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MEDICO-SOCIAL PROBLEMS IN GENERAL PRACTICE

BY

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Thesis submitted for degree of Doctor of Medicine at  
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1965.

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INTRODUCTION

During recent years in general practice, it was apparent to me that medico-social problems were increasing, and I considered that an assessment of the situation would be of value. To achieve this aim I systematically completed a record of every patient seen by me during the 12 months, January to December inclusive, in the year 1963. The data obtained provided me with the material for my thesis and is shown in detail subsequently in the text.

The thesis demonstrates that a fundamental problem in general practice is the inadequacy of time to permit of satisfactory dealing with the mental, physical and social problems of people living in a complex industrial society. This is particularly evident in attempting to enhance the health of older people. Means are suggested, whereby the work-load of the general practitioner can be mitigated by the use of ancillary help. While freedom of access and lack of restraint exists this is a very difficult problem to solve.

A statistical analysis is presented of simple variables measured in the surgery. This provides basic information and shows that general practice is a rewarding source of clinical data for those who desire to establish fundamental levels of "normality".

## METHODS

The proforma shown in the Appendix was completed for 847 men and 1,046 women over the age of 19 years seen by me in the surgery and at domiciliary visits during the 12 months January to December, 1963. In addition a further 114 men and 201 women aged 65 years and over were subsequently assessed with their physical, mental and social states. To provide figures for discussion of general practice, men and women under 20 years of age were noted only in terms of age, complaint and diagnosis except in the case of women, the age of onset of menarche was also recorded.

Certain physical variables were measured as follows:-

1. Pulse rate. The number of pulse beats in one minute were recorded.
2. Height, was measured by a measuring stick attached to a standardised weighing machine to the nearest  $\frac{1}{8}$  inch. The record was made with the patient wearing no footwear.
3. Body weight was taken with the patient wearing indoor clothes and footwear as laid down by standard Life Assurance examination and measured to the nearest  $\frac{1}{2}$  lb.
4. Blood Pressure was estimated by the auscultatory method

to the nearest even number and a mercury manometer with standard cuff was used. The systolic pressure was recorded as that point at which sounds were first heard, and the diastolic pressure as the point of sudden muffling prior to the disappearance of the sounds. The blood pressure was taken with the patient lying on the examination couch. Blood pressure was taken at the end of the examination to permit any possible anxiety to be allayed.

The data for the above 5 variables was obtained by examining each patient who attended the surgery where accurate measurements could be taken. Thus I obtained a series for 416 men and 535 women. Excluded from the numbers were those patients who had any known physical disease, in order that the record should be of healthy men and women. Adiposity was not a bar to inclusion in the series.

RESULTS OF PERSONAL INVESTIGATION INCLUDING DISCUSSIONS

## THE WORK OF A GENERAL PRACTITIONER IN GENERAL PRACTICE

The population at risk in this study is taken as the mean number as at 1st January, 1963 and 31st December, 1963 i.e. 2,807.

A number of these patients must be concluded to be inflationary; that is the holding of National Health Service envelopes for patients who are not in fact at risk.

Against this number are these patients who are at risk, who are not actually on the recorded panel, and are taken to balance the "inflated" number.

Changes in the practice between withdrawals and additions have averaged out over the past 15 years, the practice having been established since 1948.

Consultations are defined as actual patient-doctor contacts and do not include telephone calls or non-medical consultations.

Of the patients at risk 1,893 were seen one or more times during the year (67.4%). This figure coincides with over half of all practices in an analytical survey of studies of general practice by Lees, D.H. and Cooper, M.H. in 1963. In that survey, 40% had over 70% of patients during the year and a number of practices (10%) saw over 80% of their lists.



The overall consultation rate for 1,893 patients, who had 8,972 services, was 4.7.

The modal frequency of half of the studies reviewed by Lees and Cooper were 3.0 - 4.0.

With a range of significance ( $\pm 0.5$ ) my figures are slightly over their figure but not significantly so.

For the people at risk of the whole practice - 8,042 a total of 4,831 home visits were made during 47 weeks of the year, there being an absence of 5 weeks in the year on holiday.

Only the visits incurred in  $5\frac{1}{2}$  days per week were used in the series, weekends are allocated in a rota system with another practice.

During the same period a total of 8,874 surgery consultations were carried out.

The discrepancy between the totals in the latter paragraph and the 8,972 services previously quoted is explained by the fact that patients on my partners' lists have also attended or been attended by myself for various reasons.

The percentage of home visits per total consultations is 35.2% which gives an indication of extra time and effort of travelling involved.

The attendance rate in age and sex is shown in Table 1.

Table 1 applies only to my own patients at risk i.e. 1,893 out of 2,807 patients.

An attempt was made over the year to show how a practitioner's time was spent during the day. A total of 6,491 consultations were carried out at morning surgeries, totalling 173 in all, giving an average number seen at each surgery of 37.5.

The average period of time spent in each surgery during the mornings was 2.38 hours. Thus each average consultation was 4.2 minutes.

Similarly in the evening surgeries a total number of 2,383 consultations were made in 141 sessions giving an average of 16.9 consultations per session. The average session lasted 1.31 hours giving an average time of 5.3 minutes allocated to each patient seen.

The total number of home visits in the year was 4,831, and of these 395 occurred after 8 p.m. or during the night i.e. 8.2% of the total calls. The average number of house visits each day was 27 and the average time each day spent on house visits was 4.3 hours, giving an average time spent on each house visit of 9.6 minutes. This includes travelling time.

Each visit carried out after 8 p.m. incurred an average time of 31 minutes and at an average of three visits per evening at risk this added 1 hour 33 minutes to the working day for those days and an

average of 56 minutes over all (0.9 hours).

During the year a series of representatives from drug houses called for interview regarding their products. Each representative was seen by appointment and usually at the end of the morning surgery.

Every effort was made to see each representative, as such meetings I found helpful, on the whole, as a means of keeping up to date with modern advances. The samples left by some of these representatives also proved useful for the emergency bag. The average time spent on these visits was 10 minutes, and as 98 contacts were made during the year over 141 surgeries, where it was possible for a representative to call, this gave an average of 6.9 minutes per working day.

We have two receptionists on duty at the surgery whose main donation to assist the working day is to deal with telephone messages. The rest of the clerical work, filing and phone calls to hospitals is done by myself and this entails an average time of 1 hour 22 minutes each working day.

This gives an average working day of 10.3 hours and a 56.6 hour working week.

It is obvious from the preceding data that the time one is able to spend in doctor-patient contacts is quite inadequate to provide a service satisfactory to the doctor and satisfactory for the patient.

Time being restricted to fixed limits, some means of ancillary help will have to be integrated in to present day general practice to enable the doctor to give his patients direct access and continuing access to a satisfactory degree.

As Scott (1965) has so well described, there has been a vast change in the concept of general practice since the beginning of the National Health Service, as we now know it, in 1948. There has been a higher degree of specialisation in the Hospital service and a major redistribution of medical manpower. In the hospitals, more doctors look after fewer patients. In general practice there has been a gradual drop in the number of doctors, due to retireals, resignations, emigration, and a lower intake into practice, combined with a gradual increase of population, so that the average number of patients per practicing doctor has been relatively increased.

The general consultant of old in the hospitals is being replaced by an increased number of specialists especially in teaching hospitals. It is very rarely possible to proceed from general practice to an appointment in a hospital grade. Thus the gap between practitioners and consultants has widened and has made communication more difficult. When a problem case in general practice arises which cannot be narrowed down to a limited field, it is often unrewarding discussing the problem with a succession of specialists. Just as unsatisfactory is the alternative of sending the patient to a specialist and leaving him to

pass the patient on to a succession of his colleagues, with concomitant succession of referral notes and reports after a lengthy delay. This may take much interpretation by the practitioner between the specialist and the patient and raises a point in the post-graduate training of future medical students.

The onset of the National Health Service in 1948 produced the onslaught. The country was given free and direct access to their personal doctors. As a result the quantitation aspect of general practice took a rapid upward swing. Even if a doctor limited his practice list in an attempt to give a better service, he has no control over the range and the volume that any one day can bring. It is clear at least to the doctor that it is the patient who determines this.

A large proportion of the daily (and even nightly) work demands very simple skill in diagnosis and management. This demand has to be satisfied although his training has equipped him to deal with more complicated and professionally satisfying situations.

In practice it boils down to doing a little for many which prevents him from doing more for a few even although he is professionally equipped to do so. This may be a factor which halts the entry of young doctors into practice as they may feel they are likely to be deprived or denied the use of tools they are competent to use.

To attract these doctors into general practice then ancillary help

must be given. Help in the form of free access to laboratory resources, biochemical, pathological and the like. To give him more freedom to use his tools he must have secretaries, receptionists, nurses and psychiatrically trained social workers.

The effect of the national Health Service on the community has been such that the general practitioner has become an advisor on not only medical problems, but also their social problems.

Advice on pre-marital, marital, birth control, health education of children, and divorce is freely sought as the father figure symbol grows. The division between medical and social is not clear cut and is never constant. It changes with social needs and also medical knowledge.

The concept of social security was a wide programme of policy against poverty, disease, squalor and unemployment. The care of the sick is only one of the inter-related needs of society. Medical care can only be a success if it is related to other aspects of human welfare.

The increased load that each doctor feels he has to bear in present day practice, may be an expression of the inadequacy of society's provision in these fields.

I have attempted to show in these papers that many of the factors involved in taking care of the sick, have their origins in social

maladjustment and in inadequate or faulty interpersonal relationships. Whether the "old" doctor-patient relationship still exists or not, all of our patients some of the time use us as a shield from the hard blows of society.

To the patient, the doctor now provides tender care and medical science and the same patient will show irritation if he cannot be supplied with the latest highly advertised advance in medical knowledge.

And what of the future?

Advances in diagnosis and treatment, over the past three decades, have made the position of the general practitioner more powerful, enabling him to treat conditions at home which would formerly have needed hospital treatment. This process will increase; as treatment becomes more effective, early and exact diagnosis will become more important, since there will be treatment for diseases which were formerly incurable. Antibiotics against viruses will be produced and this will necessitate virus identification as a basis for treatment. The cure of cancer with drugs will one day, we hope, become a reality but will surely depend on early diagnosis; from the practitioner's point of view a bio-chemical test of the blood would be most suitable. More effective medical treatment of peptic ulcers will save much suffering and render surgery outmoded. More important still will be the role in preventive medicine. Better standards of personal hygiene and food handling could reduce the incidence of gastro-enteritis.

The challenge is to use the advance of technology to provide a better life for society -- more leisure hours, more recreation and exercise, a healthier diet and environment, and, if possible, an end to the frenzied race of to-day's industrial civilization. There is no doubt automation could provide the means to a healthy life, and who better to teach how this may be done than the medical profession?



## REFERRALS FOR CONSULTANT OPINION

During the year the referrals for consultant opinion were as follows:- of 482 men, 52 (10.8%) were sent to a general surgeon; 22 (4.6%) to a physician; 20 (4.2%) to an orthopaedic surgeon; 18 (3.9%) to an ophthalmologist; 8 (1.7%) to a psychiatrist; 6 (1.3%) to to an Ear Nose and Throat surgeon; 4 (0.8%) to a dermatologist; and 3 (0.6%) each to a neurologist and a genito-urinary surgeon.

Of 675 women, 58 (8.6%) were sent to a general surgeon; 50 (7.4%) to an obstetrician; 27 (4%) to a gynaecologist; 26 (3.8%) to a physician; 16 (2.4%) to an orthopaedic surgeon; 13 (1.9%) to a psychiatrist; 13 (1.9%) to an ophthalmologist; 6 (0.9%) to a dermatologist; 5 (0.7%) to an Ear Nose and Throat surgeon, and 2 (0.3%) to a genito-urinary surgeon.

Thus 136 (28.2%) of 482 men and 216 (32.0%) of 675 women required referral for consultant opinion.

It can be seen that the referral rate is slightly higher for women but this figure becomes 26.1% if expectant mothers are deleted from the numbers surveyed.

During the year, 33 (6.8%) of the 482 men and 15 (3.5%) of 675 women were referred to a Casualty Department of a hospital.

The number of children from birth to the age of 14 referred for consultant opinion was much smaller.

Of 309 male children, 12 (3.9%) were referred for Ear Nose and Throat opinion; 9 (2.6%) to an eye specialist; 3 (1.3%) to a general surgeon; 2 (0.8%) to a physician and 1 (0.4%) to an orthopaedic surgeon.

Of 297 female children, 11 (3.7%) were referred to an Ear Nose and Throat surgeon; 6 (2%) to an eye specialist; 5 (1.7%) to a physician; 2 (0.7%) to a genito-urinary surgeon, and 1 (0.4%) to an orthopaedic surgeon.

The number of children referred to the casualty department was 38 (6.3%). This consisted of 21 boys (6.8%) and 17 girls (5.7%).

On reviewing the literature on this subject it is apparent that comparison between surveys are difficult to make, due to differences in definition and analysis as discussed by Lees and Cooper (1963).

I have collated my referrals to include both out-patient and admissions. Only referrals to casualty departments have been kept separate.

The total referral rate was 404 patients from a total at risk

of 2,807 i.e.14.0%. The number of doctor-patient contacts during the year was 4.7%.

These patients were referred for four reasons:-

1. For a second opinion where either I was at a loss for a diagnosis or I wished advice.
2. For investigation, again under two headings; i.e. for investigation which could have been arranged by myself, if facilities had been available or for special investigations where specialist facilities or interpretations were required.
3. For treatment, where diagnosis and probable treatment were known before referral.
4. At the patient's or the patient's relatives request.

An analysis of the figures under the above divisions is of interest; 13.8% were referred for a second opinion; 20.7% were referred for investigation; 60% were referred for treatment; and 0.05% were referred at patient's request.

These figures compare with those of Fry (1959), Hopkins (1956) and Wood (1964), where 15% of Fry's referrals were for diagnosis

(doctor "stuck"), 9% for special investigation and 73% for treatment. Hopkins referred 15% for diagnosis; 31% for special investigations, but his figures included those sent for pathology and radiology; 53.8% were for treatment. Wood's referred 18% for diagnosis; 12% for investigation, and 70% for treatment.

No mention in any of these papers was made of any referral at the patient's request.

This survey agrees with other works too, that a large amount of medical practice can be conducted without reference to the hospital service, and even more could be done if facilities such as radiology, pathology, electrocardiography, physiotherapy and the like were directly available to general practitioners.

To be able to carry out treatment in one's own practice, one would need not only the facilities listed above but also time. How often one has to refer to hospital, say, a laceration which would take a little longer than normal to suture because the waiting-room is full of restive patients. This implies a smaller list per doctor with its resultant effect on the financial structure of the National Health Service. However, more money thus spent on the general practitioner would inevitably save as large an amount spent on Hospital Services.

## PROBLEM FAMILIES

During the working life of a general practitioner, he is bound to encounter several types of what are euphemistically called problem families.

During the year 1963 several examples of these were encountered by myself. Generalising one could say these families are recidivists, those of low mentality, apathetic. Examples are as follows:-

1. The McL. family consists of husband, aged 38, wife, aged 36 and three sons and three daughters. The eldest sibling is 16 years of age and the youngest is 4.

Mr. McL. has spent much of his time as an inmate of Her Majesty's Prisons (Plural!). His offences have ranged from petty larceny to assault with an offensive weapon. His main source of "income" has been from suitably available public-houses and accounts for his fairly frequent outbreaks of alcoholism. He has not worked for the last eight years, but four of these years he did help with the output of mailbags and the like. He suffers from chronic bronchitis and emphysema and is virtually unemployable.

The family - in its earlier years - suffered from malnutrition and were poorly clad. As the years have passed, the various sources

of social welfare have improved the wife's lot both financially and mentally.

Mrs. McL. has improved her domestic abilities, thanks to the help rendered by the child welfare officer, family case worker, health visitor, district nurse and in a small way by myself.

Her finances have improved by and from sickness benefit varied with unemployment benefit, national assistance benefit and increased family allowance.

The children are now well fed and clothed. Their manners are impeccable and the father's word is law. His own remarkable civility and politeness has been passed on to them.

He has four brothers, each as polite as himself. Each has also served several prison sentences, not, agreed, as many as Mr. McL. but I have the feeling that in many of their exploits, Mr. McL. has been a Sidney Carton.

Their parents were hard-working people whom the family all supported well in their various ways, but in delving in to the family past, neither were strangers to the prison cell.

Here we have a man with 20 years of crime, who has passed through the hands of psychiatrists, and social workers but can be summed up as incurably anti-social.

2. The second family I describe consists of a husband, aged 24 and his wife aged 35.

In the house live eight children, the eldest is 19 and the youngest is 11 months old. The alarming feature is the fact that the children muster five surnames between them.

The mother has been married legally twice and had three paramours. She is a high grade mental defective and her present husband has served three prison sentences for robbery and assault.

The house is filthy, the children neglected and the neighbours have all applied for transfers to other parts of the burgh.

This family have been a heavy and expensive drain on all the financial sources for social services and also on the time of the Staff concerned.

3. Another family consists of husband, wife and five children, the eldest being 6 and the youngest 10 months old.

The father has an inadequate personality who cannot face up to the responsibility of adult life. He is an only son who was sheltered in his youth and prevented from growing up to face any difficulty.

As a result he has been in many jobs which he has to leave because of his insecurity. His workmates, he feels, laugh at him and make him a butt of their jokes. Despite this he has always run a car,

purchased on "easy terms". No doubt this, to him, is a status symbol of his man-hood.

As a result the family finances are in a very tight stretch. The house is poorly furnished but reasonably clean. Mr. C. is well domesticated. The children are poorly clad and not suitably fed. The mother goes out to work in an engineering shop and does heavy work. As a result she is anaemic, always tired and has a myriad of gynaecological complaints. The children are constantly ill owing to their poor nutrition, and the number of late calls for medical attention are legion.

Here we have a chronic demand on the social and medical services. For the general practitioner to care for these families adequately, considerable time is necessary and this is not available under the present contract of service. It can be argued that the children's officer, the family case worker, the health visitor and others exist to lighten this load on the general practitioner, but I feel that with the increasing complexity of life much more of this work should be performed personally by the general practitioner with integrated action by others.



## THE HEALTH OF MARRIED WOMEN WHO WORK AND OF THEIR CHILDREN

An attempt was made from the data available to establish whether children of mothers who took up gainful employment, either part or full-time, had a higher sickness rate than other children, and also if there was any effect on the health of the mothers themselves.

Of the 452 married women in this series, 229 women (50.7%) with young children did not go out to work, while 99 (21.9%) with no young children and 124 (27.4%) with young children did go out to work. In this analysis young children means infancy to 15 years of age.

There was no difference in the consultation rate for children between these of working and non-working mothers. Their rates were 5.8 services in the year.

The 229 married women with children up to school-leaving age, who did not work, had 816 attendances giving an attendance rate of 3.6, while the 124 women with children and also working had 843 attendances and a consultation rate of 6.8 per annum.

The difference between these is highly significant ( $P < 0.01$ ). Thus, while the fact that married women who work and have young children, do not seek medical advice for their children more than

the comparable group of non-working married women, there is a very real increase in ill-health among those working married women compared with the non-working group with young children.

Of the 452 married women, 74 (16.4%) were emotionally disturbed. Of these 74 emotionally disturbed married women, 29 (39.2%) had young children and did not go out to work, while 16 (21.6%) with no young children and 29 (39.2%) with young children did go out to work.

Thus working married women with no young children are in a much better mental state than married women with young children irrespective of whether they work or not.

The difference in mental illness between those who are working with a young family, and other married women, may be due to the following reasons. Some women have to go out to work because of bad home circumstances, where the family income needs to be implemented or bolstered by the mother being gainfully employed, thus adding to an already present stress. It is possible, of course, that many women do go out to work in order to "keep up with the Jones".

It has been noted that the health of the children whose mothers went out to work, was not apparently worse off than other children nor did their welfare suffer. On the contrary many of the

children were better clothed and fed.

One point, however was brought out, and that was the number of late afternoon and evening calls varied greatly between those children whose mothers went out to work and those whose mothers did not.

During the year the number of calls per 100 was 1.1, among children whose mothers did not go out to work, while the corresponding figure for children of working mothers was 3.4.

The majority of these calls were purely for the convenience to the mothers because they were out at work all day and had been told by the matron of the childrens' nursery, or by whomever had been looking after the child, that her offspring had not been well during the day. The illness incurred did not merit a late-call and could easily have been dealt with by a visit to the surgery, but as this would have meant losing time off work, it is easier to call the doctor out in the evening.

Should a pre-school child be ill enough to require treatment in bed, if there is an older daughter at school, then the latter child is kept from school to act as a nurse during the day, while the mother continues her work.

THE MEANS OF ARTERIAL BLOOD PRESSURE FOR PAROUS WOMEN AND MARRIED  
WOMEN WITH NO CHILDREN BY PARITY OTHER THAN UNMARRIED  
THE MEANS OF ARTERIAL BLOOD PRESSURE FOR MARRIED WOMEN BY PARITY

From my figures recorded against each married woman, I abstracted each individual blood pressure. This was collated against age and parity in an attempt to see if blood pressure was influenced by the number of children borne.

Table 2 shows the number of women in each age group by parity.

Table 3 shows the systolic and diastolic means of women, excluding those unmarried, in each sub-group. At 20 - 45 years there is no significant variation in mean arterial pressure, with increased number of children. Indeed the blood pressure averages for the childless woman are if anything most satisfactory. At 46 - 59 years all blood pressure means are higher than the corresponding values at 20 - 45 years; again the childless have the most satisfactory arterial blood pressure averages and there is no significant trend with increase in parity. The 60 - 79 age group shows similar features to the 46 - 59 years age group and while after the first child the 60 - 79 years age group shows a fall in mean values to parity of five or more, this fall is not significant being based on small numbers of women. Tables 4 and 5 are more condensed to show the favourable

position of those childless in each of the three age groups.

These findings are at variance with those of Miall and Oldham (1958) who in a study of the general population in South Wales stated that between 15 - 45 years of age, married women without children have higher blood pressures than those with one child, who in turn have higher pressures than those with two or more children. At the reference age group 45 - 50, a woman with six children would be expected to have systolic and diastolic pressures at 20 millimetres of mercury and 9 millimetres of mercury lower than a childless woman.

My findings are more in agreement with those of Barnes and Brown (1945) who, from the measurements of the blood pressures of 915 childless women, and 1,041 married women with children, found that there was no difference in pressure between the two groups of women and that parity had no influence on blood pressure.

## MENARCHE AND MENOPAUSE

A record of the menarche and the menopause was noted in all females who attended during the year 1963. During the years of practice one gained the impression that women who had borne children had a later onset of the menopause as opposed to women who had remained childless; also that the younger women and girls were maturing much sooner than previous average figures given for the menarche; and also an attempt was made to see if the old adage of "come early, go late"; "come late, go early" which had been handed on as a rule of thumb for the duration of the female menstrual era.

In the data provided by my series which included 125 women, who have passed menopause, 90 being parous (72%) and 35 non parous (28%), no significant difference was noted in the series to show that parous women had a later menopause. From this can be presumed that the physiological action of childbirth does not influence the prolongation of ovarian activity and its effect on menstruation.

Similarly, there was no significant association between age of onset of menarche and age at which the menopause ensued. No regular pattern was seen. It had been proposed that in girls who had an earlier menarche, the ovary was more active and as a result of this activity, tended to extend the proliferative life of the

ovarian follicles. No proof of this could be substantiated by my records, including 116 parous and 48 nulliparous.

However, as can be seen by Table 6 the younger generation of to-day have an earlier menarchal age. My figures agree with Tanner (1961).

These figures are taken from the females seen by me from the entire practice during the year i.e. a total of 911 women who had matured.

The average age at the menarche in temperate zones is between 12 and 14 years of age. Many factors control and determine its onset. Heredity plays an important role and most girls follow the pattern of their mothers and sisters. Structural development is also important; this may explain the earlier onset of menstruation as the somatic development of modern generations had been proved to be advanced. Environment, physical condition, socio-economic status affect the age of menarche. This latter condition, with its implied better nutrition and general health, on the whole, produces earlier menarche. It has been shown that girls reared in cities have an earlier menarche than rural girls. Diseases such as anaemia, diabetes mellitus, tuberculosis and other chronic diseases, as well as malnutrition and psychic stress are usually associated with a later menarche.

There can be no doubt that children are better fed and healthier than 25 years ago. Anaemia and tuberculosis are no longer the cause of much physical disability. Children are physically bigger than 25 years ago and housing conditions have improved out of all recognition. The consideration of all these factors may explain the earlier age onset of menarche.

It is obvious that the ages given by each patient depends on the memory of each patient. Older people tend to be vague about the age of menarche onset on account of the passage of time. Never the less the difference and trend is so insistent that the error in response is not great enough to destroy the basic total trend.

This earlier onset of menarche must have an effect on our modern society. An early menarche means an earlier physical maturing. This may explain the increased number of teenage marriages which now take place, often very soon after leaving schools. Very few of these girls (and boys) are suitably equipped for marriages, especially in bringing up a family and also in budgeting household economy.

Education to this end could be part of the school curriculum, which could include instruction on housewifery, citizenship and sex education.



Inevitably the increase of these marriages brings housing problems. Very few couples at this age can have capital to buy, or even furnish a house.

Houses to let are very scarce, so inevitably their marriage begins living with in-laws and also inevitably, this is a source of domestic strife. This raises the question whether young newly-weds should be subsidised by the state until they are economically independent, especially students who have still to finish their course of studies and achieve their degrees. As well as financial help, there must always be available a source of advice on health and social matters. Fortunately, some of these couples do come to their general practitioner for help. Usually the reason is, in the first instance, on a health matter but during these visits any other problems can be discussed. Where necessary, I have full call on the services of the health visitor and a social worker and I find that in certain cases where co-operation is given, that much help can be given.

Many patients, however, fight shy of confiding in a third party. These have to make do with any advice that I can give.

While I was extracting this data, it was brought to my notice that there were an unusual number of broken marriages in married couples in their teens. During 1964 I kept a record of the number of "teen-age" marriages present in the practice and made a note of their compatibility. Of 150 youths between the

age of 16 and 20 years, 9 or 6 per cent were married, while of 189 girls of the same age group 29, or 15.3 per cent were married. Of the 9 youths, 1 or 11 per cent was separated from his wife, while of the 29 married girls, 9 or 31.0 per cent were either legally separated or divorced. Of the 9 youths, 6 or 66.6 per cent were parents, while of the 29 girls, 19 or 65.5 per cent were mothers. Of the 9 youths, 4 or 44.4 per cent were married because the girl was pregnant, while of the 29 girls, 12 or 41.4 per cent were pregnant before they were married. However, of those girls who were pregnant before marriage, 4 or 33.3 per cent of those pregnant were engaged to be married and the pregnancy brought forward the date of the marriage by a few months. No youth, who was involved in a pregnancy before his marriage, was engaged.

Of the 9 youths who were married, 2 or 22.2 per cent were unemployed when they married. Of the girls' husbands, 7 or 24.1 per cent were unemployed at their marriage.

Only 1 or 11.1 per cent of the youths had a house of their own to start married life, while 12 or 41.4 per cent of the girls had a house at the time of marriage.

Of the 9 youths, one was 17 years of age, two were 18 years of age and three each were 19 and 20 years of age. Of the 29

girls, two were 16 years of age at the time of their marriage, seven were 17 years of age, seven were 18 years of age, and six each were 19 and 20 years of age.

The ages of the 4 youths who, of necessity, had to marry, were two each of 19 and 20 years of age.

The ages of the 12 girls who were pregnant before marriage were:- two 16 years of age, four 17 years of age, one 18 years of age, two 19 years of age, and three 20 years of age.

As a comparison, of 256 couples between the age of 21 and 45, 15 or 5.8 per cent were separated or divorced during the same period under review. As 26.3 per cent of the 38 couples aged between 16 and 20 years of age were either separated or divorced, the incidence of broken marriage is roughly five times higher in the younger age group this would imply that these young people are not ready to adjust themselves to married life, or, as has already been discussed, are not sufficiently educated in what is required in the give and take of matrimony. As already outlined education on "growing-up" in schools might help to diminish the number of teen-age marriages that go astray.

MENTAL ILL-HEALTH

Mental ill-health is one of the commoner occurrences in general practice. It is a wide-spread impression among practitioners that the number of neurotics we have to deal with, has shown an alarming increase since the beginning of the National Health Service.

It is possible that this may partly be due to them attending the doctor more readily in a "free" health service. However the complexity of our industrial civilisation is increasing. Since there is a threshold for the ego beyond which mental health is lost, it is reasonable to assume that as our society becomes more complex there will be a parallel increase in the incidence of mental illness. Furthermore there is a falling off in religious awareness and the extent to which emotionally disturbed individuals are coming to seek the physician's rather than the clergyman's help is a consideration worthy of note.

A simple differentiation is used in this paper between purely psychotic and the emotionally disturbed.

In the number of patients reviewed in this series, 3 (0.6 per cent) of 482 men and 9 (1.2 per cent) of 675 women were truly psychotic. All were referred to the psychiatrist

and in this respect the immediate onus of medical coverage was removed from the general practitioner.

Not so those suffering from emotional disturbance by which I mean anxiety or depression of serious degree. This the general practitioner must try to mitigate and prevent and this matter will be discussed subsequently.

Table 7 gives the causes of emotional disturbance among men and women. Emotional disturbance due to all causes was observed in 82 (17.0 per cent) of 482 men and 147 (21.8 per cent) of the 675 women. The sex difference is significant ( $\chi^2 = 3.8$ ; d.f. = 1  $P < 0.05$ ) with more women than expected emotionally disturbed.

The most frequent cause of emotional disturbance was physical disease and this combination of mental and physical ill-health was noted in 46 (9.5 per cent) of 482 men and 53 (7.8 per cent) of the 675 women. There is no significant sex difference ( $\chi^2 = 1.14$ ; d.f. = 1  $P > 0.25$ ).

Emotional disturbance due to adverse home environment occurred in 17 (3.5 per cent) of the 482 men and 46 (6.8 per cent) of the 675 women. The sex difference is highly significant with more women than men emotionally disturbed by an adverse home environment than expected ( $\chi^2 = 5.61$ ; d.f. = 1  $P < 0.01$ ).

In this context 8 of the 46 women lived alone and were very lonely. They were socially isolated.

A cause of emotional disturbance peculiar to women was the menopause and this accounted for 20 (2.9 per cent) of the 675 women. Bereavement affected 5 (0.7 per cent) of the women but no man, and compulsory retirement due to all reasons involved 4 (0.8 per cent) of the men but no women.

Only 2 of the 1,157 men and women suffered because of neglectful children and 2 because of financial difficulty.

On occasion more than one cause co-existed in the individual emotionally disturbed, an interesting feature is the rarity with which financial difficulty is a primary cause of emotional disturbance, though it often exists as a secondary feature. This agrees with Sheldon (1948) and Cowan (1963) that financial difficulty rarely exists in isolation as a cause of emotional disturbance, but does accentuate the emotional disturbance due to other primary causes.

Table 3 shows the age distribution of men and women with mental ill-health. 482 men and 675 women were ill due to physical or mental causes and Table 9 shows the number of men and women who were mentally, physically, or mentally and physically ill, with reference to the number of repeat visits during the year.

To assess the significance of this data, I have combined those mentally ill only, with those mentally and physically ill, and contrasted this group with those physically ill only in terms of the numbers who attended 10 or less and 11 and more times in the year.

Of the 482 men and 675 women in this series, 397 men and 519 women with physical disease only, and 59 men and 106 women with mental ill-health, attended on 10 or less occasions during the year while 42 men and 120 women with physical disease only and 26 men and 50 women with mental ill-health attended on 11 or more occasions.

For men and women there is a similar significant trend and the significance is greater for men than women.

The observable trend is that men and women who are mentally ill have a highly significantly greater number of return visits than those with physical disease only. (Men  $\chi^2 = 23.06$  d.f. = 1  $P < 0.05$ ; women  $\chi^2 = 5.36$  d.f. = 1  $P < 0.025$ ).

That this should be so indicates that adequate reassurance and guidance requires many visits to allay the anxieties and depressions of patients.

The considerable number of people with physical disease who are also mentally ill draws attention to the fact that when

a physician deals with physical illness he must keep in mind a double obligation to his patient, namely, the treatment of physical disease and the treatment of co-existing mental ill-health.

The converse obligation is also true. Where a patient presents with an apparent mental illness, the physician must also be keenly aware that there may be an underlying physical disease. This often entails various elaborate investigations and referral to a hospital clinic.

Unhappily, in some cases, where no abnormal positive findings are elicited, the mental stress can be exaggerated and a long course of medical treatment ensues. This entails frequent attendances at the surgery with long and difficult discussions and explanations.

The initiation of any such investigation is obviously the decision of each individual practitioner and requires an intimate knowledge of the patient concerned.

It is not possible for me to present statistical evidence of the value of reassurance over many visits, but I am certain that my verbal guidance and encouragement has been of real value in promoting the happiness and contentment of my patients who were emotionally disturbed.



Their mental improvement is shown by a greater readiness to smile and be talkative and there is less liability to weep and show evidence of panic state.

I have selected some of the cases I have encountered during the year under review.

Case No. I Mrs. H.C. -- aged 49 -- a widow who had borne 8 children. She was undergoing the menopause. She had low back pain. Reassurance failed to reduce her fear of cancer being the cause. She attended regularly and often. Full physical check up revealed no abnormality. Eventually she lost confidence and changed her doctor.

Case No. II Mrs. M.D. -- aged 52 -- very happily married with 1 son and 1 daughter both married. She had no financial worries. She had been nursing her aged mother who had recently died. She then attended for treatment for insomnia, and "dizzy turns". She required lengthy reassurance at each visit till one day she developed acute hysteria. She had overheard an innocent telephone conversation of her husband's and accused him of infidelity. This required a 2 hour session which however proved successful. She was resentful of her husband's freedom during the day, yet he never took her out, nor helped her in the house. It was obvious she had "mothered" him since they were married and had been the dominant partner.

She has improved considerably since then but still attends for reassurance.

Case No. III Mrs. A.M. - aged 48 - married with 1 daughter aged 17. This patient attended with many and varied symptoms. A physical examination revealed only a sub-acute appendicitis and unfortunately while, in hospital, she developed an abscess. This prolonged her operation and during the subsequent six months her mental distress increased. After many discussions it transpired that she felt she had wrongly advised her daughter in accepting her first post as a typist. Eventually her guilt complex was allayed and she became much happier. She has had her operation but still attends.

Case No. IV Robert F. - aged 24 - unmarried. Lives with his widowed mother and his sister aged 18. He had suffered tuberculous meningitis at age of 16 - complicated by cerebral thrombosis. As a result of streptomycin therapy his hearing was severely impaired and because of the cerebral incident his speech was affected and his power of locomotion. He had had a long period of partial recovery and was now partially independent. He was very frustrated - jealous of his sister's health. He had outbursts of crying and physical violence. The difficulty was to communicate because of his disabilities. Reassurance added to tranquillisers and sedation have improved his outlook and he is able to attend a rehabilitation centre.

Case No. V Mrs. E.M. - aged 41 - married with 1 son aged 16. This patient was undergoing the menopause. She had recurrent epigastric pain with bouts of acute vomiting. Clinically her symptoms suggested a hiatus hernia and a-ray confirmed the diagnosis. Medical treatment and diet were suggested and initiated. However her complaint continued and operation was advised. This she strongly refused to have as a neighbour had told her that this was a serious operation. She became increasingly anxious and depressed and required psychiatric in-patient treatment. She came home and agreed to have the operation. This was carried out and was completely successful. She improved in every way after this and had a rapid convalescence. She was able to return to her job of factory supervisor and her mental outlook improved vastly.

Progress in psychiatry in the treatment of both mild and severe illnesses has brought many benefits for the patient but, at the same time, certain problems for the general practitioner. With the arrival of new drugs available to practitioners, many patients can now be treated without hospital in-patient treatment. As correct diagnosis is necessary to make fullest use of these drugs, training in psychiatry as a student will require to be extended. From my own experience as a student, my training in psychiatry was purely rudimentary and quite unsuited for entry into general practice to be able to cope with

the wide range of psychiatric ailments presented by patients. Anxiety and tension states are probably the most commonly seen as I have shown in my thesis. Every patient, faced with a sufficiently unpleasant situation, is capable of experiencing anxiety. In the majority of instances this anxiety will disappear as quickly as it came once the cause is removed. However, some people experience anxiety long after the original cause has disappeared, while others may react excessively to every stress, be it great or small. They may do this to such an extent that their lives become dominated by their irrational fear. In these anxiety states mental or physical symptoms may predominate, and, as has been noted previously, it is important to remember that anxiety may hide organic disease.

An excessive pre-occupation with health, is often seen in the ageing. Elderly people become increasingly introspective, rigid in personality, and their outside activities and interests diminish. This can also be found in persons of anxious personality, or morbid obsessional traits, persons made lonely by bereavement or infirmity, who all tend to hypochondriasis. I find this diagnosis difficult to make because of the wide variety of presenting symptoms. Once the diagnosis is made, one has to assess how much of the symptoms are due to a personality disorder, how much to environmental stress, and how much, if any, to an underlying depressive illness.

Chronic disease such as schizophrenia are fortunately rare. It has been calculated that the average practice will have one such patient every 3 years. However being chronic they are cumulative and with the newer drugs more patients spend longer periods out of hospital. This latter fact means there is adjustment to be made by the family and can be a cause of emotional tension.

Psychiatric community services outside the hospital have been proposed as public attitudes change. To be developed properly much time and money will be needed. The general practitioner will fit into these "teams" and will have to learn to share responsibilities with non-medical personnel. This will require drastic overhauling of the practitioners duties. Such a service, properly staffed by mental welfare workers, health visitors, and mental nurses, would improve the lot of the patient and would benefit the practitioner's work load as well as helping him to ensure proper follow-up treatment. No doubt these community services will be based in the group practice health service of the future and will give much assistance in many medico-social problems. Such problems as subnormal children, nervous patients whose symptoms are especially acute or severe or worrying to others, the supplying of out-patient supervision of those discharged from hospital, old people who are emotionally disturbed, will be aided by the ascertainment of this service.

Any practitioner who could fit his general duties in with a post as clinical assistant in one of those centres should be able in his own right, to make a valuable contribution to family psychiatry in a specialised setting.

While this project is still very much in the future, it seems most desirable. There is no doubt that if a practice could have the help of a trained social worker, her knowledge of the varied community care services would help the practitioner to make fullest use of the services available. The social worker would also help in preventive work and would go a long way towards the prevention of individual, marital and family breakdown.

Psychotherapy in general practice, in my opinion, is possible to a certain extent. Treatment depends on the knowledge of psychiatry the practitioner may have, on the selection of such cases within his scope only, and on the time possible to spend with each patient. I still maintain more specialised training is required before one should envisage extensive psychotherapy in one's practice. One must always realise that one is not therapeutically omnipotent and also ask oneself why or whether, some particular patients should cause antagonism in the practitioner's mind.

Possibly one of the most commonly requested items in the nations drug bill is a sleeping tablet. It is said that 20 million prescriptions are dispensed each year in Britain with a view to providing sleep. During the year 1963, a record was kept of those patients who required a regular prescription for nightly sedation.

In the age group from 21 to 64 years of age, 22 men or 4.9 per cent received regular prescriptions. Of patients aged 65 and over, one man or 2.8 per cent of 36 men and 21 women or 13.2 per cent of 159 women received prescriptions regularly. These figures came as a surprise to myself as it had appeared to me that I had prescribed sleeping tablets more frequently than the data proved. This brings to notice how erroneous impressions can be. There is no doubt that hypnotic drugs have their place in therapeutics but I am convinced that many patients become dependent not on the drug but on "the tablet". I am sure a placebo of same colour and shape would achieve the same result for many of these patients. There is also no doubt in my mind that many patients do become addicted to the drug. This is a major problem in our present society and requires research. The easy way would be for the doctor to avoid prescribing a hypnotic drug but with the increased tensions and stresses in our present way of living, there are patients who will require, on medical grounds, a hypnotic.

Perhaps the pharmaceutical industry will be able to produce an effective hypnotic which is not habit-forming. This would decrease their turn-over in sales but would be beneficial to the public as a whole.



## THE PROBLEMS OF THE ELDERLY PATIENT IN GENERAL PRACTICE

Since 1946 there has been a greater interest taken in the health of older people. A greater number of hospital beds have been allocated for their care; newer and more potent drugs have prolonged their lives; and it has been recognised by clinicians that a vast, previously unexplored, field of medicine and pathology has been brought forward.

A study of general practice would be incomplete without taking into consideration the role of the practitioner in relation to his older patients. For this present analysis I have drawn on people aged 65 and more in my own and my partners' lists. Hence I have assessed 114 men and 201 women, aged 65 to 90 years of age.

Table 10 shows the men and women by age, sex and marital status and Table 11 shows these numbers expressed as percentages of each total in each age group.

Table 11 reveals important details. In both age groups, more men than women are married, and there are more women than men widowed and single.

### Emotional Disturbance

In this thesis, I have stressed emotional disturbance as a major problem in general practice. It is most relevant to consider

the incidence and causes; Table 12 shows the number of old people emotionally disturbed with Table 13 showing the corresponding percentages in terms of the respective totals in each marital status group.

Of the 114 men and 201 women, 29 or 25.3 per cent of men and 93 or 46.3 per cent, of women are emotionally disturbed. Hence a significantly greater number of women than men are emotionally disturbed. This sex difference is observed in all marital status groups in both age groups. Further more, in both sexes, the incidence of emotional disturbance is least for those who are married.

An important cause of emotional disturbance in those who are married is ill-health of the spouse and Table 14 shows the physical illnesses of the spouses of the patients seen. These diseases are typical of old age and are largely of a chronic, disabling and progressive character. Such diseases were noted in 12 or 21.0 per cent, of 57 wives and in 22 or 44.9 per cent of 49 husbands.

A significantly greater proportion of women than men live alone, and the proportion emotionally disturbed is much higher in the case of women. Many of these people complained of isolation and of feeling very lonely. It is fair to interpose here, the fact that the number of those emotionally disturbed would have been greater, but for the interest shown by the Rutherglen Old Peoples

Welfare Committee in these men and women. The majority of those who lived alone were further isolated because either they had no children, or if children existed they lived so far away, that for practical purposes they might as well have been non-existent.

Where the husband and wife lived together alone, the cause of emotional disturbance is largely due to physical disease of self or spouse. This cause seems to be alleviated when a son or daughter also lives in the home. With such an ideal family structure, there was no emotional disturbance in the series.

No widowed men in the series lived with a son. Where the widowed person had a son or daughter themselves single or widowed there was negligible emotional disturbance. However where the son or daughter was married and in the home, there was an increase in emotional disturbance precipitated by incompatibility between the in-laws. It seems to be unwise, on the whole, for an elderly person to give up his or her own home to live with a daughter-in-law. The number of elderly people who lived with sisters, brothers, grand-children, or in residential homes are too few for comment.

The existence of relatives irrespective of their location has a bearing in the incidence of emotional disturbance in old age. Emotional disturbance in 6 or 60 per cent of 10 men, and in 21 or 77.8 per cent of 27 women with no living relative, in 15 or 24.6 per cent of 61 men, and 52, or 44.8 per cent of 116 women with one to three relatives living, and in 7 or 16.3 per cent of 43

men and 20 or 34.5 per cent of 58 women with five to six relatives living. Thus the incidence of emotional disturbance seems to diminish with increase in the number of living relatives. There is no doubt that old people with no living relatives are in a serious social position and every effort is necessary to provide these potential or actual isolates with company.

The influence of the presence of relatives on the mental health of old people can be assessed in another way. That is by reference to the location of the relatives in relation to the old person's home. Relatives may live in, near, or far from the home. By living near the home, I mean that there is no difficulty in the relative visiting the old person as often as desired. Tables 15 - 17 shows the relevant details.

The data indicate a strong influence of the proximity of relatives on the mental health of old people. To have no relatives, as previously shown, is a serious mental problem when 27 or 73.0 per cent of 37 people in this category are emotionally disturbed. This is in complete contrast to the 15 or 17.0 per cent of 79 people with relatives in the home, near and far. This data can be condensed to compare those with no relatives, those with relatives in the home, and those with relatives all outside the home. The figures then for emotional disturbance are 27 or 73.0 per cent of the 37 with no relatives; 71 or 30.0 per cent of 237 with relatives in the home; and 24 or 58.5 per cent of 41

people who had relatives outside the home. Clearly the best protection against emotional disturbance is to have relatives in one's home; the most mentally dangerous is to have no relatives, while to be in the position of having relatives at least alive is a saving grace, even although communication might only be by the written word, however erratic in time that might be.

Table 13 shows the number of spouses whose partners suffered morbid ill-health. The numbers are too small to permit accurate assessment of the inclination of emotional disturbance in spouses of all patients seen. However emotional disturbance was observed in 10 or 29.4 per cent of 34 men and 15 or 40.5 per cent of 37 women aged 65 years to 74 years and in 4 or 17.4 per cent of 23 men and 7 or 46.8 per cent of 15 women aged 75 years or over. Thus women in both age groups possess a greater tendency to emotional disturbance than men. Combining the two age groups, since the sex trends appear similar, then 14 or 24.5 per cent of 57 men and 22 or 44.9 per cent of 49 women were emotionally disturbed. The sex difference is now seen to be highly significant ( $\chi^2 = 3.94$ , d.f. = 1,  $P < 0.05$ ).

Table 14 shows the physical diseases of the spouses. These diseases are those which would be expected in older age groups. The important factor in the data, however, is that of 57 male spouses and 49 female spouses, 22 men or 39.3 per cent, and 12 women or 25.0 per cent were in chronic ill-health. This

means that when a practitioner is called in to see an ill elderly patient, he must assess the physical and mental health of the spouse, whether he is the family doctor of the spouse or not, so that he can deal adequately with the emotional and somatic problems of the family unit. In older patients particularly, it is obviously desirable that husband and wife should be tended professionally by the one practitioner unless the doctor himself feels that he should merely treat physical ailments.

Following a natural sequence of events, Table 19 shows the incidence of emotional disturbance in the widowed. The loss of a spouse has a serious effect on the minds as well as the lives of the survivors. Of the widowed, in the younger age group, 7 men or 44.4 per cent of 16 men and 36 women or 69.2 per cent of 52 women and in the older age group 9 or 25.7 per cent of 35 men and 27 or 39.7 per cent of 68 women were emotionally disturbed. Both sexes in the widowed older age group, show a significantly lower incidence of emotional disturbance, compared with the younger age group, and in both age groups, women show a greater than expected number who are emotionally disturbed, when contrasted with men. This difference between the age groups may be due to the fact that the older people have had a longer time interval between the loss of their spouse and my examination. While the total incidence of emotional disturbance in this widowed group cannot be regarded as solely due to bereavement, nevertheless the data indicate that being widowed is associated with an increased

prevalence of emotional disturbance.

However, Table 20 shows the numbers of emotionally disturbed men and women in relation to bereavement and the time interval and it becomes obvious from this data, that the mental distress resulting from bereavement can linger on for many years. The sex difference has a subtle reason. While women live longer on average than men, I have shown that more women than men live alone, and possibly women are less socially adjustable than men when the need for care and attention compels them to seek residence with others, whether it be with relatives, or voluntary or statutory accommodation.

Table 21 shows the causes of emotional disturbance among the 315 elderly patients reviewed; 25.4 per cent of the men and 46.3 per cent of the women were emotionally disturbed. These figures compare with Hobson and Pemberton (1955), but are higher than those of Anderson and Cowan (1955), and far higher than Sheldon (1948). The greater majority suffered emotional disturbance due to physical disease and also adverse home environment. These accounted for 89.7 per cent of the causes among men and 77.4 per cent among women. The data confirmed my previous findings that women were more liable to emotional disturbance when the ill-health or death of a spouse was a contributory factor. Only 3.4 per cent of men were emotionally

disturbed by ill-health of their spouse and 6.9 per cent by the death of the spouse. Among women the relative percentages were 6.4 per cent and 10.7 per cent.

### Religious Awareness.

I considered it useful to assess the possibility of a positive association between religious awareness and the absence of emotional disturbance. I regarded individuals as possessing religious awareness on a relatively simple basis, namely, that they were members of a religious organisation, or though they were not members, yet clearly expressed a faith in God. While rather a crude way of categorising the deepest of mental states, the data are of interest and are presented in Table 22. Of the 114 men in the series, religious awareness was exhibited by 75, and of that number, 11 were emotionally disturbed, while 39 showed no religious awareness, of whom 18 were emotionally disturbed. Of the 201 women, 141 had religious awareness with 54 emotionally disturbed, while 60 revealed no religious awareness, of whom 39 were emotionally disturbed. Thus there is no significant difference in the proportions of men and women with religious awareness ( $\chi^2 = 0.65$  d.f. = 1,  $P > 0.25$ ). This sex similarity differs from the usual expectation that more women than men find value in religion. Indeed, of all the men and women some 68.6 per cent had religious awareness. It could be argued that among the statements made to me, there were some slight deviations from



from the truth, either to impress me with their piety or as a sop to their own conscience or feelings. Emotional disturbance is significantly less where there is religious awareness; for men ( $\chi^2 = 13.4$ , d.f. = 1,  $P < 0.005$ ) and for women ( $\chi^2 = 11.9$ , d.f. = 1,  $P < 0.005$ ). This suggests that one way of helping the emotionally disturbed with no religious awareness, is to give some thought to the rekindling of their faith. This seems to be primarily the function of the clergy rather than medical men and indicates that intensive pastoral work might be remarkably rewarding in older years. This point of view was put forward to a lady of 80 years of age who had not been connected with the church since her husband had died 40 years ago. Her reply was, "I am on the short list now, and whether the decision for me is up or down, I will accept it gladly."

#### Liability to Falls

Prevention of falls among elderly patients is probably one of the most important medical and social problems facing general practitioners. Accidents, directly or indirectly must be among the commonest causes of death in elderly people. I have listed the diseases causing falls among 49 men liable to falls out of the total of 114 and among 79 women liable to falls out of the total of 201 women. Any illness, of course, is liable to cause falls in the elderly. The basic fact is that with advancing age the number of nerve cells in the central nervous system

diminish and the blood vessels become narrower and less elastic. This means that the margin of safety in maintaining posture and balance is very slight. This explains the higher percentage of "drop-attacks" as a cause of falls. These are caused by throwing the head backwards or turning the head to the side quickly and thus further diminishing, temporarily, the narrowing of the arteries to the brain. The percentage of falls due to this condition was 34.8 in men and 23.5 in women. This figure agrees with Sheldon (1960) who listed 125 out of 500 falls which happened to 202 individuals were due to drop attacks. Osteoarthritis of the lower limbs was also high on the list of causes and women had by far the greater number of sufferers for this disease. No doubt this can be explained by the fact that women are more prone to obesity than men. It was interesting to notice that 10.2 per cent of men had falls because of bronchitis and not one woman was in danger from this cause. No doubt most of these falls were incurred during bouts of expulsive coughing which had an effect similar to drop-attacks in causing temporary cerebral anoxia. The other diseases, hemiplegia, frailty, painful feet, parkinsonism, loss of one limb, and obesity, all have one factor in common. That is the fact there is limitation of mobility. Cataract with its impairment of vision is a cause of falls in old age especially

where surroundings are strange to the patient. There is no doubt that in most falls there is a large element of pure accident involved. An attempt was made by me from the data available to correlate the liability of falls with emotional disturbance. In Table 23 49 men, of whom 19 were emotionally disturbed, were liable to falls. This meant that the remainder of the total of 114 men in the series, i.e. 64 men plus 1 bed-fast were not liable to falls and of those 10 were emotionally disturbed. The comparable figures for 201 women were 79 liable to falls of whom 43 were emotionally disturbed, and 118 women not liable to falls of whom 50 were emotionally disturbed. In both sexes the numbers liable to falls who are emotionally disturbed are greater than expected. While this trend just fails to reach the level of significance ( $\chi^2 = 2.75$ , d.f. = 1,  $P = >0.05$ ) for women, it is highly significant for men ( $P = <0.01$ ). With the increase in limited powers of movement associated with the older age group, it is inevitable that most falls take place in the home. This is a major problem in industrial society to-day because with a fall the elderly person can pass from the stage where he or she still has an independence on others. With the slowing of the senses, increased deafness and loss of vision add further hazards. The difficulty old people experience in co-ordination and in

automatically recovering their posture is more marked. They have an increased need for more points of tactile support and kinaesthetic stimulation. That is to say, old people need more environmental information than younger people to maintain normal functions and activities and avoid accidental disability in the home.

### Housing

This leads on to the need in our present housing programme to consider the special requirements of the ageing population. Chronic disease, and other illnesses, occurs more frequently in older people. This emphasises the need for special services and facilities, in some conditions, for medical care of aged persons in the house. Such facilities should be inherent in the structure. Much research and investigation is needed to improve our knowledge of the psychology and physiological factors pertinent to aging, so that this knowledge might be applied to improve the housing needs for the older person.

(a) Physiological Needs. Aged persons, having poorer circulation and impairment of their heat regulating mechanism, are much more sensitive to their surrounding temperatures. This is no doubt the reason why one has to peel off several layers of woollens before one can auscultate a chest. Because of this impairment, provision should be made for a higher room

temperature plus an even air temperature from floor to ceiling, so that floor heat will be the same at ankle height. This is to allow for the chilling of the extremities to which old people are prone. Heating systems should use fuel which requires the minimum amount of physical labour in their operation. Likewise it is important that thermostatic regulation is such that over-heating is prevented, particularly in bedrooms. This would entail proper siting and size of windows, particularly in bedrooms, to allow cross-ventilation.

Gradual impairment of vision is an inherent part of the process of growing old. Large windows, suggested previously, will also assure more daylight. Glare of sunlight may have to be controlled by venetian blinds which would still allow adequate ventilation. Artificial lighting should be so placed that plenty of light is over the entire staircase and floor space. Extra bright lighting would be required over areas of the room where reading or close work was done. Glare could be overcome by indirect lighting. The extra direct sun-light would also help to cheer the spirits of those who were more confined to their home. If possible the house should be sited so that the sun may shine in to the living room and the bedroom, if building conditions permit.

Sound deafening is also important since old people are less

able to adjust to external stresses.

Since exercise has a beneficial effect on circulation and appetite, adequate space for walking or other recreation should be provided.

(b) Psychological Needs Privacy is essential. This is emphasised by the frequency of acute and chronic illness among older people. Furthermore, there is a special need to be able to avoid the daily living tensions and to have privacy for sedentary recreation and meditation. Therefore, older persons living in a household with others need a room of their own with access to a bathroom, even although they are living with close relations.

Physical ability for work being impaired, this requires structural arrangements to ease housework. By eliminating corners, cracks and provision of flush walls and smooth - not slippery - floors, this would facilitate cleaning. The layout of the kitchen should be designed to minimise walking and give easy access to cupboards without excessive reaching or bending. Furniture on castors, or even built-in, is desirable.

Personal cleanliness must be encouraged by an easy supply of hot water. Toilets with foot-operated valves may be useful.

If it were economically possible to build houses for the

elderly on one floor, this would be ideal. As this is not possible, special attention must be paid to bedrooms and stairways as they seem to be the principle sites of falls. Design of the rooms and location of furniture with open passageways to the hall and bathroom would help to reduce accidents. Rugs should not be used. Proper night lighting is essential with light switches which are easily accessible. Stairways should have uniform treads and rise. Treads should have non-slip surfaces and broad enough to accommodate the whole foot. Hand rails are essential at least on one side and continuous for the length of the stairway. Long stairways should have spacious intermediate landings. Clear definition of the first and last steps is necessary. In the bathroom, the bottom of the bath should be of non-slip material and grab-rails should be provided. The step-in level should be low.

Entrance threshold and floor elevation should be on the same level.

Finally the siting of these homes should be in its own community, and intelligent planning could protect against the hazards of traffic and yet have access to all community amenities. One house, at least, in the location should have a telephone. This telephone owner should be a fit and active person and the others in the area should be able to alert him by a bell, that

all is not well in a particular household. He (or she) is then able to summon whichever of the public services required, be it doctor, nurse, priest or fire service.

An attempt to carry out some of the above suggestions has been done by the Rutherglen housing authority. The most successful and popular site has been the one most accessible to old associations of shops, church and social amenities. It is also built on flat terrain and is built at one level.

Table 24 shows the various types of houses which are inhabited by the patients under review. Table 25 describes how the patients are distributed under owner-occupier, privately owned, rented houses and council houses. I have included those living in residential homes under council houses. Table 26 shows the number of old people living in substandard houses i.e. where there is no inside toilet, no bath, no source of hot water, and no adequate lighting in the house or its approaches. Of those living in houses of an adequate standard, 20 or 19.7 per cent of 103 men, and 70 or 40.2 per cent, of 174 women were emotionally disturbed. For those older people living in substandard houses, the figures are highly significant. 9 or 81.8 per cent of 11 men were emotionally disturbed, while the relevant figures for women were 23 or 85.2 per cent of 27 elderly female patients. It would appear obligatory that



elderly people should be provided with proper houses to help them enjoy their "twilight years" better than they otherwise would, and for those who live alone, a visiting service of some kind should be provided by the local authority.

### Consultative Health Centres for Older People

With the onset of newer and more powerful drugs in all fields of medicine, the modern trend is towards preventive medicine. There is no reason why preventive medicine should not be practiced in the field of the ageing population. Because of the loss of mobility that this group of patients are heir to, it is desirable that this type of medicine should be based not on hospitals but in clinics zoned on specific areas. By this means elderly patients can attend and will attend, more readily than if they have to travel to a hospital where the atmosphere may tend to be more impersonal. To this end, in 1952, such a clinic was developed in Rutherglen by the local Medical Officer of Health, Dr. Nairn R. Cowan and Dr. W. Ferguson Anderson, now David Gargill Professor of Geriatric Medicine at the University of Glasgow. This clinic was formed with the full agreement of the local general practitioners and has gone from strength to strength. The clinic provided comprehensive facilities for the assessment of the physical, mental and social states of the older people. Its purpose was to seek out actively incipient and hidden disease, to enhance health, to

bolster morale and to carry out research into the ageing process.

Over the years I have sent a significant number of old people to this clinic and the findings have been of great benefit to myself in the medical care of these patients. It follows as a *sine qua non* that the patients themselves have been much the better of this extra service. Disease, such as incipient cardiac involvement, have been diagnosed at an early stage. Hospital beds being readily available, a short period of bed rest with proper stabilisation of drug therapy, have enabled these old people to become more active members of society for a longer period than they otherwise would have been. Older people have a better appreciation of what is done for their benefit and all have been eternally grateful for their improved health and for the kind and sympathetic approach that is made to them at the clinic. "Why, doctor, we even get a cup of tea!"

From my own point of view, the help with diagnosis and the clinical discussions I have had regarding my patients, have increased my clinical awareness and definitely improved my medical knowledge.

#### The Dying Patient

The final relationship between patient and doctor is

always concerned with death. For many it is a blessed release from suffering, for some it is a severance from this world at the prime of their active life with so many hopes unfulfilled. Despite the inevitable sadness, to me there is a majesty in death. It conveys an experience, an aura, to which I will never become accustomed. During the year 1963, 12 males or 10.5 per cent of 114 men and 9 females or 4.4 per cent of 201 women died, 7 of the men and 6 of the women in hospital. The age groups of the men ranged from 48 to 84 years of age but only 2 of these were less than 64 years of age. The ages of the women ranged from 63 to 76 years of age, only 1 was less than 70 years of age.

The causes of death among men were:- diseases of lung (including 1 from bronchial carcinoma) 4 or 33 per cent; cerebro-vascular disease 3 or 25 per cent; cardio-vascular disease, diseases of the digestive system, urogenital system, skin (melanoma) caused 1 death each. There was 1 fatal accident. Combined, the latter causes were responsible for 32 per cent. Of the women 4 or 44 per cent died from cardio-vascular disease; Cerebro-vascular disease and disease of the lung caused 2 each or 22 per cent; carcinoma of the bladder caused death in 1 woman or 11 per cent.

The amount of pain or discomfort in the terminal stages was noted in each of the 8 patients who died at home under my

care. No patient, fortunately, suffered prolonged severe pain, 6 or 75 per cent suffered moderate pain, and 2 or 25 per cent suffered no pain. Death is an ever present companion in general practice. Death is an enemy which every doctor must learn to respect. It may arrive with sudden finality or after long, weary months or even years of care and devotion.

The doctor is concerned with the care of the patient during his life span, and in intractable disease or illness he must relieve suffering as best he can. Where pain is the cause of suffering, morphine remains the best of all analgesics, but the timing of its use is very important. Given too soon, the doctor is faced with a rapid increase of required dosage and also, I am convinced, the clinical picture becomes complicated by morphine addiction. The patient may exaggerate symptoms in order to receive another injection. To overcome the time lag between the onset of discomfort and the terminal stage of an illness where morphine can no longer be withheld there are many drugs available. I use scoline phosphate in the early stages to control pain. Later, as the pain becomes more marked I use dihydrocodeine bitartrate (L.F. 118) as I find patients can withstand higher doses of this drug without side-effects. Next in line is the use of dextromoramide (Palfium) which has a very good effect of controlling pain but I would only use this drug in a terminal case, as I find that younger patients become addicted to its use very quickly. As an alternative, I may use

omnopon but I find I have to use fairly high doses (40 mgm. every 3 to 4 hours) to relieve pain. The final narcotic is morphia and I find that injection of this drug gives the best relief. I do find, however, that the most useful drug in the armament is chlorpromazine (Largactil). Used in doses of 100 mgm. to 300 mgm., either as tablet, suppository, or by injection, it seems to have a synergic effect on the release from pain given by analgesics and anodynes. Caldwell (1964) uses Promazine Hydrochloride (Sparine) in place of largactil.

Largactil seems to act by giving the patient a release from reality without dulling their mental perception of the family around them. By so doing the patient can enjoy his life as it draws to a close, within narrow boundaries certainly, and the relatives are relieved of a certain amount of mental suffering. This is achieved by the fact that the patient is apparently suffering less and also the relatives have some communication with the invalid.

As well as having to care for the patient, the doctor has also to cope with the anxieties of relatives. When death is inevitable, then the relatives must be told and this very often has the effect of increasing any emotional disturbance that may already be present.

After death of the patient, this emotional disturbance may be carried on into the latter life of the spouse or relative.

This is particularly so, where the household has consisted of man and wife, or 2 sisters, 2 brothers, or brother and sister and whether the latter are single or widowed. All is well where the surviving partner is well-adjusted or even moderately maladjusted. The problems of living alone and re-orientating their lives are more readily overcome. The surviving partner who cannot adjust because of inadequacy of personality or emotional disturbance, requires repeated attendances to bolster their morale. These visits are time-consuming to achieve any success or to make them worth while to the patient and the doctor. These visits may have to be repeated over many months. I have seen, in some cases, where the effect on emotional disturbance may endure for more than 5, 10, even 15 years. I find this a difficult task to carry out as only advice can be given. The vacuum in their lives has to be filled in. They have to be encouraged to develop a mental attitude which will look to the future and not dwell in the past. I am convinced that many of the widowed increase their emotional disturbance by self-pity and there are some who develop guilt complexes over errors of commission or omission, during their married life. If it is possible for the surviving spouse to re-marry, then the position for those is improved. More men than women marry for a second time. No doubt many of these are purely for companionship and to help to run the house. In the main, these seem to be very satisfactory arrangements for both parties and they adapt

to their new spouses very well. The reason widows do not re-marry is probably because they are not asked and would do so if they were. This may be too male an attitude, but there is no doubt women, being accustomed to carrying out domestic duties are more independent than men. Hence we have more women who are left to live by themselves. As I have shown, the incidence of emotional disturbance is increased in women who live alone and because of this the general practitioner is once more involved.

Much of the distress encountered among the old could almost certainly have been averted had they been trained in their youth in the care of the body, especially the teeth, the sight and the feet, and in a better use of leisure.

A general practitioner has a position of quite unusual privilege with regard to his older patients. He must try to help to satisfy their deep needs for honour, esteem and affection. However it should be emphasised that while the doctor has special responsibilities, he is but one member of the community which is collectively responsible for the care of its aged members. As has been said, the care of the aged is a measure of the dignity and culture of a country.

## WORK AND RETIREMENT

Of the 482 men in the series, 52 (10.8%) were retired from work. Fifteen (28.9%) of these 52 men were compelled to relinquish their work because of ill-health or accident:- 1 stopped at 53 years; 1 at 56 years; 6 at 60 - 64 years; 4 at 65 - 69 years; and 3 at 70 - 74 years. These men could have worked on but for physical disability. Another 26 men (50%) were retired compulsorily by their employees and resented this radical change in their way of life for which they appeared to be unprepared. Of these 26 men, 14 men retired at 65 years; 1 at 67 years; 1 at 68 years; 8 at 70 years and 2 at 72 years. Some sought alternative work but in this they were unsuccessful. The remaining 11 men (21.1%) retired in a voluntary manner, and for four of them this coincided with their compulsory retirement at a predetermined age. The data presented, indicate that only a minority of men are content with compulsory retirement. Retirement is an important and critical occurrence in the life of man and it is a disservice to the individual and to society that men should give up work feeling frustrated, useless and with a diminished standard of living.

Retirement appears to be detrimental to the mental health of many older men. There is a need for pre-retirement training with post retirement follow-up and in this connection, the policy of the



Glasgow Retirement Council is worthy of note. This Council believe that training is essential if older workers are to relinquish their occupation free from fear.

Mack (1958) found positive evidence of the usefulness of retirement planning. The scheme which she studied aimed to provide information about age and retirement; to encourage constructive thinking about, and planning for, retirement; to encourage and stimulate action on plans. She found that the programme reduced the fear of retirement and enhanced positive attitude towards retirement and it had the effect of producing desirable behaviour in retirement planning. The guidance was most noticeable in relation to financial planning, health and proper diet, mode of life, and the meaning of work and retirement.

Such a plan must be reasonably elastic in its interpretation as the guidance will have to be modified to suit the different mental outlooks of some of the occupational classes. This point is brought out by Burgess, Corey, Pineo and Thornbury (1958) who investigated occupational differences in attitudes towards ageing and retirement. They suggest that retirement planning programmes should be designed differently for at least the upper level occupational group and manual workers.

The Glasgow Scheme studies the problems of the older worker; promotes education for retirement and occupational activities for

men and women in retirement; provides facilities for hobbies and handicrafts, and gives information and advice on the above matters. The Council also interests commerce and industry in the special problems of the older worker; stimulates staff recreational and welfare schemes to include provision for interests and activities attractive to the older worker which will continue in retirement; arranges study courses, day schools and summer schools on the problems of retirement for personnel and welfare workers, etc; and guides and assists men and women to prepare for retirement by courses arranged in "Day-release" classes spread over one day per week for seven weeks.

After retirement courses are provided at the Council's Crafts and Hobbies Centre.

Co-operating with the Retirement Council are the Glasgow Corporation Further Education Sub-Committee, Glasgow University Extra Mural Education Committee and Workers' Educational Association. In this way experts in many fields of activity are available to guide and assist.

Three (60%) of five men social class I & II; five (15.1%) of 33 men in social class III, and three men (21.4%) of 14 in social class IV and V were content with retirement. Thus while the number of men retired is small (52), there is a suggestion that

men in social classes I and II may suffer particularly at the time of retirement. Certainly no occupational class is free from the adverse mental influences of retirement. It is interesting to note that five men (45.4%) of the eleven men who retired voluntarily and were content, had been retired with a satisfactory life pension. Financial security after retirement is a large factor in preventing stress. Of the 482 men, there were 430 in employment and of this number, 81 (18.8%) had illness of a chronic character. Table 27 shows the disease categories. The commonest were respiratory diseases (28 men or 34.6%); cardiovascular diseases (14 men or 17.3%); intestinal diseases (10 men or 12.3%), emotional disturbances, (10 men or 12.3%) followed by skeletal disease, diseases of the nervous system, the eye, renal tract, addiction, malignancy, and the endocrine system.

A consideration of the social class shows that of these 81 men with disease, 5 in social class I and II, 56 in social class III and 20 in social class IV and V. The social classes of the 349 men working and healthy or with illnesses of short duration are:- 6 men in social class I and II, 243 in social class III and 100 in social class IV and V. The difference by social classes do not attain a level of significance ( $\chi^2 = 5.65$  d.f.  $\approx 2 P > 0.05$ ). It is apparent that in all social classes there are

many working with serious physical or mental disability. Apart from the adverse efficiency of working capacity, there is the more serious aspect of the prolonged mental stress of those physically disabled. These men are very liable to become introspective and fear loss of employment due to ill-health.

Up to the age of 65, the man in society lives in a work-oriented and money-oriented world, with its values centred on production. From a period where the majority of each day is spent on work, he has to retire. Compulsion to work is removed. He has to fill up his time with meaningful activity and to work out a new pattern of living. He is placed in a position that not only does he have to find pastimes with content to occupy him, but they must be arranged in a sequence in such a way that over a period of months and years he can return to the same elements of the pattern again and again and thus gain the psychological support that was once given by his work. Once an activity is patterned and assigned an appropriate place in time, it becomes possible to fit in other activities, and thus enlarge rather than diminish his life-space. Naturally success in developing such activities is related to educational level, to socio-economic or cultural status, and to his earlier experience.

AN ANALYSIS OF SELECTED PHYSICAL VARIABLES  
AN ANALYSIS OF SELECTED PHYSICAL VARIABLES

General practice is one of the best sources of normal clinical material. At the present time, the provision of basic physiological data is desirable, in order that a better understanding is obtained relating to that area of physical fitness which borders between health and disease. It is for this reason that I present a simple statistical analysis of pulse rate, height, body weight and blood pressure.

1. Pulse Rate. Table 28 shows the means with their standard errors, standard deviations and coefficients of variation for pulse rate. The mean values for women show a slight increase with age from 74.4 beats per minute to 75.1 beats per minute at 70 - 79 years of age. Age has no influence on the standard deviation or coefficient of variation.
  
2. Height. Table 29 shows the means with their standard errors, standard deviations and coefficients of variation for height. The mean values for men show a slight decline from 67.5 inches at 20 - 29 years to 66.6 inches at 70 - 79 years, while women show no appreciable change in average height with age. These findings for the sexes seem to differ from the findings of Cowan (1956) who noted

in the age range 60 - 89 years in women, but not in men, a significant decrease in height with increase in age. The standard deviations and coefficients of variation for both sexes are exceedingly small as is to be expected of a skeletal measurement.

3. Body Weight. Table 30 shows the means with their standard errors, standard deviations and coefficient of expansion for body weight. Men show an increase in average weight from 153.5 lbs. at 20 - 29 years to 164.0 lbs at 40 - 49 years and thereafter on balance there seems to be a decline to 154.5 lbs. at 60 - 69 years and no fall in the higher age groups. With women there is a different trend with age. There is a progressive weight increase from 127.1 lbs. at 20 - 29 years to 147.3 lbs. at 60 - 69 years. There seems to be a significant increase in women's weight subsequent to the menopause. After the 7th decade there is an average weight loss to 139.3 lbs. The absolute and relative variabilities, as shown by standard deviations and coefficients of variation, are quite large for both sexes and are in marked contrast to those for height. The weight trend over 60 years is in agreement with Cowan (1956) who observed that a slight fall in weight with age was not significant for men and that the position was quite different for women in whom a significant weight loss was evident.

Obesity is a serious problem in older years and while I have not presented disease in terms of body weight, there is no doubt that most of my elderly obese men had had either coronary thrombosis or cerebral thrombosis. Women, however, seemed to tolerate obesity better than men, though even their life expectancy is shorter. This observation of mine in general practice is borne out by the literature. For example Greene (1948) states that obesity predisposes to serious disorders and shortens life and Life Assurance statistics show the positive association between obesity and mortality rates.

In my practice the problem of nutrition is one of over nutrition and not malnutrition. Malnutrition when found is usually associated with neoplastic disease. The resultant hazards of obesity can be minimised by weight loss through the use of a reduction diet. Unfortunately very few of my patients have the will power to maintain a strict diet. Possibly the only way to save some patients from themselves, would be to admit them to hospital for reduction of weight under strict supervision.

4. Blood Pressure. Table 31 and Table 32 show the means with their standard errors, standard deviations and coefficients of variation for systolic and diastolic blood pressures respectively. Figures 1 and 2 show for men and women respectively the means of systolic and diastolic

blood pressure in my series in relation to those of other workers. The mean systolic blood pressure for men increases for 127.3 mm. at 20 - 29 years to 164.4 mm. at 80 - 89 years and in women the increase is from 125.6 mm. at 20 - 29 years to 161.7 mm. at 70 - 79 years. Contrasting the sexes, the average systolic blood pressures of men are higher than the corresponding values for women to the 5th decade. Thereafter the women show the higher average systolic blood pressure means. This sex difference is in agreement with the findings of Hamilton, Pickering, Roberts and Sowry (1954), Master, Dublin and Marks (1950), Wetherby (1932), and Saller (1928). The increase in systolic blood pressure over 60 years of age is also noted by Anderson and Cowan (1959) but their mean values are somewhat higher than those in my series. The markedly lower average values of Robinson and Brucer (1939) are doubtless due to their method of assessment.

The means by sex and age for diastolic blood pressure parallel those observed for systolic blood pressure except that the increase with age is least marked.

The absolute variabilities of systolic blood pressure is moderately large and is comparable for the sexes but is less than that observed for weight. The relative variability is moderate. The absolute variabilities, by age groups, of



diastolic blood pressure are less than those for systolic blood pressure. This indicates that in using blood pressure estimations as an index of health, diastolic blood pressure is to be preferred to systolic blood pressure. The relative variability of diastolic blood pressure is uninfluenced by age and is comparable for the sexes.

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SUMMARY

1. An assessment of medico-social problems in my Rutherglen practice in which I am one of 3 principals is described, and a statistical analysis of some common variables is presented.
2. The statistics are based on 2,807 patients at risk during the 12 months January to December 1963. A proforma was completed for each patient, aged over 20 years, examined by me during the period under review. Of the patients at risk, 1,893 (or 67.4 per cent) were seen one or more times during the year. The consultation rate was 4.7.
3. For the whole practice at risk (8,042) a total of 4,831 home visits were made, while 8,874 surgery consultations were carried out. For a 5½ day week, the average working day lasted 10.3 hours and there was a 56.6 hour working week. An attempt was made to show the time which could be allotted per patient during each day.
4. Referrals for consultant opinion are listed and the findings compared with other reported work. These works agree that a large amount of medical practice can be conducted without reference to the hospital service and that referral would be less if more facilities were directly available to general practitioners.

5. Problem families and the load they place on the social services are discussed and the point is made that more of this work should be performed by the general practitioner with integrated action by ancillary workers.
6. Increased attendance rate of married women, with children, gainfully employed was noted. An increase of requests for the doctor to make a late house visit was also recorded for this class of patient.
7. An attempt to see if blood pressure in women was influenced by parity was made. The findings are recorded and are compared with other reported works.
8. The implications of the younger onset of menarche with its allied earlier maturing onset is discussed. The problem of teen-age marriages with its high divorce and separation rate is shown and means to mitigate this are outlined.
9. Causes of emotional disturbance in the practice are detailed. The increase of the number of emotionally disturbed patients who can now be treated outside the hospital is shown. This is said to be due to more powerful drugs being available. A plea that increased psychiatric teaching should be included in student training to prepare for work in general practice is made.

10. The high prevalence of medico-social problems of the elderly patient are stressed both from the medical and environmental point of view.
11. The influence of work and retirement on the health of older men is considered and the need for preparation for retirement emphasised.
12. A statistical analysis of pulse rate, height, body weight, and blood pressure is presented. The fact that general practice is an ideal source of physiological data is evident.

APPENDIX



PRO FORMA.

No. Name: M. F. M. W. S. Sep. Div. Age:  
Address: Occupation:

Menarche: yrs. menopause: yrs.  
dysmenorrhoea: yes no

Weight: % ideal weight: blood pressure: Healthy  
not healthy

Height: pulse rate:

Symptoms: Complaint:

DIAGNOSIS:

Mental Health: normal psychoneurosis psychotic

Cause:

Retired from work: content age retired: vol. comp. employer  
not content ill-health

Number of sons living : dead : married : single : widowed : sep.  
div.

Number of dghts living : dead ; married : single : widowed : sep.  
div.

People in house : alone : spouse : sons md. single : dghts md. single : son-in-law  
wid. wid.

: dght-in-law : grand-children : sister : brother : other

very lonely : lonely at times : not lonely :

HOUSING

No. of rooms: 1, 2, 3, 4, 5, and more

inside/outside toilet  
inside/no bath present  
hot water supply piped: absent

Tenement: detached: semi-detached: terrace: 4 in block: prefab:  
flats: council house: owner occupier: private factor rented:

Tenant of house: self: other:

Table 1

Attendance Rate in Age and Sex.

AGE	MALE	PERCENTAGE OF TOTAL	FEMALE	PERCENTAGE OF TOTAL
0 - 4	161	8.5	143	7.5
5 - 14	148	7.8	154	8.1
15 - 20	56	2.9	74	3.9
21 - 49	321	16.9	459	24.2
50 +	161	8.5	216	11.4
TOTAL	847	44.6	1,046	55.1

TABLE 2

Number of Women by Age and Parity

AGE GROUP OF WOMEN IN YEARS	NO CHILDREN	1 CHILD	2 CHILDREN	3 CHILDREN	4 CHILDREN	5 OR MORE CHILDREN
20 - 45	53	74	84	38	18	9
46 - 59	12	23	38	22	13	11
60 - 79	10	15	16	12	4	7

TABLE 3

Systolic and Diastolic means of married women.

AGE GROUP OF WOMEN IN YEARS	NO CHILDREN		1 CHILD		2 CHILDREN		3 CHILDREN		4 CHILDREN		5 OR MORE CHILDREN	
	SYST. MM. HG.	DIAST. MM. HG.	SYST. MM. HG.	DIAST. MM. HG.	SYST. MM. HG.	DIAST. MM. HG.	SYST. MM. HG.	DIAST. MM. HG.	SYST. MM. HG.	DIAST. MM. HG.	SYST. MM. HG.	DIAST. MM. HG.
20 - 45	127.2	76.2	130.1	78.5	132.1	79.6	129.6	78.7	133.4	82.8	126.9	79.5
46 - 59	139.5	82.5	144.3	85.5	147.5	86.6	138.4	83.4	143.5	84.1	146.0	86.7
60 - 79	140.6	83.2	163.3	91.1	158.1	90.9	156.7	89.7	154.0	87.5	170.6	94.9

TABLE 4

## Married Women by Age and Parity.

AGE GROUP OF WOMEN IN YEARS	NUMBER OF CHILDREN		
	NONE	ONE CHILD	TWO OR MORE CHILDREN
20 - 45	53	74	149
46 - 59	12	23	84
60 - 79	10	15	39

TABLE 5

Blood Pressure means of Married Women

AGE GROUP OF WOMEN IN YEARS	NUMBER OF CHILDREN					
	NONE SYSTOLIC MM. HG.	ONE SYSTOLIC MM. HG.	TWO OR MORE SYSTOLIC MM. HG.	NONE SYSTOLIC MM. HG.	ONE SYSTOLIC MM. HG.	TWO OR MORE SYSTOLIC MM. HG.
20 - 45	127.2	130.1	131.4	76.2	78.5	79.8
46 - 59	139.5	144.3	147.3	82.5	85.5	85.4
60 - 79	140.6	163.3	159.5	83.2	91.1	90.9

TABLE 6

## ONSET OF MENARCHE IN YEARS.

AGE GROUP IN YEARS	AGE OF ONSET IN YEARS							
	10	11	12	13	14	15	16	17 +
10 - 19		2	53	43	3	1	2	
20 - 29	2	2	57	113	17	4		2
30 - 39		5	12	68	41	10	2	1
40 - 49			10	51	33	11	7	4
50 - 59			11	58	66	21	6	3
60 - 69		1		33	49	19	1	1
70 - 79				16	43	8		1
80 - 89 +	1			2	12	3		
TOTAL	3	10	143	384	264	77	18	12

TABLE 7Causes of Emotional Disturbance in Men  
and Women.

CAUSES	MEN	WOMEN	PERCENTAGE OF TOTAL IN MEN	PERCENTAGE OF TOTAL IN WOMEN
Physical Disease	46	53	9.5	7.8
Adverse Home Conditions	17	46	3.5	6.8
Ill Health of Relative	9	19	1.9	2.8
Compulsary Retirement	4	-	0.8	-
Working Conditions (Not retired)	2	-	0.4	-
Financial Difficulty	2	-	0.4	-
Neglectful Children	1	1	0.2	0.1
Miscellaneous Causes	1	3	0.2	0.3
Menopause	-	20	-	2.9



TABLE 8

The Age Distribution of Men and Women  
with Mental Ill-health.

AGE GROUP IN YEARS	MEN		WOMEN	
	NUMBER	TOTAL	NUMBER	TOTAL
20 - 29	18	126	25	143
30 - 39	23	124	29	119
40 - 49	21	121	38	120
50 - 59	17	75	34	135
60 - 69	6	25	20	89
70 - 79	-	10	10	58
80 - 89	-	1	-	11

TABLE 9

Number of men and women mentally, physically, or mentally and physically ill, with reference to the number of repeat visits during 1963.

NUMBER OF VISITS	MENTALLY ILL		PHYSICALLY ILL		MENTALLY & PHYSICALLY ILL	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
1 - 5	3	4	249	202	28	30
6 - 10	6	6	106	197	22	66
11 - 15	2	3	25	100	15	28
16 - 20	--	--	14	13	5	17
21 - 25	--	--	3	5	1	2
26 - 30	--	--	--	1	2	--
31 - 36	--	--	--	--	--	--
36 - 40	--	--	--	1	1	--

TABLE 10

The number of men and women by age, sex and marital status.

AGE GROUP IN YEARS	MEN			WOMEN		
	MARRIED	WIDOWED	SINGLE	MARRIED	WIDOWED	SINGLE
65 - 74	41	16	6	37	52	19
75 & more	16	35	0	12	68	13
TOTAL	57	51	6	49	120	32

TABLE 11

The percentages of men and women by age, sex and marital status.

AGE GROUP IN YEARS	MEN			WOMEN		
	MARRIED	WIDOWED	SINGLE	MARRIED	WIDOWED	SINGLE
65 - 74	65.1	25.4	9.5	34.3	48.1	17.6
75 & more	31.4	68.6	0.0	12.9	73.1	14.0
TOTAL	50	44.7	5.3	24.4	59.7	15.9

TABLE 12

The number of men and women emotionally disturbed by age and marital status.

AGE GROUP IN YEARS	MEN			WOMEN		
	MARRIED	WIDOWED	SINGLE	MARRIED	WIDOWED	SINGLE
65 - 74	9	7	3	10	37	7
75 & more	1	9	0	5	26	8
TOTAL	10	16	3	15	63	15

TABLE 13

The percentage of men and women emotionally disturbed by age and marital status.

AGE GROUP IN YEARS	MEN			WOMEN		
	MARRIED	WIDOWED	SINGLE	MARRIED	WIDOWED	SINGLE
65 - 74	21.9	43.8	50.0	27.0	71.2	36.8
75 & more	6.2	25.7	0.0	41.7	38.2	61.5
TOTAL	17.5	33.3	50.0	30.6	52.5	46.9

TABLE 14.

The Physical Diseases observed in the Spouses of the Patients seen.

Disease of Spouse	SPOUSE	
	MALE	FEMALE
Pulmonary disease	10	0
Cardio-vascular disease	6	1
Malignant disease	5	2
Rheumatic disease	1	2
Disease of central nervous system	0	4
Disease of gastric tract	0	2
Metabolic disease	0	1
Total	22	12

TABLE 15

The Home structure of the Men and Women.

Home structure in addition to self.	MEN		WOMEN	
	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alone	13	11.4	59	29.2
Spouse	34	29.8	37	18.4
Spouse - daughter single or widowed	17	14.9	15	7.5
Spouse - son single or widowed	6	5.3	2	1.0
Daughter - single or widowed	35	30.7	44	21.9
Son - single or widowed	0	0.0	16	8.0
Sister	6	5.3	15	7.5
Grandchild	1	0.9	6	3.0
Brother	0	0.0	3	1.5
Residential Home - Part III accommodation	2	1.7	4	2.0
Total	114	100.0	201	100.0

TABLE 16

The Home Structures of Men and Women emotionally disturbed.  
(Percentages are in terms of total number in each type of  
home structure).

HOME STRUCTURE IN RELATION TO SELF	MEN		WOMEN	
	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alone	8	27.6	41	44.1
Spouse	9	31.1	14	15.0
Spouse and daughter	0	0.0	0	0.0
Spouse and son	0	0.0	0	0.0
Daughter	10	34.5	15	16.1
Son	0	0.0	12	12.9
Sister	1	3.4	4	4.3
Grandchild	1	3.4	3	3.2
Brother	0	0.0	2	2.2
Part III accommodation	0	0.0	2	2.2
Total	29	100.0	93	100.0

TABLE 17

The location of Relatives with reference to emotional disturbance - men & women combined.

	RELATIVES							TOTAL	
	NO RELATIVES	ONE IN HOME	NEAR FAR	IN HOME & NEAR	IN HOME & FAR	NEAR & FAR	IN HOME NEAR & FAR		
No emotional disturbance	10	35	12	5	45	22	0	64	193
Emotional disturbance present	27	29	15	7	16	11	2	15	122
Total	37	64	27	12	61	33	2	79	315
Percentage of total emotionally disturbed	73.0	45.3	55.5	58.3	26.2	33.3	100.0	19.0	38.7



TABLE 18

Ill-Health of Spouses and its Relation to emotional disturbance  
of Partners.

AGE GROUP IN YEARS	SPOUSES OF MEN		SPOUSES OF WOMEN	
	WELL	ILL	WELL	ILL
65 - 74				
Not emotionally disturbed	23	1	17	5
Emotionally disturbed	7	3	7	8
75 & more				
Not emotionally disturbed	11	8	4	4
Emotionally disturbed	4	0	2	5

TABLE 19

Widowhood and its effect on Emotional Disturbance.

AGE GROUP IN YEARS		MALE	FEMALE
65 - 74	Not emotionally disturbed	9	15
	Emotionally disturbed	7	36
75 & more	Not emotionally disturbed	26	42
	Emotionally disturbed	9	27

TABLE 20

Duration of Widowhood of those emotionally disturbed.

DURATION IN YEARS	MALE	FEMALE
Up to 5 years	4	11
5 to 15	6	16
Over 15 years	6	36

TABLE 21

## Causes of Emotional Disturbance.

PRIMARY CAUSES	MEN	PERCENTAGE OF TOTAL	WOMEN	PERCENTAGE OF TOTAL
Physical	17	58.6	34	36.5
Adverse Home Environment	9	31.1	38	40.9
Bereavement	2	6.9	10	10.7
Illness of Spouse	1	3.4	6	6.4
Neglectful Children	0	0.0	4	4.2
Financial Difficulty	0	0.0	1	1.1
Total	29	100.0	93	100.0

In comparison with Table 21 the incidence of emotional stress as reported by Cowan (1961) is shown below from his series of 500 men and 500 women.

PRIMARY CAUSES	MEN	PERCENTAGE OF 500	PERCENTAGE OF 111	WOMEN	PERCENTAGE OF 500	PERCENTAGE OF 136
Adverse Home Environment	34	6.8	30.7	49	9.8	36.0
Bereavement	17	3.4	15.4	23	4.6	16.9
Enforced Retirement	16	3.2	14.4	1	0.2	0.7
Personal Ill-health	15	3.0	13.5	14	2.8	10.4
Ill-health of Relative	9	1.8	8.0	18	3.6	13.2
Neglectful Children	7	1.4	6.3	8	1.6	5.9
Inadequate Finance	4	0.8	3.6	5	1.0	3.7
Miscellaneous	9	1.8	8.1	18	3.6	13.2
Total	111	22.2	100.0	136	27.2	100.0

TABLE 22

Religious Awareness and Emotional Disturbance.

MEN		WOMEN	
WITH RELIGIOUS AWARENESS	NO RELIGIOUS AWARENESS	WITH RELIGIOUS AWARENESS	NO RELIGIOUS AWARENESS
64	21	54	21
WITH RELIGIOUS AWARENESS	NO RELIGIOUS AWARENESS	WITH RELIGIOUS AWARENESS	NO RELIGIOUS AWARENESS
NO EMOTIONAL DISTURBANCE	NO EMOTIONAL DISTURBANCE	NO EMOTIONAL DISTURBANCE	NO EMOTIONAL DISTURBANCE
EMOTIONAL DISTURBANCE	EMOTIONAL DISTURBANCE	EMOTIONAL DISTURBANCE	EMOTIONAL DISTURBANCE
21	18	57	39

Diseases observed which caused falls in 49 men and 79 women  
liable to falls.

DISEASES	NUMBER IN MEN	NUMBER IN WOMEN	PERCENTAGE IN MEN	PERCENTAGE IN WOMEN
Drop attacks	24	20	34.8	23.5
Osteo Arthritis affecting lower limbs	13	33	18.8	38.8
Cataract of eye	8	7	11.6	8.2
Bronchitis and Emphysema	7	0	10.2	0.0
Hemiplegia	5	7	7.2	8.2
Frailty	5	13	7.2	15.3
Painful feet	3	0	4.4	0.0
Parkinsonism	2	1	2.9	1.2
Loss of one leg	2	0	2.9	0.0
Obesity	0	2	0.0	2.4
Hypertension	0	2	0.0	2.4
Total	69	85	100.0	100.0

TABLE 23

The liability to falls associated with Emotional Disturbance.

	LIABLE TO FALLS	NOT LIABLE TO FALLS	BEDFAST
<u>MEN</u>			
Not emotionally disturbed	30	54	1
Emotionally disturbed	19	10	0
Total	49	64	1
<u>WOMEN</u>			
Not emotionally disturbed	36	68	4
Emotionally disturbed	43	50	0
Total	79	118	4

TABLE 24

Housing - Types of Houses Inhabited.

	SEMI-	DETACHED	FLAT	TENEMENT	TERRACE	PREFAB	RESIDENTIAL HOME	TOTAL
Men	3	26	5	18	13	2	2	114
Women	7	27	25	42	41	0	4	201



TABLE 25

## Distribution of Patients as to Tenancy of Houses.

	OWNER--OCCUPIER	RENTED--PRIVATE	COUNCIL INCLUDING RESIDENTIAL HOME	TOTAL
Men	31	26	57	114
Women	40	49	112	201
Total	71	75	169	315

TABLE 26

## Tenants of Sub-standard Houses.

	ADEQUATE		SUB--STANDARD		TOTAL
	MEN	WOMEN	MEN	WOMEN	
Not emotionally disturbed	83	104	2	4	193
Emotionally disturbed	20	70	9	23	122
Total	103	174	11	27	315

TABLE 27

Men working with disease.

AGE GROUP IN YEARS	RESPIR- ATORY	CARDIO- VASCULAR	INTESTINAL DISTURBED	EMOTIONALLY SKETCHY	CENTRAL NERVOUS SYSTEM	CARCINOMA ISM	ALCOHOL- TRACT dis.	RENAL EYE	ENDO- CRINE	TOTAL
20 - 24	1		1							3
25 - 29	1		1	1						4
30 - 34	1		1	2	1	1	1			7
35 - 39	1		1	1	1		1			5
40 - 44	4	3	2	1	1					12
45 - 49	3	3	1	1			1	1		9
50 - 54	5	1	1	2	4	1	1			15
55 - 59	9	2	1	1				1		13
60 - 64	2	3	1	1						7
65 - 69	1	1	1			1				4
70 - 74		1		1						2
Total	28	14	10	10	4	2	2	2	1	81

VARIABLES

This table shows number of men and women used in the estimation of the several variables which follow.

AGE GROUP IN YEARS	NUMBER	
	MEN	WOMEN
20 - 29	116	150
30 - 39	94	111
40 - 49	76	94
50 - 59	69	105
60 - 69	39	54
70 - 79	17	21
80 - 89	5	0
Total	416	535

TABLE 28

Pulse Rate.

AGE GROUP IN YEARS	MEN				WOMEN			
	MEAN ± STANDARD ERROR PER MINUTE	STANDARD DEVIATION PER MINUTE	COEFFICIENT OF VARIATION	MEAN ± STANDARD ERROR PER MINUTE	STANDARD DEVIATION PER MINUTE	COEFFICIENT OF VARIATION		
20 - 29	73.6 ± 0.38	4.1	5.6	74.4 ± 0.3	4.1	5.5		
30 - 39	74.1 ± 0.66	6.4	8.6	75.9 ± 0.5	4.8	6.4		
40 - 49	73.4 ± 0.52	4.5	6.1	75.3 ± 0.4	4.1	5.5		
50 - 59	73.3 ± 0.62	5.2	7.1	76.3 ± 0.4	4.3	5.6		
60 - 69	73.9 ± 1.12	7.0	9.5	76.4 ± 0.6	4.1	5.4		
70 - 79	74.9 ± 1.04	4.3	5.7	75.1 ± 0.8	3.6	4.8		
80 - 89	70.8 ± 2.41	5.4	7.6	-	-	-		

TABLE 29

Height.

AGE GROUP IN YEARS	MEN			WOMEN		
	MEAN $\pm$ STANDARD ERROR INCHES	STANDARD DEVIATION INCHES	COEFFICIENT OF VARIATION	MEAN $\pm$ STANDARD ERROR INCHES	STANDARD DEVIATION INCHES	COEFFICIENT OF VARIATION
20 - 29	67.5 $\pm$ 0.20	2.2	3.3	64.2 $\pm$ 0.2	9.2	7.3
30 - 39	67.8 $\pm$ 0.26	2.7	4.0	64.3 $\pm$ 0.2	2.2	3.3
40 - 49	67.4 $\pm$ 0.30	2.6	3.8	63.7 $\pm$ 0.2	2.0	3.1
50 - 59	66.5 $\pm$ 0.29	2.4	3.6	64.1 $\pm$ 0.2	2.1	3.3
60 - 69	66.9 $\pm$ 0.43	2.7	4.1	64.6 $\pm$ 0.3	2.0	3.1
70 - 79	66.6 $\pm$ 0.78	3.2	4.8	63.4 $\pm$ 0.5	2.2	3.5
80 - 89	68.6 $\pm$ 1.88	4.2	6.1	-	-	-

114

TABLE 30

Body Weight.

AGE GROUP IN YEARS	MEN				WOMEN			
	MEAN $\pm$ STANDARD ERROR LBS.	STANDARD DEVIATION LBS.	COEFFICIENT OF VARIATION	MEAN $\pm$ STANDARD ERROR LBS.	STANDARD DEVIATION LBS.	COEFFICIENT OF VARIATION	STANDARD DEVIATION LBS.	COEFFICIENT OF VARIATION
20 - 29	153.5 $\pm$ 1.4	15.0	9.8	127.1 $\pm$ 1.4	17.6	13.87	17.6	13.87
30 - 39	158.3 $\pm$ 1.9	18.4	11.6	134.2 $\pm$ 2.1	22.1	16.5	22.1	16.5
40 - 49	164.0 $\pm$ 2.4	20.7	12.7	135.7 $\pm$ 2.2	21.4	15.8	21.4	15.8
50 - 59	158.3 $\pm$ 2.7	22.1	13.9	144.8 $\pm$ 2.1	21.7	15.0	21.7	15.0
60 - 69	154.5 $\pm$ 3.3	20.7	13.4	147.3 $\pm$ 3.0	21.5	14.6	21.5	14.6
70 - 79	162.3 $\pm$ 7.9	32.8	20.2	139.3 $\pm$ 5.5	25.2	18.1	25.2	18.1
80 - 89	156.0 $\pm$ 5.2	11.6	7.4	-	-	-	-	-

TABLE 21

Blood Pressure - Systolic.

AGE GROUP IN YEARS	MEN				WOMEN			
	MEAN $\pm$ STANDARD ERROR MM. HG.	STANDARD DEVIATION MM. HG.	COEFFICIENT OF VARIATION	MEAN $\pm$ STANDARD ERROR MM. HG.	STANDARD DEVIATION MM. HG.	COEFFICIENT OF VARIATION	STANDARD DEVIATION MM. HG.	COEFFICIENT OF VARIATION
20 - 29	127.3 $\pm$ 0.97	10.5	8.3	125.6 $\pm$ 0.8	9.2	5.5		
30 - 39	135.0 $\pm$ 1.20	11.6	8.6	132.6 $\pm$ 1.1	11.7	8.8		
40 - 49	139.7 $\pm$ 1.35	11.8	8.4	138.3 $\pm$ 1.4	13.1	9.5		
50 - 59	144.3 $\pm$ 1.49	12.4	8.6	145.3 $\pm$ 1.1	12.0	8.2		
60 - 69	151.2 $\pm$ 2.29	14.3	9.5	153.7 $\pm$ 2.1	15.5	10.1		
70 - 79	161.6 $\pm$ 5.33	22.0	13.6	161.7 $\pm$ 5.0	22.5	13.9		
80 - 89	164.4 $\pm$ 7.07	15.8	9.6	-	-	-		

TABLE 32

## Blood Pressure - Diastolic.

AGE GROUP IN YEARS	MEN				WOMEN				
	MEAN $\pm$ STANDARD ERROR MM. HG.	STANDARD DEVIATION MM. HG.	COEFFICIENT OF VARIATION	MEAN $\pm$ STANDARD ERROR MM. HG.	STANDARD DEVIATION MM. HG.	COEFFICIENT OF VARIATION	MEAN $\pm$ STANDARD ERROR MM. HG.	STANDARD DEVIATION MM. HG.	COEFFICIENT OF VARIATION
20 - 29	75.6 $\pm$ 0.68	7.3	9.6	76.8 $\pm$ 0.6	7.5	9.7			
30 - 39	81.4 $\pm$ 0.76	7.4	9.1	79.9 $\pm$ 0.7	7.3	9.2			
40 - 49	83.6 $\pm$ 0.85	7.4	8.8	82.4 $\pm$ 0.8	7.9	9.6			
50 - 59	84.7 $\pm$ 0.82	6.8	8.0	86.0 $\pm$ 0.7	7.5	8.7			
60 - 69	85.1 $\pm$ 1.17	7.3	8.6	88.8 $\pm$ 0.9	6.8	7.6			
70 - 79	90.6 $\pm$ 2.89	11.9	13.1	90.8 $\pm$ 2.06	9.4	10.4			
80 - 89	94.4 $\pm$ 7.07	15.8	16.7	-	-	-			



FIGURE 1.

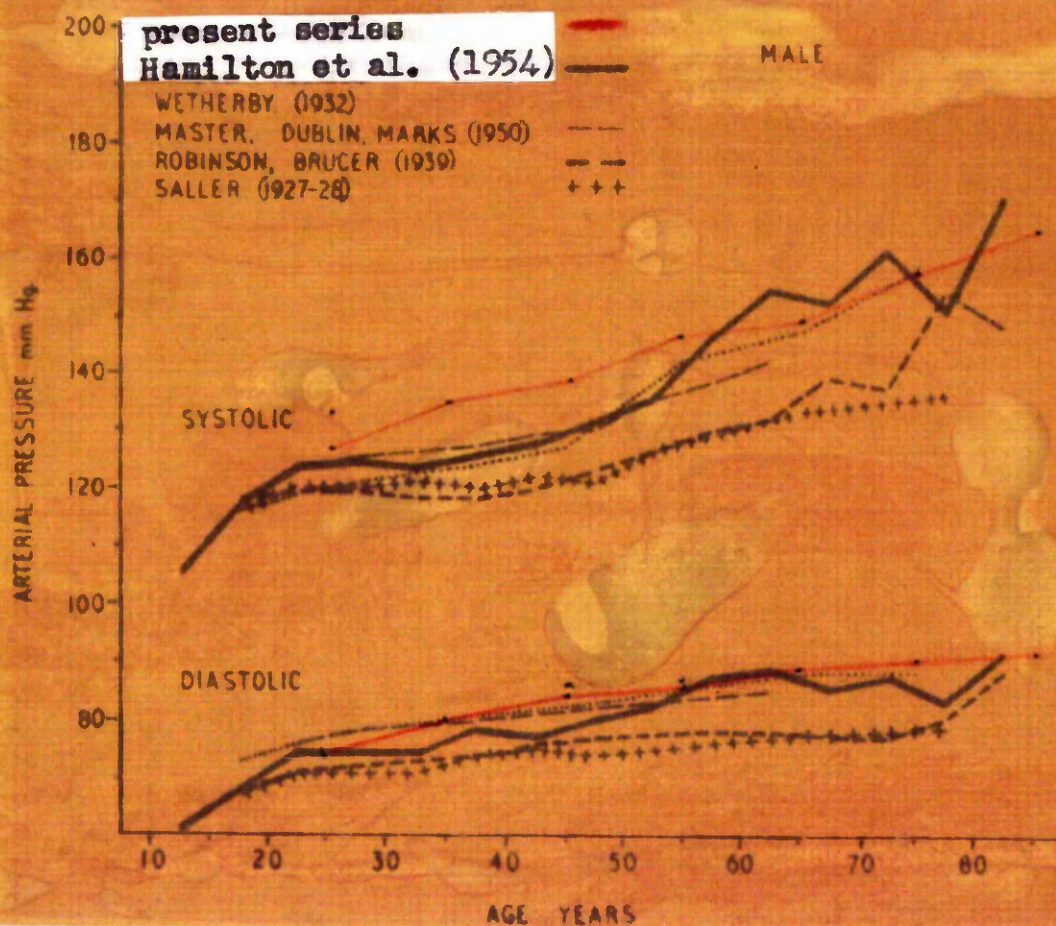


Figure 1. The systolic and diastolic blood pressure means of my series as compared with those of other workers for males.

FIGURE 2.

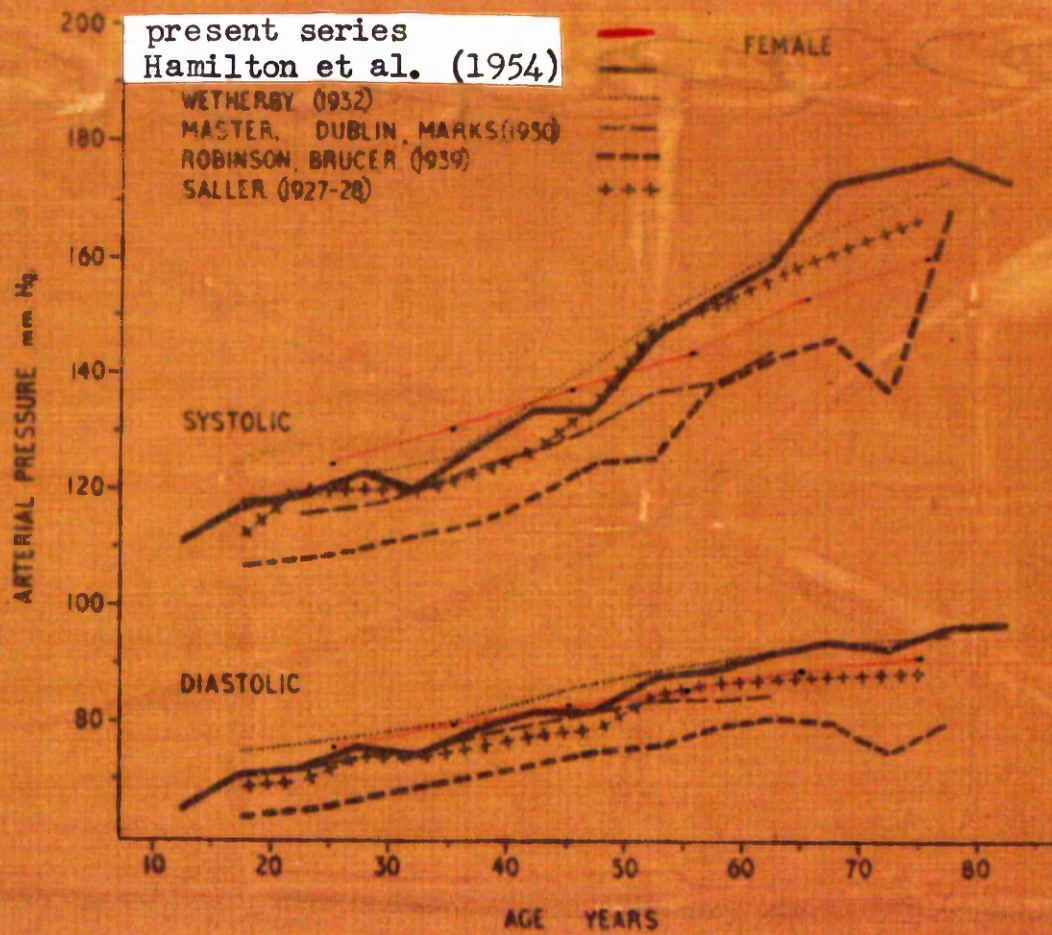


Figure 2. The systolic and diastolic blood pressure means of my series as compared with those of other workers for females.





Weight.

Men

Weight in Pounds.

AGE GROUP IN YEARS	93	100	107	114	121	128	135	142	149	156	163	170	177	184	191	198	205	212	219	226	233	240	247	254	TOTAL	
20 - 29				1	2	3	12	29	22	28	10	1	5	1	-	1	1								116	
30 - 39				3	1	5	5	12	14	19	13	8	6	4	2	1	-	1							94	
40 - 49				-	-	2	6	14	13	7	3	13	5	7	1	1	-	1	-	-	-	-	-	1	2	76
50 - 59				-	3	3	4	16	9	9	6	9	2	4	2	-	-	1	-	-	-	-	-	-	1	69
60 - 69				1	4	-	6	3	6	8	-	5	1	2	1	-	2								39	
70 - 79				1	2	-	-	4	4	-	2	1	1	-	-	-	-	-	-	-	-	1	1		17	
80 - 89				-	-	-	-	1	2	1	-	1													5	
																									416	
																									150	
20 - 29	1	8	14	32	17	29	10	19	8	4	5	-	-	2	1										111	
30 - 39	2	5	6	15	8	18	8	12	13	10	3	5	2	2	1	1									94	
40 - 49	1	3	7	13	8	14	7	10	6	7	4	8	3	1	1										105	
50 - 59	-	-	3	9	4	13	7	13	7	18	12	10	1	2	2										54	
60 - 69	-	-	-	1	6	4	6	-	7	3	9	5	6	3	4										21	
70 - 79	1	1	2	1	1	2	2	1	1	4	2	2	1												535	

WOMEN





