wards and need not depend on the restraints of locked doors.

The Mental Health Act, 1959 repealed all previous legislation on mental disorders. The Board of Control was dissolved and its functions transferred, in the main, to the Ministry of Health. The duties of local authorities concerning community care, particularly in the provision of residential accommodation, training and occupation centres, were defined, arrangements were made for admission of patients to mental hospitals without any legal formalities and the legal distinctions between mental and other hospitals were ended.<sup>3</sup>

## The Cost of Mental Disorders

The cost of the care and treatment of mental disorders under the National Health Service in England and Wales amounted to approximately £142 m. during 1964. The sources and build-up of this estimate are described in the

# A

## The Cost of Mental Disorders. N.H.S. England and Wales 1961/64.

Source: Appendix.

Note: Estimates include expenditure on both mental illness and mental subnormality.

N.H.S. Services	Cost of Mental Disorders				Proportion of Total Expenditure on Services			
	1961	1962	1963	1964	1961	1962	1963	1964
	£ m.	£ m.	£ m.	£ m.	%	%	%	%
Hospitals	96.5	101.5	109.3	115.5	21	21	21	20
General Medical	4.0	4.3	4.6	4.9	5	6	6	6
Pharmaceutical	7.6	8.3	8.6	10.2	9	10	9	9
Local Health	6.2	7.5	9.5	11.7	8	9	10	11
<i>Totals</i>	114.3	121.6	132.0	142.3	13	13	13	13

appendix. The estimate covers hospital in-patient and out-patient care for mental illness and mental subnormality, a proportion of the cost of general practitioner's service for these and for related diagnosis, and for the estimated costs of the medicines prescribed, together with the expenditure by local health authorities on mental health. The estimates do not include capital expenditure or any notional amortisation charges.

The cost of mental disorder, for the years 1961, 1962, 1963 and 1964 borne by each of these services is given in *Table A*. In this period, total expenditure rose by 24 per cent but this rise was not proportionately greater than the rise in total N.H.S. expenditure. Mental disorders in each of these years accounted for approximately 13 per cent of the total health service expenditure, or 2s. 7d. in every pound.

The hospital services bear the greatest part of the cost of mental disorder. Between 1961 and 1964, the proportion spent on hospital treatment declined slightly from 84 per cent to 81 per cent and this was offset by a corresponding rise in the share of costs by local health authorities, from 5 per cent to 8 per cent. The proportion borne by the general medical and the pharmaceutical services remained constant at 4 per cent and 7 per cent respectively.

The high proportion of costs for hospital care reflects the intractable nature of the medical problems which mental disorders still present. In its advanced form the condition is not fully reversible nor generally is it subject to spontaneous remission. Furthermore, unlike cancer which at present shares these two characteristics, it is not fatal and thus the medical services are faced with the long-term care of the patient.

Much of the expenditure on mental disorders is, therefore, domestic, on items such as catering, heating, lighting, laundering and building maintenance costs. An analysis of expenditure on mental disorders in the hospital services which shows the proportions spent on domestic items, on nursing care and on 'therapy' (i.e. medical and professional staff costs, medicine, dressings and medical appliances) is given in *Table B*. A similar breakdown of costs in acute non-teaching hospitals is given for comparison.



## B

### Hospital Costs of Mental Disorders, England and Wales 1964.

Source: Appendix.

Note: Estimates include expenditure on both mental illness and mental subnormality.

Items	Mental Disorders			Acute Hospitals	
	£ m.	per cent	Cost per patient week	per cent	Cost per patient week
			£		£
Therapy	11.1	10	1.02	16	6.92
Nursing	37.6	32	3.77	23	9.83
Domestic	64.9	56	6.48	43	18.31
<i>Total In-patient</i>	113.6	98	11.27	82	35.06
			Cost per attendance		Cost per attendance
Out-patients	1.9	2	1.31	18	1.23
<i>Total Hospital Services Costs</i>	115.5	100	—	100	—

The differences are striking. All but 2 per cent of hospital expenditure on mental disorders is for in-patient care, while 18 per cent of expenditure in acute hospitals is on out-patients. Therapy, both in-patient and out-patient, accounts for 12 per cent of hospital expenditure on mental disorders, compared with 34 per cent for all diagnoses treated by acute hospitals. Domestic and nursing items represent 88 per cent of the hospital expenditure on mental disorders but only 66 per cent in acute hospitals.

The level of expenditure, which to a large extent reflects differences in standards of provisions, is substantially greater in acute hospitals than for the treatment of mental disorders. Expenditure on 'therapy' is seven times greater and expenditure on both nursing and domestic items is three times greater in acute hospitals, per patient week. The differences are found in most of the items included in these broad sub-divisions of costs per patient week: catering, for example, averages under £2 per patient week in mental illness hospitals compared with more than £5 in acute hospitals. The reasons for this discrepancy in standards are many: the needs for post-operative nursing care in acute hospitals are far greater than occur with mental disorders. Much of the large discrepancy in standards may, however, arise from the historical difference between psychiatric and general hospitals. Mental hospitals are traditionally long-stay institutions where entirely different standards may persist. General hospitals are short-stay institutions, and conditions, standards and environment have needed to keep in step with the normal expectations of the community.

The hospital services do not bear the whole costs of domestic care for mental disorders; some part is now borne by local health authorities through

the provision of hostels. Taking expenditure by all services together, custodial care for mental disorders including domestic services, nursing and local authority care, amounts to a little over £114 m. or 80 per cent of the total spent on mental disorders. Therapy in hospitals and in general practice amounts to £28 m. or 20 per cent of the total.

The changing pattern of medical care for mental disorders initiated by the Maudsley experiment and formally embodied in the Mental Health Act, 1959 represents a shift in emphasis in hospital care from long- to short-stay and a correspondingly greater part to be played by non-institutional health services. Trends in the costs of mental disorders need to be examined against the changing pattern of patient care.

## Trends in Patient Care

There have been considerable changes in the pattern of care for mental illness. The changes are characterised by a substantial increase in admissions to mental hospitals, a faster rise in the number of discharges leading to a reduction in the average length of stay and, since 1954, a fall in the total number of in-patients in mental illness hospitals. With mental deficiency there has been far less change, and the numbers of in-patients have gradually risen.<sup>4</sup>

Between 1949 and 1960, annual admissions to mental illness hospitals rose by 59,000, thus more than doubling from 55,000 to 114,000 a year. Discharges, excluding deaths in hospital, rose by 61,000 a year, from 42,000 to over 103,000. The number of in-patients rose slowly up to 1954, reaching 148,000; thereafter, with the more rapid increase in discharges over admissions, the numbers of in-patients declined continuously, falling to approximately 135,000 by 1960. These figures refer to patients treated in mental illness hospitals only. An estimate of the numbers of discharges and deaths of patients suffering mental disorders from non-psychiatric hospitals is available from 1955. Between 1955 and 1960, the numbers remained reasonably constant between 38,000 and 39,000 patients a year. Contrary to the trend in psychiatric hospitals, the average duration of stay for mental disorders of patients discharged from non-psychiatric hospitals rose slightly between 1957 and 1960<sup>5</sup> (*Fig. 1*).

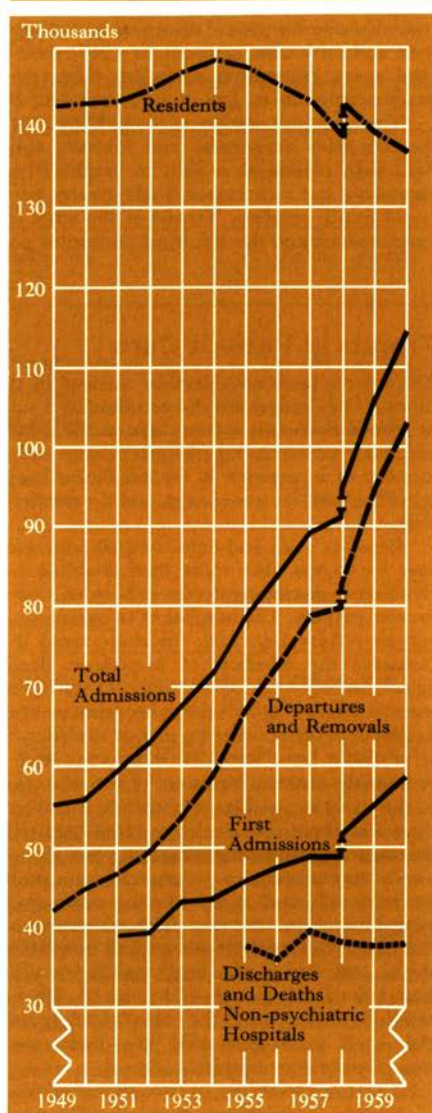
In mental deficiency hospitals<sup>6</sup>, the number of patients rose steadily between 1949 and 1955, reaching nearly 59,000. Thereafter, the rise continued but at a slower rate. Both admissions and discharges rose throughout the 1950s, but as these were small in relation to the total number of residents, this trend made little significant difference to the total in-patient population. Compared with mental illness hospitals, where for every hundred in-patients at the end of 1960, 75 cases had been discharged within that year, there were only five discharges per hundred residents from mental deficiency hospitals (*Fig. 2*).

The principal changes have therefore taken place in the care of mentally ill patients in psychiatric hospitals. The position as regards admission and discharge of mentally subnormal patients has altered hardly at all.

Virtually identical trends in in-patient movements over the ten years from 1950 occurred in state and local government mental hospitals in the United States. Information on mental illness and mental subnormality combined is available (*Fig. 3*). Total admissions for mental disorders rose substantially in both countries: in England and Wales by 87 per cent and in the United States by 86 per cent. Discharges in both countries increased even more substantially: in England and Wales by 117 per cent and in the United States by an even greater amount, 148 per cent. The number of residents in both countries fell from the mid-1950s: the total in 1960 was about 4 per cent less in England and Wales than in 1950 and about 2 per cent less in the United States.<sup>6\*</sup>

\* The percentage of changes for England and Wales are calculated after making a proportionate change to the 1960 figures to allow for the re-designation of beds in 1958.



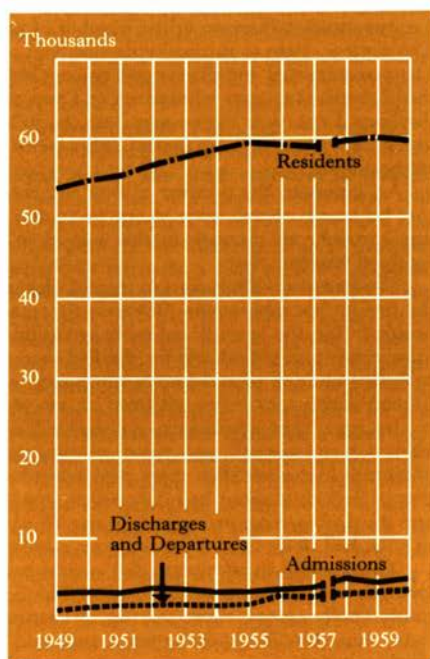


# 1

## Mental Illness Hospitals. Admissions, Discharges and In-patients. England and Wales 1949-60.

Source: Registrar General, Supplement on Mental Health 1960, M.1(a), H.M.S.O. 1964.

Note: Following the re-designation of beds under the Mental Health Act, 1959 figures for 1958 and 1959 are not fully comparable.

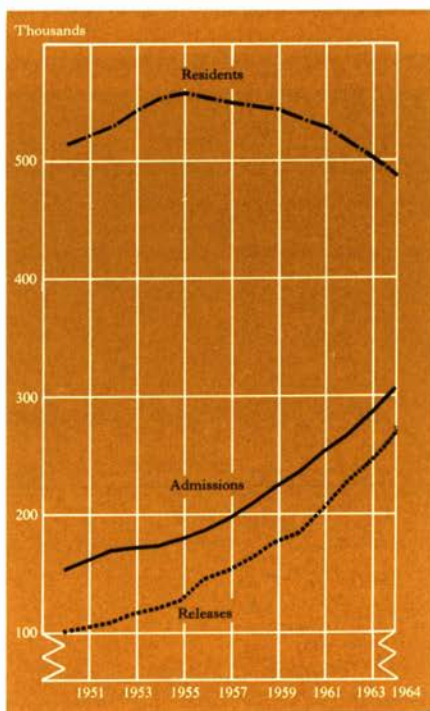


## 2

### Mental Deficiency Hospitals. Admissions, Discharges and In-patients. England and Wales 1949-60.

Source: Registrar General, Supplement on Mental Health 1960. M.1(b). H.M.S.O. 1964.

Note: Following the re-designation of beds under the Mental Health Act, 1959 figures for 1958 and 1959 are not fully comparable.



## 3

### Patients in State and Local Government Mental Hospitals. U.S.A. 1950-64.

Source: U.S. Dept. of Health, Education and Welfare *Mental Health Statistics: Current Reports*.

Note: Figures are for mental illness and mental subnormality combined.



## Interpretation of Trends

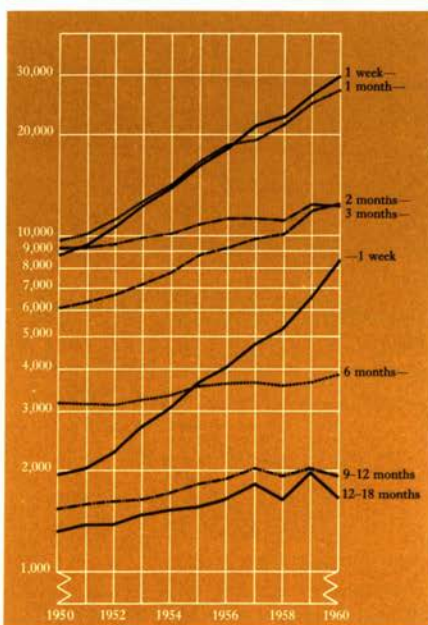
The rise of admissions and discharges from mental illness does not represent a commensurate increase in the number of patients receiving hospital care. The figures relate to medical episodes, and not to patients. Thus a patient who was admitted and discharged twice within one year, would record four medical episodes: two admissions and two discharges. Similarly, a patient discharged one year but re-admitted the following year would also appear twice: once in each year's figures. This factor complicates the interpretation of the trends.

As, however, the number of first admissions to mental illness hospitals rose by nearly 20,000 from 39,000 to 59,000 between 1951 and 1960, there was certainly an increase in this period in the number of patients who received hospital care.

The rise in re-admissions to mental illness hospitals has been faster than the rise in first admissions. Between 1951 and 1960, the numbers entering hospitals for the seventh or more occasion rose from 460 to 3,500; the numbers entering hospitals for the fifth and sixth occasion rose from 1,570 to 8,380, while third and fourth admissions increased from 6,220 to 11,140. Second admissions increased from 12,330 to 24,680.

In 1951 first admissions represented nearly two-thirds of the total admitted and second and third admissions under one-third. Less than one-tenth had more than three previous admissions. By 1960, the proportion of first admissions had dropped to just over one half the total; second and third admissions accounted for one-third, while a fifth of those admitted in 1960 had more than three previous admissions.<sup>7</sup>

The changes in admission and re-admission rates reflect corresponding changes in the pattern of discharges. The number of discharges increased most rapidly among those staying in hospital for less than one week: the figure rose over four-fold between 1950 and 1960 (*Fig. 4*). The number of discharges following stays of up to two months rose about three-fold, while discharges following stays of up to two to three years rose only moderately.



## 4

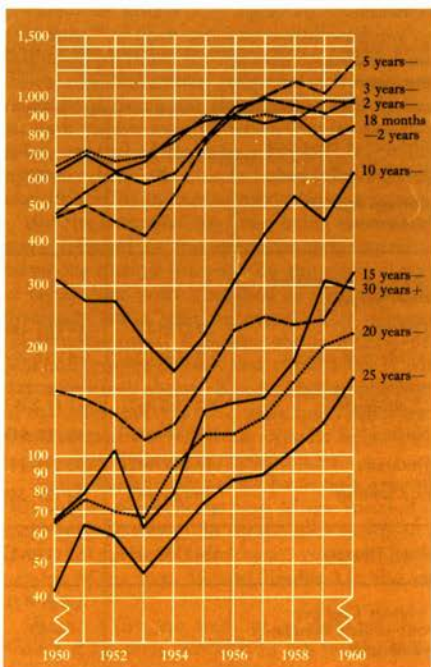
Numbers of Discharges from Mental Illness Hospitals by duration of stay for patients in hospital up to 18 months. England and Wales 1950-60.

Source: Registrar General, Supplements on Mental Health, Various Years, H.M.S.O.

With long-stay patients, the trend of discharges has been different but the numbers involved are not relatively substantial. The numbers of long-stay patients discharged tended to fall each year between 1950 and 1953. From 1954, the year which saw the introduction of tranquillisers, this trend was reversed and the numbers discharged after stays of more than five years rose rapidly (*Fig. 5*).

Considering the general trends of admission and re-admission and the rapid rise in the large numbers discharged after short spells in mental illness hospitals, the question has arisen whether changes in mental health policy and advances in therapeutics have resulted in a reduction in the total time spent by the mentally ill as in-patients or whether they have split up what was formerly a long period in hospital into several shorter visits. A study of patients admitted for the first time to mental illness hospitals in 1955 and 1956 provides some answers to this.<sup>8</sup> For all first admissions in these years, nearly two-thirds were discharged within three months and over four-fifths within two years. The proportions who were subsequently re-admitted were not great. One in five of those first admitted in 1954 and 1955 were subsequently re-admitted for a second spell, while only one in twenty were admitted again for a third spell in hospital by the end of the calendar year following that of admission.

It would appear from the trends of admissions and discharges that three groups are emerging in the mental illness hospital in-patient population. The first and largest with the greatest absolute increase since 1950 is patients admitted for one or two short spells. The second group, which appears at present to be small but growing rapidly, comprise patients who are repeatedly admitted and discharged from mental hospitals. The third group is the inherited population of the long-stay permanently institutionalised patients, which should slowly diminish. Generally, mental health policy has made it possible for a larger number to receive in-patient care



## 5

Numbers of Discharges from Mental Illness Hospitals by duration of stay for patients in hospital over 18 months. England and Wales 1950-60.

Source: Registrar General, Supplements on Mental Health, Various Years, H.M.S.O.



for a greater number of shorter periods. The scope of the service has thus been expanded.\*

The experience of different hospitals has, however, varied widely: the trends in patient care are not uniformly shared. The ratio of admissions in a year to the number of staffed beds available provides a guide to the extent to which different mental hospitals have been able to increase their intake and discharge of mentally ill patients. For the year 1960, figures from different hospitals show ratios ranging from as little as 5 to as much as 771 per cent.<sup>9</sup> The different ratios represent the difference between what are in practice long-stay and short-stay hospitals. The reasons for the differences are many, including size, policies of hospital boards, or individual consultants, general practitioners' referral habits and even perhaps differences in local health authorities' services for people who are mentally ill.

### Cost Implications

Figures are available for both analysed costs and the intake of patients for 19 hospitals where ratios of admissions in 1960 range from 47 per cent to 192 per cent of available staffed beds. Costs per patient week are summarised in *Table C*. Do the cost differences between these hospitals throw any light on the cost implications of the trend on in-patient care in mental hospitals?

The figures are not conclusive. The ranges around the average are wide. The four hospitals with the highest intake of patients in relation to the number of beds have higher average costs per patient week. This trend is more marked if specific items are examined. The average cost of medical

## C

### Costs per patient week in 19 Mental Illness Hospitals. England and Wales 1960-61.

Source: Ministry of Health Hospital Costing Returns 1960-61. Section B and C. Registrar General. Supplement on Mental Health 1960. Table A (i).

Note: Mental illness hospitals only, excluding subnormality.

Number of Hospitals	4	5	7	3
Average staffed beds	1,120	1,070	1,200	1,200
Average ratio of admissions	130	92	75	58
<b>Shillings per patient week (Range)</b>				
Therapy	19 (13-27)	14 (10-16)	14 (10-17)	15 (11-18)
(a) Medical salaries	9.8 (6.6-15.2)	6.8 (5.6-9.0)	5.8 (5.6-9.9)	7.2 (5.0-9.3)
(b) Pharmaceutical supplies	5.2 (4.3-6.7)	4.3 (3.2-5.3)	4.0 (2.8-4.7)	3.9 (3.8-4.1)
Nursing	52 (44-65)	48 (39-55)	48 (33-70)	48 (45-52)
Domestic	113 (95-142)	100 (93-145)	101 (64-114)	104 (86-119)
(a) Catering	36 (26-44)	32 (29-35)	33 (26-37)	34 (29-36)
<b>Total (Range)</b>	<b>184 (158-263)</b>	<b>162 (150-181)</b>	<b>163 (125-194)</b>	<b>167 (143-189)</b>
<b>Average Cost per Out-patient attendance (shillings)</b>	<b>17</b>	<b>53</b>	<b>58</b>	<b>47</b>

\* A possible alternative interpretation of the trends in mental illness hospital population, particularly the rise in admissions, is an absolute rise in mental illness. However, the timing, the consistency, the speed and the extent of the rise cannot be related to any factors bearing on the incidence of mental illness.

salaries and of pharmaceutical supplies per patient week diminishes as the ratio of admissions to the number of available staffed beds falls.

The hospitals with high intake and discharge tend also to have a greater number of out-patient attendances. With the more intensive use of facilities costs per attendance for these hospitals tend, however, to be lower than for the hospitals where the number of out-patients is small.

The impression that a high turnover of patients involves high costs is reinforced by a comparison of trends in average costs per in-patient week between mental illness and mental subnormality hospitals. The turnover has risen rapidly in the former, but remained largely constant in the latter. Both types of hospital are generally subject to similar inflationary trends. Average costs per in-patient week rose substantially between 1951 and 1964: the rise, however, was more rapid for mental illness hospitals. Costs per in-patient week in these hospitals rose 186 per cent compared to a 166 per cent rise in costs for mental subnormality hospitals. The difference is more substantial for the items grouped as 'therapy' costs. Costs in mental illness rose 4.7 times as against a rise of 4.1 times in mental subnormality hospitals. The trends in in-patient care will be reflected in corresponding changes in the care of the mentally disordered by the health services outside hospitals. There are, however, no figures compiled on a standard basis covering this period which saw such a marked change in in-patient turnover. A number of studies of mental illness in general practice has been undertaken since the war.<sup>10</sup> The results vary widely depending principally on definition and classification of mental illness and the subjective valuation of the physician. They range from 5 per cent to 70 per cent of the population at risk suffering psychiatric or psychosomatic disorders. The majority of studies find between six and twelve per cent of patients with psychiatric disorders. These figures, however, include a substantial number of minor and transient episodes of illness.

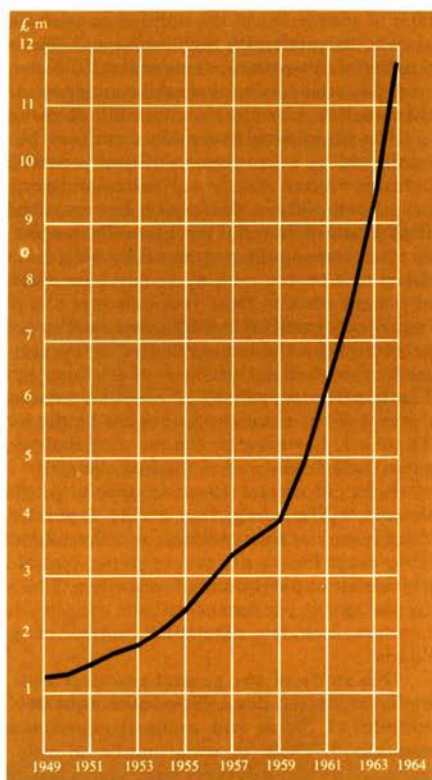
One study of 261 general practices with just over one million patients in Great Britain from November 1961 to October 1962 excluded minor episodes of illness and confined attention to persons who were disabled mentally.<sup>11</sup> These persons numbered only about one-tenth of the total indicated by those surveys which included all forms and episodes of mental illness. In November 1961 the survey found a prevalence of 7.4 mentally disabled patients per thousand at risk in England and Wales. In the subsequent twelve months 1.6 new cases per thousand at risk occurred. These rates, applied to the whole population, would give approximately 350,000 mentally disabled patients being treated by their general practitioners at any one time, with an annual total of about 70,000 new cases of mental disability.

In the course of the year, using the rates from the survey, 215,000 cases were referred to the specialist psychiatric services leaving 205,000 cases cared for during the year by the general practitioner alone. About 78,000 of these cases were classified as either 'helpless at home' or 'off work continuously for a year or more'. The remainder, 128,000, were less of a continuous social liability: about 83,000 of them were continuously on psychotropic medicines and could keep at work or perform normal day-to-day activities; about 18,000 although clearly mentally ill were able to live in the community and to work and look after themselves without the aid of doctors, medicines or other outside help. The remaining 27,000 had caused serious but short-term social upsets.

Local health authorities have only recently begun to play a significant part in the domiciliary care of the mentally disordered. Their increasing scope may be measured by the pace at which expenditure has risen (*Fig. 6*). Over the 10 years from 1949, expenditure rose 2.8 times. Following the passing of the 1959 Mental Health Act, the same expansion occurred in half this time.

Figures for the number of persons receiving mental health services provided by local authorities are available from 1961. At the end of that year 122,000 were being aided: in 1962, the figure rose by nearly 13,000





## 6

### Expenditure by Local Health Authorities on Mental Health. England and Wales 1949/50-1964/65.

Source: Ministry of Health Annual Reports, Pt. 1. Various Years. H.M.S.O.

to 135,000 reaching 141,000 by the end of 1963. In 1964 the figure was 156,000. For historical reasons the greater part of the local health authority services are directed towards the mentally subnormal rather than the mentally ill: 82,000, over two-thirds of those being aided in 1961, were mentally subnormal. The number of mentally ill patients aided, however, is rising more rapidly, from 40,000 in 1961 to 67,000 in 1964.

*Table D* estimates the distribution of patient care for the mentally ill and the mentally subnormal between the three main parts of the National Health Service at the end of 1961. The figures for the general practitioner service refer only to the mentally disabled patients and exclude the large hinterland of transient episodes of mental ill-health. It is not known to what extent patients under the care of their general practitioners overlap with those receiving local authority mental health services, and thus the figures cannot be added together. For every patient in hospital suffering from mental illness there are two in the community: the local authorities look after only one-tenth of this number. Local authority services bear the greatest burden in the public care of the mentally subnormal.

## D

Estimated Number of Patients under the care of Various Health Services, 1961 year end. England and Wales.

Sources: Ministry of Health Annual Report 1962.  
Watts *et al.* (1964) *Brit. med. J.* 2: 1351.

	<i>Mentally Ill</i>	<i>Mentally Subnormal</i>
Hospitals	140,000	60,000
General Practitioner	310,000	40,000
Local Authority	40,000	80,000

### Benefits to the Community

The benefit the community may expect to receive from greater expenditure on medical care for mental disorder is broadly a reduction in the social costs of incapacity. The impact of incapacity is diverse. It affects many aspects of normal day-to-day life in the family and the community. The simplest and most precise effect is the inability to work, to earn one's own living. Has the changed pattern of medical care reduced the total days lost through mental disorder?

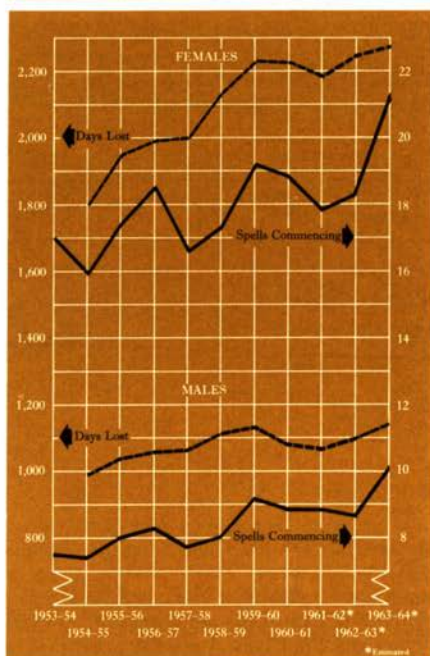
Information on the loss of working days through sickness is derived from claims for sickness benefits under the national insurance scheme. They cover only that sector of the working population which is entitled to benefits. Information is available for the years between 1953 and 1961,<sup>12</sup> but these figures must be interpreted in the context of the regulations governing benefits. Since 1948, claimants have been entitled to benefits without limit on time. Thus with long-term diseases, like mental disorders, if an employed or self-employed person builds up an entitlement to benefits before falling ill, he may remain a claimant throughout the remainder of his working life. Thus since 1948, incapacity figures have included a cumulative number of permanently incapacitated persons. The general trend in the statistics of chronic disabilities would, therefore, be upwards.

Working days lost per thousand males and females from mental disorders rose by about one-quarter for females and one-sixth for males between 1954-55 and 1963-64 (*Fig. 7*). For every female employed just over two working days are lost and for every male just over one working day is lost each year through mental disorders.

Also since 1954-55 the number of new claims for sickness benefit through mental disorders rose. The rise, however, is in claims and not necessarily in claimants.

It is not possible to state with certainty the causes of these increases. The period from the mid-1950s saw an increasing number of long-stay patients released from mental hospitals. If the increase in working days lost through mental disorder is due to an increasing proportion of chronic cases among mentally disordered patients in the numbers unemployed through sickness, it would suggest that few of these have, in fact, returned to work. Alternatively, with the rise in new claims for sickness benefits and the rapid rise in the numbers admitted for short spells to mental hospitals throughout the 1950s, the increase in working days lost may be due to a simple rise in the number but not the average duration of periods off work through mental disorder. There are insufficient figures to judge which of





## 7

Mental Disorders. Days lost and new claims per thousand employed males and females. Standardised rates. Great Britain 1953/54-1963/64.

Source: Ministry of Pensions Annual Report, 1964, Cmnd. 2669, H.M.S.O. 1963. (Estimates for 1961/62, 1962/63 and 1963/64 added.)

these causes lies behind the increase in mental disorder sickness absence. It is probable that both factors played a part.

Whatever the cause of the rise in sickness absence through mental disorder, it is clear that up till now, the community has not derived any benefits in reduction of sickness absence through the changed pattern of medical care. In 1963-64, a total of over 28 million working days were lost through mental disorders, and a further 4 million working days lost from the related causes of sickness absence such as depression and nervousness. If these claimants received the average sickness benefits for each working day lost, mental disorders cost the national insurance funds approximately £21 m.: about £4 m. more than it would have been if the rates of sickness absence had not risen since 1954-55.

From the point of view of the patient the change in the pattern of mental care has had two consequences: first, it has reduced the chance of long-stay in hospital; second, it has increased the availability of short-term specialist and hospital care, thus offering a greater chance and opportunity for early treatment. The effect on the daily life of the mentally disordered of these changes are many, but little is in fact known about them. The effects may be many sided. Far more research is needed into the impact on the mentally disordered of the changing pattern of medical care, before it is possible to draw any firm conclusions about the implications of these changes.

The release into the community of the mentally sick people who may have spent a large part of their adult life in mental institutions may be a mixed blessing. Much rests on the extent to which they are dependent on others, particularly on the family circle into which they are released and the extent to which community services ease the burden of care. The totally dependent patient will mean a new economic burden for his kin.

For those irretrievably mentally disabled, care in a mental hospital meant at least that the costs of domestic items were borne by the community as a whole: the greater part of mental hospital expenditure is on domestic services. The release of these patients into the community might, therefore, mean no more than a shift of the economic burden of incapacity from the Health Service to the patients, their families and the National Assistance Board.

#### The Future

The pattern of mental care must be judged, however, against its broad objectives. Changing the character of mental hospitals from long- to short-stay institutions has broken down the barriers which existed between the community and the mentally ill while releasing hospital and specialist services, otherwise employed on long-term care, for the use of a larger number who may need short-term aid.

Ending the segregation of the mentally disordered can reduce the frustration, isolation and social stigma of mental illness. This is valuable both therapeutically and socially. The social stigma and isolation traditionally attached to mental illness is itself an aggravation of the disease and the social losses suffered by the mentally disordered. The success of this policy depends on the extent to which society is willing to tolerate a large degree of eccentricity and deviations from what is regarded as 'normal behaviour'.

In the long-term the expansion in the scope of care for mental illnesses is potentially of greater significance. A larger number can now obtain specialist care at an early stage. This represents a secondary form of preventive medicine, early diagnosis and treatment which may mean that far fewer patients eventually lapse into a state of total mental disability. Extrapolating from the figures in the study of those cared for in general practice,<sup>11</sup> an estimated 10,000 persons with schizophrenic disorders were kept at work for at least most of the time, and a further 60,000 with depressive-anxiety states were kept at work and maintained a reasonable state of health through long-term care with psychotropic medicines. However, still much more needs to be known about the long-term effects of these advances in therapy and changes in mental health policy concerning the manner in which it affects the prognosis of mental illness.

It is in this that the greatest social benefits to the community may lie. The past fifteen years have seen substantial therapeutic advances and important steps towards breaking down the segregation between the mentally disordered and the community. Mental illness is being placed on an equal footing with other kinds of disability. In the future the prospect or the need for permanent institutional care may be substantially reduced.



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## APPENDIX

### The Cost of Mental Care

The estimate of expenditure on mental disorders was built up from statistical data not originally collected for costing purposes. The method has, therefore, been determined by the data available rather than by the selection of ideal units for costing. The method is similar to that used in the earlier O.H.E. analysis by diagnosis of total N.H.S. expenditure (Office of Health Economics, 10 *The Costs of Medical Care* 1964).

The diagnostic groups included in mental disorders are I.C.D. No. 300 to 326 *Mental, psychoneurotic and personality disorders* together with I.C.D. Nos. 790.0 *Nervousness* and 790.2 *Depression*.

Expenditure in the N.H.S. hospital service in England and Wales was calculated from the average daily bed occupancy for mental illness, psychiatric children, chronic sick under psychiatric supervision and mental subnormality departments—(e.g. Min. of Health Report 1963, Cmnd 2389, Table 57 pt II) multiplied by average costs per patient year in mental illness and mental subnormality hospitals (e.g. Min. of Health Hospital Costing Returns 1963-64 Part I, Appendix 4). Allowance was made for mentally ill patients in general hospitals from the estimated numbers of discharges for these diagnoses from hospitals included in the I.P. survey (Min. of Health Report on Hospital In-patient Enquiry 1961, Part I, Table 1). Estimated average daily bed occupancy was then multiplied by average costs for mainly acute hospitals (e.g. Min. of Health Hospital Costing Returns 1963-64, Appendix 4).\*

The cost of out-patient attendances for mental disorders was calculated from the total number of attendances at mental illness or subnormality departments (e.g. Min. of Health Report 1963, Cmnd 2389, Table 57 pt. 3) multiplied by the weighted average cost per out-patient attendance at mental illness and mental subnormality hospitals (e.g. Min. of Health Hospital Costing Returns 1963-64, Part I, Section C).

Costs of mental disorders falling on the general medical and the pharmaceutical services were calculated from the British Medical Index and the British Pharmaceutical Index. The publications form part of a market research service provided by Intercontinental Medical Statistics (185, Great Portland Street, London W.1).

The costs to the General Medical Service of mental disorders was calculated proportionately according to the percentage of mental disorder diagnoses made in the year. Costs to the pharmaceutical service were calculated according to the proportion of each therapeutic class of medicines given for mental disorder diagnoses. Costs for dispensing fees were added and total expenditure on medicines was proportionately adjusted to relate to England and Wales.

Expenditure by local health authorities represents current net expenditure on mental health (e.g. Min. of Health Report 1963, Cmnd 2389, Table 51).

The costs of mental disorders to the National Health Service in England and Wales, calculated by this method, are given in *Table A*. Capital expenditure and expenditure on mental care outside the National Health Service is excluded.

#### Acknowledgement

The Office of Health Economics wishes to thank Intercontinental Medical Statistics Ltd. for making available some of the statistical data on which the calculation of costs of mental disorders was based.

\* The total in-patient expenditure for 1961 calculated in this fashion came to £94.8 m. which compares with an estimate of £92.9 m. for similar items in the earlier O.H.E. cost analysis (O.H.E. 10 *ibid* Table A). The difference arises from the fact that in the earlier study sufficient data was available to weight in-patient average costs by different durations of stay in different types of hospitals. This data was not available for the later years covered by the present estimate of expenditure of the costs of mental disorders.

It should be noted that the earlier study did not allocate either out-patient or the greatest part of local health authority expenditure to diagnostic groups. All these items are included in the present estimate of the costs of mental disorders.

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