

## APPENDIX A.

REPORTS OF THE DEPARTMENTAL  
ACTUARIAL COMMITTEE.

## TERMS OF REFERENCE.

I appoint—

Sir ALFRED WATSON, K.C.B., F.I.A., F.F.A., Government Actuary.  
A. D. BESANT, Esq., B.A., President of the Institute of Actuaries,  
L. E. CLINTON, Esq., F.I.A.,  
A. HENRY, Esq., F.I.A., Deputy Government Actuary,  
R. G. MAUDLING, Esq., F.I.A.,

to be a Departmental Actuarial Committee to advise the Royal Commission on National Health Insurance actuarially as to whether the present basic contribution under the National Health Insurance Acts is, in fact, required for the existing benefits (including the cost of Societies' and Insurance Committees' administration) or whether such a re-arrangement of the financial basis of the scheme would be justified as would reduce the amount allocated to the present benefits and leave a margin for other purposes; and thereafter to continue in being to furnish such further actuarial advice as may be required by the Royal Commission on any matters arising in the course of their enquiry.

I further appoint Sir Alfred Watson, K.C.B., to be Chairman and M. B. Knowles, Esq., F.I.A., of the Government Actuary's Department, to be Secretary to the Committee.

NEVILLE CHAMBERLAIN.

19th November, 1924.

FIRST REPORT OF THE DEPARTMENTAL  
ACTUARIAL COMMITTEE.

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## ROYAL COMMISSION ON NATIONAL HEALTH INSURANCE.

## REPORT OF THE DEPARTMENTAL ACTUARIAL COMMITTEE.

To the Right Honourable Lord LAWRENCE OF KINGSGATE,

Chairman of the Royal Commission on National Health Insurance.

MY LORD,

WE have the honour to present our Report upon the question submitted to us by the Minister of Health as stated in our Terms of Reference, copy of which is annexed.

1. The present rates of contribution under the system of National Health Insurance are 10d. a week for a man and 9d. a week for a woman, these rates being payable during insurable employment until the age of 70 and providing, *inter alia*, for sickness and disablement benefits in periods of incapacity up to this age. Under the Widows', Orphans' and Old Age Contributory Pensions Act, pensions are provided for insured persons at the age of 65 and, from January, 1928, this age is accordingly substituted for 70 as the limit of insurance for sickness and disablement benefits, and for the payment of contributions, the rates of contribution being reduced, from January, 1926, to 9d. a week for a man and 8½d. a week for a woman.

These contributions are divisible as follows:—

	Men.	Women.
	d.	d.
Benefit Fund and cost of administration... ..	7½	7½
Reserve Values (interest and redemption) ... ..	1	1½
Contingencies Fund* ... ..	½	½
	9	8½

2. In the case of an entrant at the age of 16 the contributions to the Benefit Fund provided on the present actuarial basis for seven-ninths of the liability in respect of benefits (including the cost of administration) the remaining two-ninths being met by Exchequer grants. The question referred to us is, in effect, to determine whether such modifications in the actuarial basis as would reduce these contributions of 7½d. for a man and 7½d. for a woman are justifiable and if so to state the amount of the reduction. Inasmuch as the actuarial basis governs the estimates of the reserves required to support the liabilities of the Approved Societies, as well as the basic contribution, any change by which the contribution was diminished might normally be expected to involve some reduction in these reserves. Practical effect would be given to this reduction by decreasing the reserve values credited to the Approved Societies and this operation might be utilised to shorten the term over which the redemption of the reserve values will extend—estimated at approximately 30 years from the present time—or alternatively to diminish the part of the contribution applied, as shown above, to the service of reserve values (interest and redemption). In the latter event the sum released by the reduction of the basic contribution would be increased. We may say at once that we see no reason to advise a diminution in the length of the redemption period and our recommendation will take this alternative form.

\* The joint weekly contributions to the Central and Contingencies Funds are 9d. for a man and 8½d. for a woman. Of these sums a maximum of 7½d. in the case of a man and 7½d. in the case of a woman may, at the discretion of the Joint Committee, be credited to the Central Fund. At the present time the whole of the above contributions are carried to the Contingencies Fund.

+ Owing to changes introduced by the Contributory Pensions Act there is a small margin in the contribution in the case of women, see para. 30 of the Report of the Government Actuary on the Financial Provisions of the Bill (Cmd. 2406).

3. The Contingencies Fund is, in effect, a sub-account of the Benefit Fund to which after each valuation its accumulated balances are transferred. The contributions credited to the Contingencies Fund thus constitute a part of the provision made for benefits and we have regarded the consideration of them as falling within the scope of our terms of reference.

4. The following factors enter into the financial basis of the system:

- (a) The rate of interest at which the funds are assumed to fructify by investment;
- (b) the probability of survivorship from age to age;
- (c) the average amount of sickness and disablement benefit payable in each year of age;
- (d) the probability that maternity benefit will be payable in each year of age;
- (e) the probability, at each age, that an unmarried woman will marry and cease to be insurably employed;
- (f) the probability that an insured married woman will become a widow in passing through each year of age;
- (g) the claims for sickness and maternity benefit under the special terms and conditions applicable to women who have recently left insurable employment on marriage. (Class K.);

In respect of (b), (c) and (d) the cases of men and women require to be separately considered, and in regard to women the cases of the unmarried (spinsters and widows) and the married must be distinguished so far as concerns (c) and (d). The factors (e), (f) and (g) arise only in the case of women.

- (h) the average number of weeks during which an insured person will be unemployed in each year;
- (i) the cost of medical benefit;
- (k) the provision to be made for expenses of administration.

The question submitted to us requires us to consider each of these factors. We deal with them, *seriatim*, in the following paragraphs.

5. Before proceeding to this stage we think it necessary to refer to certain considerations which arise out of the peculiar conditions governing the finance of the system of National Health Insurance. The system is operated through a large number of financially independent or semi-independent units, either societies or branches of societies, and these units differ materially from one another in their experience in respect of the greater number of the factors enumerated above. The contributions are not, however, equated to the varying risks undertaken by the separate units; they are uniform in amount for all insured persons of each sex, and the Reserve Values, representing the estimated loss arising from the acceptance of persons of higher ages than 16 at the rate of contribution appropriate to that age, are likewise uniform in amount for all persons of the same age and sex. It follows that widely differing results are found on the valuation of the separate societies and branches, and no rearrangement of the financial basis which retains the present uniformity of contributions can avoid this feature.

The discrepancies between the basic assumptions as to the cost of the risks undertaken and the realised facts of the working of the societies, which are inherent in the existing system, might be held to invest us with a wide discretion as to the provision to be made, on the uniform basis, for the liabilities of the future. It is clear, however, that Parliament intended the scheme to be solvent regarded as a whole whatever might follow from the grouping of risks incidental to the voluntary segregation of insured persons in Approved Societies, and we read our terms of reference as requiring us, in advising any changes, to conform

to this condition. As we shall show, there are in the present basis certain margins over the general average of expenditure to be expected, and we shall advise the release of these margins. It should be understood that we do not include the accrued surpluses of the Approved Societies in the margins to which we refer; we have felt constrained by our instructions from proposing any changes of basis which would involve drafts upon these surpluses. Subject to this reservation the provision which we shall propose to make will be that which, so far as we can estimate, would be required if the whole system were operated through a common fund.

#### THE RATE OF INTEREST.

6. The rate assumed in the present financial basis is 3 per cent. per annum. The actual receipts from interest fall into three categories (i) interest on reserve values, (ii) interest on the credits of the Approved Societies in the Investment Account\* maintained by the Department (with which may be included interest on the balances of the societies' current accounts in the National Health Insurance Fund), and (iii) interest on the investments made by the societies, or (where this alternative procedure has been selected by societies) on the investments made by the Department on their behalf. The rate realised is an average dependent on the receipts from these three sources, which, it may be added, are exempt from taxation.

As regards (i), interest is credited on reserve values at the fixed and uniform rate of 3 per cent. per annum and, the reserve values being book credits, is derived from the product of the portion of the contributions retained for the service of reserve values as shown in paragraph 1 above. Receipts under (ii) are also based on a uniform rate; this rate, being prescribed by regulations, may be varied from time to time. It is at present 4½ per cent. per annum, and assuming that after 31st December, 1926, the balances of the interest income of the Investment Account are applied solely to the provision of interest on the credits of Approved Societies, etc., making up the total of this Account, it will evidently be possible to maintain the rate at this figure for a prolonged period. Receipts of category (iii) are derived from interest on trustee securities selected by the individual Approved Societies. The rates vary to some small extent with the types of investment selected by the societies, but the average appears to be about 5 per cent.

7. The average rate of interest to be realised in future, taken over the whole of the funds and credits of the Approved Societies, will depend very largely upon the relation between the amounts of funds (or credits) respectively attributable to those three categories. Reserve values represent at present about 45 per cent. of the societies' assets and, since the interest provided on reserve values is at the rate of 3 per cent. only, the average rate of interest now realised is under 4 per cent. notwithstanding the high rates at which the actual money investments have been made.

In this respect, however, present conditions are about to be greatly altered. The limitation of the sickness and disablement benefits to the age of 65, for which the Contributory Pensions Act provides, will have the effect of reducing the reserve values by about £37,000,000† and, so far as present benefits are concerned, a further reduction in this asset is to be expected as a consequence of the change of basis which we shall find it possible to recommend for the purposes indicated in our terms of reference. Under these new conditions the proportion which

\* For convenience the singular number is used: there are in fact three Investment Accounts maintained respectively by the Ministry of Health, the Scottish Board of Health and the Welsh Board of Health, but the procedure is identical throughout. Similarly there are three National Health Insurance Funds.

† Report of the Government Actuary (Cmd. 2406), para. 29.

the reserve values bear to the total assets of the Approved Societies must be materially diminished, and the average rate of interest realised must be correspondingly improved. It is impossible to make a precise estimate of the future rate since the proportion of the total assets which, at the outset of the new arrangements, will be represented by reserve values cannot be ascertained until the details of the new arrangements have been settled. It has, however, been found possible to make certain experiments, involving the probable receipts and expenditure over a considerable future period, and as the result of these we are satisfied that an average rate of 4 per cent. per annum on the whole of the funds and credits of the Approved Societies will be realised in any circumstances likely to arise over the next 25 or 30 years; we consider, accordingly, that this rate may be adopted, instead of the present rate of 3 per cent., in revising the financial basis of the system. It is, however, an integral part of our proposals that the rate of interest credited on the Reserve Values should continue to be 3 per cent. We rely on the high rates secured on the actual investments to produce the average rate of 4 per cent.

8. In coming to this conclusion we have considered it unnecessary to look beyond the period, estimated at about 30 years, over which the redemption of reserve values will extend. As soon as the completion of this operation becomes imminent, the question of the future use of the contributions applied to the service of reserve values will arise, and an opportunity for meeting any difficulty, should such have developed, in connection with the continued maintenance of the basic rate of interest will thus present itself.

9. One further point requires attention in connexion with this subject. If the current rate of interest falls the value of securities yielding high rates of interest will rise above their cost prices and if, in this event, investments are realised with the object of increasing surplus, and the proceeds re-invested, the average rate of interest earned will be reduced. The same result will follow if securities which have appreciated in value are written up to the market prices. If, therefore, so high a rate as 4 per cent. be adopted as the basic rate while a substantial part of the assets, namely the reserve values, is only yielding 3 per cent., it will be essential to place a measure of control upon the results of any operations by which the average rate of 4 per cent. might be endangered. We take it that the power to vary their securities is an integral part of the self-governing functions with which the Approved Societies are endowed; and that to discourage unnecessary or perhaps ill-timed realisation of investments the valuation regulations must continue to include a provision under which investments are taken at their market values for the purpose of the quinquennial valuation. Taking a long view therefore, it would seem that further capital accretions to Approved Societies' funds are to be expected from the future appreciation of security values. In our opinion these accretions should be reserved for the purpose of supplementing the interest income of the Benefit Fund so far as is found necessary to secure the rate of 4 per cent., and only the balances remaining, after this purpose has been served, treated as realised assets. This is a matter for regulations the precise form of which, having made the purpose clear, we do not regard as falling within our province.

#### THE PROBABILITIES OF SURVIVORSHIP.

10. The element of survivorship from age to age exercises an important influence on the liabilities arising under the National Health Insurance system, and in reviewing the financial basis of the system the assumptions made in this respect must be carefully examined with reference to present experience and tendencies. It is perhaps unnecessary for us to enter upon a lengthy explanation of the effect of variations in mortality upon the finance of a system of insurance against incapacity, but it will



be understood that if the tendency of the death rate is to diminish, the proportion of the population surviving to the older ages will be increased with a consequent addition to the liabilities, as originally estimated, for sickness and disablement benefits. The probabilities of survivorship incorporated in the present basis of the system are derived from the mortality experience of the whole population of England and Wales in the years 1908-10. If it were possible it would be desirable to compare this experience with that of the population covered by the system of National Health Insurance. The records of the Approved Societies are not, however, sufficiently complete for this purpose and, to review the basis, recourse must be had to the latest available facts relating to the whole population. It is common knowledge that in recent years the general death rate has fallen substantially, and an approximate measure of the fall since the system of National Health Insurance was established, will be found in Table (A) page 38 of the Report of the Government Actuary on the Financial Provisions of the Contributory Pensions Bill (Cmd. 2406). So far as the future is concerned reasons are given in paragraph 3 of the Appendix to that Report (p. 28) for the assumption that the Life Tables derived from the population of England and Wales at the 1921 Census and the registered deaths in the two years 1920 and 1921 may properly be employed for the purpose of a contributory system which is co-extensive with that of National Health Insurance. For the most part the reasons here given apply with equal cogency to the case of the Health Insurance system and we have accordingly adopted these tables for the purpose of the new basis which we shall recommend.

#### THE SICKNESS AND DISABLEMENT RATES.

11. The present basis in regard to sickness and disablement is the Manchester Unity Experience 1893-97 loaded by about 13 per cent. in the case of men and 35 per cent. in the case of women, exclusive of a special provision for married women. So far as men are concerned this basis was adopted at the outset, and has not been subsequently changed. The reasons for its adoption are set out in the first report of the Actuarial Advisory Committee set up in 1912 (published as an Appendix (p. 552) to the Report for 1912-13 on the Administration of the National Insurance Act, Part 1 (Cd. 6907)). The loading is not the result of any exact appraisal of such extra risk as might be expected to be involved in a compulsory and wide-spread system of insurance as compared with that arising under a voluntary system, but is the provision for any feature of the kind that the margin in the original contribution of 7d. a week rendered possible. This margin was fortuitous in its extent since it arose out of the fact that, for administrative reasons, the contribution had necessarily to be an integral number of pence per week. In regard to women the Manchester Unity Experience (which was that of men only) was also adopted originally and with the same margin—about 13 per cent.—in the case of sickness benefit. For disablement benefit the original contribution of 6d. a week enabled the margin to be increased to 19 per cent. Material changes have, however, been subsequently made in the financial basis of women's insurance, chiefly as the result of the Interim Report of the Departmental Committee on Approved Society Finance and Administration (Cd. 8251). The effect, as indicated in paragraph 11 of the Report of the Government Actuary on the First Valuation of Approved Societies (Cmd. 1662), was to increase the addition to the Manchester Unity rates in the case of women by proportions approximating, over all ages, to 35 per cent. A considerable further provision was made for married women, and this is now financed by the grant of special reserve values for women who remain in insurance after marriage.

12. We have been supplied, for the purposes of our enquiry, with two sets of material relating to the recent experience of Approved Societies in respect of sickness and disablement claims. The first of these is a

summary showing, approximately, the percentage which the claims of the whole insured population (in Approved Societies) in Great Britain have borne to the "Expectation," i.e., to the provision made by the existing basis, in each of the six years 1919-24; separate results being given for men and for women. The second is a full statement of the experience in each of the years 1921-22-23 of a group of societies, so chosen as to constitute as nearly as may be in respect of each sex, a microcosm of the whole insured population. These societies included about 500,000 men and 400,000 women, and in the aggregate therefore their records yield observations covering about 1½ million years of life in the case of men and 1¼ million years in the case of women. The experiences are separately tabulated for the sexes and are given in adequate detail with reference to age. The material was collected and tabulated by the Ministry of Health, and the actuarial analysis, of which summaries are given in the tables appended to this Report, was made by the Government Actuary's Department. We shall refer hereafter to this experience as the "Selected Societies Experience."

13. The summary of the experience of the insured population of Great Britain is contained in the following table. The figures are not exact since (i) it has been impracticable for the purpose of obtaining the "Expected" cost, to take out a complete age distribution of the insured population for each year included in the table and (ii) there are no means of ascertaining the extent to which, on the average of the whole insured population, the benefits have been reduced in each year in respect of arrears. It is believed however that the percentages shown are closely approximate to the actual facts; they are certainly near enough to them to supply an accurate index of the general course of the experience over the years covered by the table.

*Percentages of actual to "expected" cost of Sickness and Disablement Benefits in Great Britain.*

Year.	Men.		Women.	
	Sickness.	Disablement.	Sickness.	Disablement.
1919 ... ..	75	42	71	81
1920 ... ..	65	47	72	94
1921 ... ..	67	56	80	116
1922 ... ..	74	66	86	130
1923 ... ..	66	74	85	146
1924 ... ..	74	80	96	161

14. *Men.*—Looking first at the men's experience it will be seen that the claims for sickness benefit have varied curiously between two levels, the higher of which has prevailed in the years 1919, 1922 and 1924 and the lower in the years 1920, 1921 and 1923. The higher level is probably explainable by the claims incidental to epidemic sickness, and the character of the fluctuations is such as to create doubt as to whether under existing conditions—including the liability to frequent and sometimes severe visitations of influenza—an experience of even six years' claims is sufficient to give a reliable average. In any case it enforces the need for retaining a reasonable margin if such average be adopted for the purpose of a new basis.

15. The experience of disablement benefit has followed quite a different course, the claims have constantly risen and in 1924 (assuming that in the meantime the expectation had not greatly changed) were nearly double those of the year 1919. The relative magnitude of these figures compared

with the standard is however of some significance. It appears to indicate that in the earlier years of the period covered by the statement some cause was operating to produce an abnormally low volume of claims for disablement benefit and that the trend throughout the period has been towards the development of what may be regarded as normal conditions. We are inclined to think that this is the case. It appears to us that the very low disablement claims of the year 1919 were intimately connected with the low sickness rates of the later years of the war period, and were attributable to the same economic and other conditions which produced those low rates. If this be so, the steady growth of disablement claims for about a decade from the year 1914 (when this benefit first began to be paid) which those concerned were actuarially advised to expect, was sharply interrupted by forces set up by the war, and has gradually reasserted itself as those forces have abated. In the most recent years of the period covered by the statement the growth of disablement claims may, indeed, have been accelerated by economic forces of a directly opposite kind. Widespread unemployment, so far as it influences the sickness experience of Approved Societies, would be expected to have its most pronounced effects on the weakly and debilitated class who supply presumably the major part of the claims for disablement benefit. We are however compelled to say that the recent growth in the cost of disablement benefit has confronted us with serious difficulty in settling the provision to be made for the future. We have suggested a theory to explain it, but this is no more than a theory, and it affords no great assistance in determining the probable weight of the charge when permanent conditions have been reached.

16. Turning now to the Selected Societies Experience, the rates of sickness and disablement obtained will be found respectively in Table A (M.) and Table B (M.) appended to this Report. In these tables are shown for each quinary group of ages, the basic rate of sickness (in weeks of claim per annum) at the central age of the group, the years of life "exposed to risk" in the group in each of the years 1921, 1922 and 1923, the corresponding "expected weeks" of claim, the related actual weeks of claim, and the proportion (per cent.) which the actual weeks bear to those expected. The average proportion for the whole body of persons insured in these Societies is shown opposite the totals for each year. It will be seen that so far as sickness benefit is concerned, there is a tendency for the claims to be above the general average at the younger ages and to be below it at the middle ages. This feature is not, however, of much importance financially and the average percentages for all ages in each of the three calendar years may be taken as representative. These percentages, viz., 66 in 1921, 77 in 1922, and 71 in 1923, are not greatly different from those shown above as representing the experience of the whole of the insured male population. Such differences as exist may be partly due to differences in the distribution of the respective populations with reference to age, and partly to the fact that the statistical treatment of the Selected Societies Experience is practically exact, while that of the whole population is approximate, as explained in para. 13.

17. In regard to disablement benefit the Selected Societies Experience while exhibiting, in the aggregate, the same close relation to the experience of the whole insured male population as exists in the case of sickness benefit, presents quite different features when the experience is examined at the individual age-groups. The claims at the younger ages far exceed the "expectation," but the ratio of actual to expected diminishes steadily until an approximately constant minimum is reached at 50 and all higher ages. Taking the year 1922, for example, the claims for disablement benefit at ages under 30 were about 150 per cent. of the expectation; the proportion steadily diminished, falling to 104 per cent. at ages 35 to 40, and to 77 per cent. in the next age-group; it continued to fall, and was no more than 50 per cent. at ages 50 to 55; thereafter it averaged about 54 per cent. This feature is not easily explained. We

do not think—it is not necessary to elaborate the reasons for our opinion—that it is due to war disabilities. It is probably due, at least in part, to the absence of the customary measures of controlling admission to membership, including medical examination, which were practised in the system of voluntary insurance, the experience of which supplied the financial basis of National Health Insurance. It is, however, by no means certain that this is the whole explanation; in this connection we would draw attention to the study of the Selected Societies Experience contained in the Memorandum appended, which has been prepared by the Government Actuary's Department. It appears to us that questions of considerable administrative importance as to the control of the claims upon Approved Societies are raised by this Memorandum, and pending an examination of these questions by the responsible department we feel precluded from incorporating in the permanent basis of the system a feature which may prove to be capable of reduction by administrative action. Our reluctance to do so is increased by the difficulty which presents itself in the rising cost of disablement benefit to which we have drawn attention in para. 15. Fortunately an alternative course presents itself. The essential thing is to provide at each age for a total outgo in sickness and disablement benefit of an amount which, while it may be approached in actual experience, is not likely to be exceeded in any material degree. On the facts brought out we think that a reasonable provision for sickness benefit would be 80 per cent. of the present provision, and that as regards disablement benefit an ultimate level 33½ per cent. above the average of the Selected Societies in the three years 1921-23 might be assumed. On these bases the aggregate outgo at each age would be closely approximate to that shown by the *unloaded* Manchester Unity Experience (1893-97) at all ages under 45, and somewhat below it at ages between 45 and 65. Having regard to these features, and to the advantages inherent in utilising an authoritative standard table, we propose to adopt this basis, namely, the Manchester Unity (1893-97) without loading. If, as the result of the administrative enquiries which we advise, the cost of sickness and disablement benefits can be reduced below this standard, some moderate provision for new services in excess of that which we shall now find ourselves able to recommend may be possible at a future day. If, on the other hand, the cost of benefits cannot be influenced by the particular administrative steps to which we refer, the total expenditure should still be within the provision which we propose to make for it, and such further adjustment of the basis as may be desirable hereafter will have no further effect than the transference to the heading of disablement benefit of some part of the provision which we are assigning to sickness benefit. From this point of view it is important to realise that, while an experience of disablement benefit under which the claims are 150 per cent. of the standard must in all circumstances call for attention, it will not in fact occasion loss upon the estimates at a young age if against it can be set a saving of 5 to 10 per cent. on the provision made for sickness benefit. Thus at age 27 the rate of sickness, according to the present standard, is .78 of a week, while the rate of disablement is .19 of a week; an excess of 50 per cent. on the expected cost of disablement benefit would thus be balanced by a saving of 6 per cent. on the expected cost of sickness benefit, bearing in mind the fact that disablement benefit is only payable at half the sickness rate. This compensatory influence is in full operation at the present time, and the basis which we propose to adopt will require its continuance should it be found impossible to bring the claims for disablement benefit under closer control.

18. *Women.*—On referring to the statement in para. 13 above, it will be seen that, unlike the corresponding experience in the case of men, the

relation of the sickness claims of women to the standard shows an almost continuous increase. So far as disablement benefit is concerned, the experience agrees with that of men in showing the same feature of continuous growth, the claims, relatively to the standard, in the year 1924, having been almost exactly double those of the year 1919. But the number of women who remain in insurance much beyond the age of 30 is, relatively, so small that we are precluded from thinking that much of the increase can be accounted for by the cause which we have suggested in para. 15 to be operating in the case of men. A substantial part of the increase of the women's disablement claims must, we think, be associated with the increase in the corresponding claims for sickness benefit and be attributable to the same cause—whatever that cause may be.

19. The Selected Societies Experience in regard to women is given in Tables A (S. & W.) and B (S. & W.), which relate respectively to the sickness and disablement claims of spinsters and widows, and in Tables A (M.W.) and B (M.W.), which contain the corresponding data in respect of married women. In regard to sickness benefit a conspicuous feature brought out by these tables is the heavy pressure of the claims of married women. Something of the kind was indeed to have been expected, but the relative amount of the sickness benefit claimed by the married as compared with the unmarried is arresting. An even more disquieting fact is that the relative excess among the married women is growing. Taking, for instance, the important group of ages 25 to 30 the married women's rate of sickness was, in 1921, 1.74 times the unmarried women's rate; in 1922 it was 1.98 times and in 1923, 2.42 times the unmarried women's rate. In respect of disablement benefit the claims of both unmarried and married women have been very heavy (relatively to the standard) at the younger ages, but the relation of the claims of the married to those of the unmarried has varied in a most singular manner, having been favourable at ages between 25 and 45 and unfavourable over 45. These phenomena appear to us to require administrative consideration; their causes are far from clear to us and the prospect of their persistence seriously complicates the problem referred to us. We are required, in fact, to find the proper contribution for the sickness and disablement claims of women at a time when (a) the sickness claims of unmarried women at the ages of chief importance are about 40 per cent. higher than the corresponding claims of men and the disparity is increasing; (b) the sickness claims of married women are double the corresponding claims of unmarried women, and the disparity is also increasing; and (c) the disablement claims of both unmarried and married women are double the corresponding claims of men.

20. It is clear that in these circumstances we cannot come to any final decision. The utmost we can do is to recommend for the time being a basis which *prima facie* appears to make an adequate provision, relying on (a) further actuarial enquiry as to its suitability after the lapse of a few years, and (b) in the meantime, an effective administrative investigation of the features to which attention has been directed, with the application of such remedial measures as suggest themselves. In the absence of any authoritative standard of women's sickness experience the basis which we propose should be adopted is that provided by the Selected Societies Experience of women's sickness and disablement claims in the year 1923 with an addition of 10 per cent. But for the experience of the year 1924, as indicated in para. 13, we should have been inclined to think that the experience of the year 1923 provided as high a standard of the future claims as ought to be necessary. In the circumstances we are constrained to add a loading to the 1923 rates which we fix at the moderate figure of 10 per cent. in view of the fact that certain small margins arise in the operation of the system of transfer values.

## MATERNITY BENEFIT.

21. The experience of the Selected Societies in respect of claims for maternity benefit is shown in Tables C (M.), C (S. & W.) and C (M.W.) for men, unmarried women and married women respectively. The experience, as summarised at the foot of the tables relating to men and married women, shows a declining birth rate from year to year. In the case of men, the relation of the claims to the expectation in the several age groups does not vary greatly from a constant figure except at both extremes of age, and we consider that it will be sufficient to employ issue rates equal to 85 per cent. of those incorporated in the present financial basis. In the case of women, the experience has departed more widely from the basis, and here we think it advisable to use the actual rates of the Selected Societies Experience adjusted to secure a smooth progression from age to age and otherwise so as to produce an over-all margin of about 10 per cent. which, we consider, should be added in view of the low birth-rates in recent years.

22. The remarkably low proportion (51 per cent. over all, as compared with 82 per cent. in the case of men) which the maternity benefit claims of insured married women bear to the standard, calls for comment. The same feature was shown by the Government Actuary in his Report on the First Valuations of Approved Societies (Cmd. 1662), para. 52, to have prevailed over the whole field of National Health Insurance in the period up to 1918, and in view of its persistence after the special conditions of the war years had passed away we are led to think that it is permanent. The present basic rates are constructed from the records of births to married women in a representative community in the year 1910. A general fall in the birth rate has subsequently taken place, but the extent of this is not greater than is indicated in the experience relative to the wives of insured men. The larger part of the difference in the case of insured married women affords a clear indication that a much lower birth rate prevails among married women engaged in industrial employment than among those who are not so engaged.

## MEDICAL BENEFIT.

23. The charge upon the funds of Approved Societies for medical benefit is fixed by the principal Act at seven-ninths of a sum of 9s. 6d. per insured person per annum, and in estimating the contribution required to provide the present benefits we have taken the liability on this basis. The sum named does not, however, comprise the whole cost of medical benefit, and further provision of a temporary character is made by the National Health Insurance (Cost of Medical Benefit) Act, 1924, which comes to an end on 31st December, 1926. Such further charges as may be placed upon the funds of Approved Societies after this date in respect of medical benefit will accordingly fall to be met out of the sum which, at a later stage of this Report, we shall advise to be available for new expenditure.

## MINOR FACTORS.

24. The present basic assumptions as regards the factor (e) named in para. 4 above have been adopted without modification. The present basis in regard to (f) has been altered so far as is necessary to bring it into conformity with the new Life Table employed, as explained in para. 10 above. So far as concerns (g)—the provision to be made for the sickness and maternity benefits of women in Class K—we have examined the actual experience of the Class both among the Selected Societies and in other important organisations whose data were available to us. On the facts before us we conclude that it will be sufficient to provide for the payment of maternity benefit in 70 per cent. of the cases in which married women enter into Class K and for an average duration of sickness claim of five-eighths of a week. It should be added that on this basis the contributions



will permit of the increase of the sickness benefit of Class K to the ordinary rate (12s. a week), subject to the limit on the period of benefit being retained at six weeks.

As regards (h)—unemployment—the position at the present time is abnormal, and, after full consideration, we have made the same allowances as are provided in the present financial basis.

In regard to (k)—the provision to be made for expenses of administration—we have estimated the liability on the basis of the allowances provided by the present regulations, viz., 4s. 5d. per insured person per annum to the age of 65 for the expenses of Approved Societies and 6d. per insured person per annum throughout life for the expenses of Insurance Committees.

#### EFFECT OF THE CHANGE OF BASIS.

25. The effect of the several changes in the basis which we have adopted, as detailed in the foregoing paragraphs, is to reduce the weekly contribution for seven-ninths of the benefits, as computed for an entrant at the age of 16, to the following extent.

In the case of men from 7·44d. to 6·55d.

In the case of women from 7·20d. to 6·85d.

The respective differences between these rates, 89d. a week in the case of men and 35d. a week in the case of women are available for the purposes which the Royal Commission may recommend. It will be observed that although the rate of sickness benefit is lower in the case of a woman than in that of a man, and although there are other important differences, tending in the same direction, between the insurance conditions of the sexes, the contribution required at the age of 16 on the new basis is greater in the case of a woman than it is in the case of a man. This is the direct consequence of the heavier sickness and disablement claims among women for which, in view of the facts brought out by the investigation, we have felt compelled to make provision.

26. We pointed out in para. 2 that it was to be expected that any change in the rate of contribution appropriate to an entrant at the age of 16 would be accompanied by an alteration in the reserves required to be held by the Approved Societies and that a resultant change was to be anticipated in the part of the contributions (men 1d. a week, women 70d. a week) allotted to the service of reserve values. We now proceed to investigate this question.

We find that the effect of the change of basis is to reduce the reserves required by the Approved Societies by approximately £9,000,000. This amount falls, therefore, to be deducted from the sum of the reserve values credited to the societies at 31st December, 1926, assuming this to be the date at which the new conditions will be applied.

After giving effect to the changes required by the Contributory Pensions Act,\* the aggregate amount of the reserve values on the present basis at this date is estimated, we are informed, to be about £61,000,000. The change of basis reduces this sum to £52,000,000. Another point, however, now arises. The regulations governing the Reserve Suspense Fund require the balances from time to time to the credit of this Fund, so far as they consist of reserve values, to be cancelled, and so far as they consist of actual money to be applied to the redemption of reserve values. We understand that no operations under these regulations have yet been carried through and that, assuming the balances of the Reserve Suspense Fund to be accumulated to 31st December, 1926, they are likely to amount, after providing for certain incumbent charges, to about £17,000,000, of which about £10,000,000 will be represented by reserve

\* See Cmd. 2406, para. 29.

values and about £7,000,000 by cash.\* The application of these sums in the manner required by the regulations will reduce the reserve values from £52,000,000, as above stated, to about £35,000,000, and this is the sum for the service of which (interest and redemption) the new "Sinking Fund" contribution must provide. As we have already indicated, we see no reason to increase the rate of interest credited on Reserve Values or to arrange for a shortening of the redemption period, which is estimated to extend to about 30 years (apart from any shortening attributable to the transfer of future balances from the Reserve Suspense Fund), and we find, therefore, that the part of the weekly contribution retained for the service of reserve values may be reduced from 1d. to 65d. in the case of men and from 9d. to 58d. in the case of women. These reduced amounts are related to the reserves required for the present benefits. As we shall show later, certain additions will have to be made to them should any charges be introduced of a kind which requires the creation of further reserve values.

27. We referred in para. 3 to the possibility of revising the contributions payable to the Contingencies Funds of the Approved Societies. These contributions are at the rate of five-ninths of a penny per week in the case of men and two-fifths of a penny in the case of women, and their annual produce is about £1,400,000. The Contingencies Funds were established in 1918, with retrospective effect, under a recommendation of the Departmental Committee on Approved Society Finance and Administration, and their primary purpose was to provide the societies with the means whence valuation deficiencies of moderate amount might be met from their own resources, thus obviating the necessity for appeal to the Central Fund save in cases of serious insolvency. This purpose has not only been fully served; the cases of deficiency have been relatively few and the bulk of the sums becoming available through the Contingencies Funds has been applied to augment the surpluses distributable under schemes for additional benefits. We regard a marginal provision of the kind made by the Contingencies Funds as of great value, especially in the case of small societies and branches, but its extent must be a matter of judgment and the experience gained by the operation of the system since 1918 leads us to think that the present contribution to these funds may safely be reduced without imposing a serious strain—from either the financial or the administrative point of view—upon the Central Fund. In advancing this view we are influenced to a considerable extent by the fact that as regards the small societies and the branch type of organisations the Act provides for pooling the Contingencies Funds either partly or wholly, thus providing these units with a measure of protection against financial strain far exceeding that afforded by their own individual resources. On the other hand we are compelled to recognise that the imposition of the contemplated new charges on existing resources will, unless other provision is made, entail a considerably greater charge on Contingencies Funds to meet deficiencies in the future than that experienced in the past, but we propose to deal with this important point as a separate question. Assuming that the recommendation which we shall make under this head is accepted, we consider that the weekly contribution to the Contingencies Funds may properly be reduced to one farthing, both for men and for women. Incidentally, we thus advise the abrogation of the present difference between the contributions of men and of women to the Contingencies Funds. In a large number of cases men and women are insured

\* These figures must not be taken as an index of the amounts of surplus likely to accrue to the Reserve Suspense Fund in future. The income of this Fund is derived chiefly from transfer values and as the result of (i) the limitation of sickness and disablement benefits to the age of 65 instead of 70 and (ii) the substitution of 4 per cent. for 3 per cent. as the basic rate of interest, transfer values will be materially reduced. Further, a considerable part of the present balance of the Fund is due to the abnormal industrial conditions set up by the War which brought a large number of persons temporarily into employment.

in the same society with a common Contingencies Fund, and having regard to the relative risks of excess in the sickness and disablement claims of the sexes we can see no justification for requiring, in the case of women, a smaller contribution for the purpose of these funds than that called for in the case of men. The effect of this recommendation will be to release from each weekly contribution for the new purposes 31d. for a man and 15d. for a woman.

28. Two consequential changes in the present system follow on this recommendation. The first of these relates to the Central Fund. The limit on the sum to be transferred to this fund under the existing statute is one-eighth of the contributions credited to the Contingencies Funds. It is important that the maximum charge upon the resources of the Approved Societies for the support of the Central Fund should not be sensibly reduced, and, since we advise a reduction of rather more than one-half in the sums to be transferred to the Contingencies Funds, we recommend that one-fourth instead of one-eighth of these sums be made available as the maximum draft for the Central Fund.

An analogous adjustment is advised in respect of the pooling provisions of the Act with reference to the Contingencies Funds of the unassociated societies with under one thousand members. At present one-half of these funds is liable to be pooled for the purpose of making good the deficiencies of societies in this category, the other half being reserved for the use of the societies individually. Since our recommendation will so largely reduce the Contingencies Funds, we advise that the whole, instead of one-half in the case of the societies in question, be brought under the liability to be pooled.

29. The margin for other purposes (to use the words of our terms of reference) which, in our opinion, may be taken from the present contribution—subject, in the case of women, to the qualifications expressed in para. 20 above—is obtained by bringing together the margins in the several parts of the contribution as stated in paras. 25, 26 and 27. The combined amounts are 1.55d. per week in the case of men and .82d. per week in the case of women.

These amounts are made up as follows:—

	Men.	Women.
	d.	d.
From the Benefit Fund contribution (para. 25) ...	.89	.35
From the contribution retained for the service of Reserve Values (para. 26) ... ..	.35	.32
From the Contingencies Fund contribution (para. 27) ... ..	.31	.15
Total ... ..	1.55	.82

30. These figures constitute the answer to the question submitted to us, but, since the contribution of which in each case they form a part is payable only until the age of 65 and is intermitted in weeks of sickness and disablement and of unemployment, it remains to be considered for what expenditure the margin will provide in the case of insured persons of each sex. This question admits of a variety of answers according to the nature of the purposes involving new expenditure which may be contemplated. It is not within our province to anticipate the questions which may arise in this connection, but, having regard to the number of possibilities involving the provision of a capitation rate continuing during life which present themselves on examination of the evidence taken by the Royal Commission, we have deemed it advisable to examine the margin from this point of view. We find that with the State grant added it would provide an annual amount of 7s. for a man and 3s. 9d. for a woman, to continue during life or otherwise so long as medical benefit is provided. If the new expenditure took this form some addition to the reserve values would be necessary,

for, while the contribution applicable to the new expenditure would cease at the age of 65, the expenditure would continue during life, and provision would have to be made for the accumulation in respect of each person reaching 65 of a capital sum representing a life annuity at that age of seven-ninths of 7s. or 3s. 9d. a year as the case might be.

On this basis, therefore, the apportionment of the weekly contribution into its component parts would be as follows:—

	Men.	Women.
	d.	d.
Benefit Fund (including the new expenditure) ...	7.95	7.65
Reserve Values (interest and redemption) ...	.80	.60
Contingencies Fund ... ..	.25	.25
	9.00	8.50

The total amount of the reserve values on this basis would be about £41,000,000, being an increase of £6,000,000 on the sum of £35,000,000 named in para. 26.

As explained in para. 23, the above sums of 7s. and 3s. 9d. would respectively be chargeable with any capitation allowance for medical benefit in excess of 9s. 6d. per annum. Only the balances remaining after such expenditure had been provided for would be available for new purposes.

31. Expenditure at the rate above indicated would amount in total to about £4,500,000 a year (inclusive of State grant), and in the course of a quinquennial period, after allowing for the set-off accruing from the reduction of the contributions applied to the service of reserve values a total charge (with interest) of about £15,000,000 would fall to be met from the funds of the Approved Societies. For the greater part this sum would be met out of resources that, under existing conditions, would emerge as surplus at the quinquennial valuations. We are, however, constrained to point out that the imposition of the new burden would result in increased deficiencies where deficiencies now exist or in the creation of deficiency in certain cases where, on the present basis, surplus would have appeared. As the valuation reports have shown, the societies vary widely in their financial position, and only the margins which have emerged on the present basis have protected a number of them, with, in the aggregate, a substantial membership, from falling into a state of deficiency. The further expenditure contemplated by our terms of reference necessarily involves the reduction of these margins, and this is bound to have adverse results upon the solvency of the weaker units. It is impossible to form any definite opinion as to the membership of the societies which the new burdens would place in deficiency, one of the difficulties of the position being that the numbers would grow as the surpluses hitherto carried forward in sub-normal cases became exhausted and the full force of the new charges had to be met without the possibility of assistance from this source. We are led to expect, after making the best estimates of which the case admits, that the effect of the new burdens would be to create eventually a condition of deficiency in societies representing about 10 per cent. of the whole insured population. This is a grave prospect, and although the machinery of the Central Fund is sufficient, we believe, to meet the situation we do not think we are going beyond our duty in inviting the Royal Commission to consider the effect upon the credit of the whole system of the adoption of changes such as might produce deficiency to the extent here indicated on the valuations of the societies—even though the means of subsequent adjustment existed and were ample for the purpose. We have taken note in this connection of the balances that are likely to accumulate in the Reserve Suspense Fund. Again we are precluded from forming dependable estimates by reason of the new conditions set up by the Contributory Pensions Act, the provisions of which may materially check the present rate of lapse from insurance. But, after giving full weight to the considerations which we



have explained in a note to para. 26, we think that in any circumstances that are likely to arise the balances of the Reserve Suspense Fund will be material, and, having regard to the altered conditions as to reserve values, we see no pressing reason why after 31st December, 1926,\* these balances should continue to be applied to the redemption of these credits. We would, therefore, submit for the consideration of the Royal Commission that the balances in question should be made available for grants sufficient to avert the creation of deficiency by the imposition of the new charges in the cases to which we have referred. We think it unlikely that the balances would be insufficient to meet this burden, but a liability to become operative in the event of this contingency arising might, we think, be placed upon the Central Fund.

We are disposed to place the amount required eventually to give effect to this recommendation at something under £1,000,000 in a quinquennial period. We put forward this estimate, however, with much reserve, since the future course of the claims for sickness and disablement on the weaker units (a factor which obviously contains potentialities of great variation) must have a material effect upon the capacity of these units to bear the strain of any new charges.

32. Before concluding this report we think it essential to explain the position so far as our recommendations may affect the surpluses of the Approved Societies. The aggregate amount of surplus carried forward from the valuation of 1922-23 will, we are informed, probably exceed £15,000,000, to which falls to be added the accumulated Contingencies Funds existing at the valuation date and amounting to a further aggregate sum of probably £7,000,000. The subsequent interest earnings on these sums, and the considerable profits that will have accrued from interest earnings in excess of the valuation rate and from other sources must, we think, bring up the total surplus at the end of 1926 to a sum considerably in excess of £30,000,000. This amount, moreover, will be augmented by the contributions credited to the Contingencies Funds subsequent to the valuation, the total at 31st December, 1926, being about £5,000,000. These accrued surpluses with their interest accumulations to the date of the third valuation, will not be affected by our recommendations, but since the new expenditure is to be provided out of what have hitherto been margins, and therefore sources of surplus, the creation of further surplus must be substantially checked, so soon as the new expenditure becomes operative. In these circumstances the surpluses declared on the third valuation will serve a very definite purpose; with their interest earnings and with the related State Grant they will everywhere provide a large part, in some cases, indeed, the major part, of the additional benefits to be provided in the future.

33. We have indicated in the last paragraph that the creation of new surplus will be materially checked if and when our recommendations are carried into effect. It will be understood from this observation that to some extent further surplus will accrue and it is perhaps necessary that we should explain why surplus funds will continue to arise after the adoption of measures of reconstruction by which the available margins in the contributions have been absorbed. The reason is that these margins are calculated on the general average of the working of the scheme, whereas, in fact, it operates through Approved Societies with widely differing experiences. Under such a system both surpluses and deficiencies must arise. Moreover, if the future experience, taken as a whole, should in all respects agree with our assumptions, there would still be a net surplus of moderate amount resulting from the operation of the Contingencies Funds and the Central Fund. Theoretically the amount representing this net surplus could be released as a further margin if the system were, in fact,

\* It is an essential condition of our calculations that the estimated balance at 31st December, 1926, should be applied to redeem reserve values as provided by the existing regulations.

operated through a common fund. From the practical point of view we doubt, however, whether any such margin would arise if the approved society system, which has its own administrative advantages, were abrogated.

34. In conclusion we desire to record our appreciation of the services rendered to us by our Secretary, Mr. M. B. Knowles, F.I.A., of the Government Actuary's Department. It has been necessary in the course of our work to require the preparation of a large number of memoranda, many of them dealing with technical questions of great intricacy. We have profited alike by Mr. Knowles's knowledge of the subject and by his willingness to undertake every task we have placed upon him.

We are, My Lord,

Your obedient Servants,

ALFRED W. WATSON (*Chairman*).

A. D. BESANT.

LOUIS E. CLINTON.

ALFRED HENRY.

R. G. MAUDLING.

M. B. KNOWLES (*Secretary*).

13th October, 1925.

TABLE A (M).  
MEN.  
First six months' Sickness.  
Selected Societies Sickness Experience, 1921-23.

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.I. (1)	Year 1921.				Year 1922.			
		Years of life exposed to risk. (2)	Expected weeks. (3)	Actual weeks. (4)	Percentage of Actual to Expected. (5)	Years of life exposed to risk. (6)	Expected weeks. (7)	Actual weeks. (8)	Percentage of Actual to Expected. (9)
Under 20 ...	Weeks. .888	54,732	48,254	27,506	57	54,991	48,483	33,043	68
20 and under 25 ...	.771	57,393	44,728	33,829	76	59,018	45,994	37,311	81
25 " " 30 ...	.783	55,399	43,535	32,405	74	53,933	42,384	36,347	86
30 " " 35 ...	.844	56,646	47,862	34,747	73	54,696	46,214	38,945	84
35 " " 40 ...	.942	55,727	52,585	34,634	66	54,559	51,483	41,257	80
40 " " 45 ...	1.088	55,080	59,941	37,507	63	52,913	57,583	42,182	73
45 " " 50 ...	1.267	50,362	63,911	38,203	60	51,255	65,044	46,980	72
50 " " 55 ...	1.538	41,360	63,616	39,195	62	41,345	63,592	46,460	73
55 " " 60 ...	1.933	31,236	60,207	38,040	63	32,145	61,960	44,966	73
60 " " 65 ...	2.469	22,141	54,285	36,613	67	22,150	54,306	42,364	78
65 " " 70 ...	3.081	12,367	37,348	28,110	75	12,991	39,232	33,833	86
Total ...	—	492,443	576,272	380,789	66	489,996	576,275	443,638	77

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.I.	Year 1923.				Years 1921 to 1923.			
		Years of life exposed to risk. (10)	Expected weeks. (11)	Actual weeks. (12)	Percentage of Actual to Expected. (13)	Years of life exposed to risk. (14)	Expected weeks. (15)	Actual weeks. (16)	Percentage of Actual to Expected. (17)
Under 20 ...	Weeks. .888	55,431	48,871	32,950	67	165,154	145,608	93,499	64
20 and under 25 ...	.771	61,794	48,157	37,378	78	178,205	138,879	108,518	78
25 " " 30 ...	.783	52,882	41,558	31,345	75	162,214	127,477	100,097	79
30 " " 35 ...	.844	53,434	45,148	33,231	74	164,776	139,224	106,923	77
35 " " 40 ...	.942	53,514	50,497	37,105	73	163,800	154,565	112,996	73
40 " " 45 ...	1.088	52,451	57,080	40,131	70	160,444	174,604	119,820	69
45 " " 50 ...	1.267	50,233	63,746	42,660	67	151,850	192,701	127,793	66
50 " " 55 ...	1.538	42,886	65,963	44,117	67	125,591	193,171	129,772	67
55 " " 60 ...	1.933	32,581	62,800	43,473	69	95,962	184,967	126,479	68
60 " " 65 ...	2.469	23,065	56,550	40,489	72	67,356	165,141	119,466	72
65 " " 70 ...	3.081	13,425	40,542	31,450	78	38,783	117,122	93,393	80
Total ...	—	491,696	580,912	414,329	71	1,474,135	1,733,459	1,238,756	71

TABLE A (S. AND W.).  
SPINSTERS AND WIDOWS.  
Selected Societies Sickness Experience, 1921-23.  
First six months' Sickness.

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.I. (1)	Year 1921.				Year 1922.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Under 20 ...	Weeks. 1.104	79,377	87,010	54,086	62	78,051	86,215	56,226	65
20 and under 25 ...	.972	79,157	77,766	58,369	75	76,641	75,294	64,649	86
25 " " 30 ...	.974	46,985	45,837	34,454	75	44,774	43,680	38,226	88
30 " " 35 ...	1.024	29,890	30,597	21,474	70	28,891	29,575	25,774	87
35 " " 40 ...	1.110	22,700	25,213	17,623	70	22,478	24,967	21,848	88
40 " " 45 ...	1.244	18,603	23,107	16,856	73	18,074	22,450	17,839	79
45 " " 50 ...	1.410	14,958	21,076	14,775	70	15,505	21,846	15,168	81
50 " " 55 ...	1.662	11,176	18,567	12,153	65	11,345	18,846	13,531	80
55 " " 60 ...	2.036	8,284	16,813	10,367	62	8,543	17,339	11,151	78
60 " " 65 ...	2.547	5,087	14,372	8,804	61	5,871	14,837	11,151	75
65 " " 70 ...	3.132	2,733	8,391	5,289	63	2,947	9,047	6,753	75
Total ...	—	319,550	368,749	254,250	69	313,720	364,096	288,788	79

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.I. Weeks.	Year 1923.				Years 1921 to 1923.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
		(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Under 20 ...	1.104	80,161	87,870	62,409	71	238,189	261,095	172,721	66
20 and under 25 ...	.972	76,690	75,342	65,176	87	232,488	228,402	188,194	82
25 " " 30 ...	.974	42,990	41,940	35,836	85	134,749	131,457	108,516	83
30 " " 35 ...	1.024	28,523	29,199	24,780	85	87,304	89,371	72,028	81
35 " " 40 ...	1.110	22,137	24,587	19,101	78	67,315	74,767	58,572	78
40 " " 45 ...	1.244	18,437	22,901	18,316	80	55,114	68,458	53,011	77
45 " " 50 ...	1.410	15,556	21,918	17,901	82	46,019	64,840	50,299	78
50 " " 55 ...	1.662	11,901	19,770	15,287	77	34,422	57,183	42,608	75
55 " " 60 ...	2.036	8,785	17,830	12,704	71	25,612	51,982	36,602	70
60 " " 65 ...	2.547	6,188	15,512	11,451	74	17,696	44,721	31,406	70
65 " " 70 ...	3.132	3,183	9,772	6,773	69	8,863	27,210	18,815	69
Total ...	—	314,501	366,641	289,734	79	947,771	1,099,486	832,772	76



TABLE A (M.W.).  
MARRIED WOMEN.  
Selected Societies' Sickness Experience, 1921-23.  
First six months' Sickness.

Ages last birthday at beginning of year of exposure.	Rate of Sickness* provided for in present basis of N.H.I.	Year 1921.				Year 1922.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20 ...	Weeks. 1.104	687	731	2,327	318	619	659	2,456	373
20 and under 25 ...	.972	7,581	7,387	13,500	183	7,019	6,838	16,825	246
25 " " 30 ...	.974	14,215	13,886	18,086	130	13,363	13,054	22,647	173
30 " " 35 ...	1.024	14,219	14,577	16,128	111	13,347	13,682	20,315	148
35 " " 40 ...	1.110	12,838	14,269	16,213	114	12,334	13,709	18,208	133
40 " " 45 ...	1.244	10,702	13,289	13,009	98	10,389	12,901	16,727	130
45 " " 50 ...	1.410	7,594	10,683	10,171	95	7,907	11,123	12,855	116
50 " " 55 ...	1.662	5,015	8,308	7,813	94	5,084	8,422	9,113	108
55 " " 60 ...	2.036	3,169	6,417	5,270	82	3,309	6,701	7,086	106
60 " " 65 ...	2.547	1,869	4,705	4,196	89	1,884	4,744	4,750	100
65 " " 70 ...	3.132	748	2,295	2,315	101	817	2,506	2,668	106
Total ...	—	78,637	96,547	109,028	113	76,072	94,339	133,650	142

Ages last birthday at beginning of year of exposure.	Rate of Sickness* provided for in present basis of N.H.I.	Year 1923.				Years 1921 to 1923.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Under 20 ...	Weeks. 1.104	757	807	2,755	341	2,063	2,197	7,538	343
20 and under 25 ...	.972	7,866	7,664	20,000	261	22,466	21,889	50,325	230
25 " " 30 ...	.974	14,142	13,815	28,573	207	41,720	40,755	69,306	170
30 " " 35 ...	1.024	13,809	14,156	23,714	168	41,375	42,415	60,157	142
35 " " 40 ...	1.110	12,420	13,305	20,797	151	37,592	41,783	55,218	132
40 " " 45 ...	1.244	10,894	13,528	18,734	138	31,985	39,718	48,470	122
45 " " 50 ...	1.410	8,226	11,571	15,054	130	23,727	33,377	38,080	114
50 " " 55 ...	1.662	5,444	9,018	10,417	116	15,543	25,748	27,343	106
55 " " 60 ...	2.036	3,415	6,915	6,861	99	9,893	20,033	19,217	96
60 " " 65 ...	2.547	2,031	5,114	4,801	94	5,784	14,563	13,747	94
65 " " 70 ...	3.132	878	2,693	2,404	89	2,443	7,494	7,387	99
Total ...	—	79,882	99,086	154,110	156	234,591	239,972	396,788	137

\* For convenience of comparison the rate here used is that applicable to Spinners and Widows, i.e. it does not include the small allowance for greater sickness in the case of Married Women for which the present financial basis provides.

TABLE B (M).  
Selected Societies' Sickness Experience, 1921-23.

MEN.

After six months' Sickness.

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.L.	Year 1921.				Year 1922.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Under 20 ...	Weeks. .054	33,871	1,717	2,626	153	34,359	1,741	3,250	187
20 and under 25 ...	.117	61,758	7,042	8,618	122	62,774	7,158	11,502	161
25 " " 30 ...	.186	55,806	10,356	10,634	103	54,179	10,054	14,586	145
30 " " 35 ...	.260	56,177	14,702	13,214	90	54,171	14,178	15,746	111
35 " " 40 ...	.401	54,992	22,219	17,424	78	53,804	21,738	22,711	104
40 " " 45 ...	.617	54,308	33,591	22,050	66	52,139	32,249	24,871	77
45 " " 50 ...	.913	49,691	45,863	24,729	54	50,585	46,689	31,937	68
50 " " 55 ...	1.552	40,841	63,450	28,980	46	40,831	63,432	31,586	50
55 " " 60 ...	2.662	30,885	82,628	37,825	46	31,795	85,063	45,303	53
60 " " 65 ...	4.975	21,933	108,729	48,154	44	21,945	108,788	56,524	52
65 " " 70 ...	9.577	12,284	112,241	55,393	49	12,907	117,934	67,141	57
Total ...	—	472,546	502,538	269,647	54	469,489	509,024	325,157	64

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.L.	Year 1923.				Years 1921 to 1923.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
		(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Under 20 ...	Weeks. .054	34,542	1,750	3,164	181	102,772	5,208	9,040	174
20 and under 25 ...	.117	65,076	7,400	12,775	172	189,608	21,620	32,895	152
25 " " 30 ...	.186	52,933	9,822	15,716	160	162,918	30,232	40,936	135
30 " " 35 ...	.260	52,786	13,814	19,319	140	163,134	42,694	48,279	113
35 " " 40 ...	.401	52,674	21,282	23,270	109	161,470	65,239	63,405	97
40 " " 45 ...	.617	51,611	31,923	29,004	91	158,058	97,763	75,925	78
45 " " 50 ...	.913	49,517	45,702	34,523	76	149,793	138,254	91,189	66
50 " " 55 ...	1.552	42,338	65,774	37,689	57	124,010	192,656	98,255	51
55 " " 60 ...	2.662	32,209	86,170	50,698	59	94,889	233,861	133,826	53
60 " " 65 ...	4.975	22,846	113,255	65,154	58	66,724	330,772	169,832	51
65 " " 70 ...	9.577	13,337	121,862	76,978	63	38,528	352,037	199,512	57
Total ...	—	469,869	518,774	368,290	71	1,411,904	1,530,336	963,094	63

TABLE B (S. & W.).  
*Selected Societies Sickness Experience, 1921-23.*  
 After six months' sickness.

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.I. (1)	Year 1921.				Year 1922.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Under 20 ...	Weeks. .071	46,059	3,066	6,791	221	46,285	3,082	6,379	207
20 and under 25 ...	.157	75,862	11,371	25,957	228	73,443	11,009	28,205	256
25 " " 30 ...	.244	45,113	10,893	24,705	227	42,988	10,380	28,477	274
30 " " 35 ...	.336	28,659	9,570	18,771	196	27,720	9,256	21,712	235
35 " " 40 ...	.501	21,738	10,888	14,737	135	21,562	10,800	18,180	168
40 " " 45 ...	.746	17,823	13,258	14,658	111	17,333	12,894	16,240	126
45 " " 50 ...	1.074	14,343	15,477	13,338	86	14,919	16,097	16,547	103
50 " " 55 ...	1.770	10,708	18,940	12,083	64	10,899	19,278	14,595	76
55 " " 60 ...	2.963	7,968	23,686	14,179	60	8,241	24,496	17,698	72
60 " " 65 ...	5.424	5,504	29,625	16,592	56	5,696	30,657	18,920	62
65 " " 70 ...	10.291	2,676	26,179	15,518	59	2,892	28,292	18,893	67
Total ...	—	276,453	172,953	177,329	103	271,978	176,241	205,846	117

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.I. (1)	Year 1923.				Years 1921 to 1923.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
		(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Under 20 ...	Weeks. .071	46,648	3,106	6,719	216	138,992	9,254	19,889	215
20 and under 25 ...	.157	73,387	11,000	29,939	272	222,692	33,380	84,101	252
25 " " 30 ...	.244	41,228	9,955	31,055	312	129,329	31,228	84,237	270
30 " " 35 ...	.336	27,364	9,137	24,647	270	88,743	27,963	65,130	233
35 " " 40 ...	.501	21,231	10,634	20,066	189	64,531	32,322	52,983	164
40 " " 45 ...	.746	17,703	13,170	19,453	148	52,859	39,322	50,351	128
45 " " 50 ...	1.074	14,977	16,160	18,572	115	44,239	47,734	48,457	102
50 " " 55 ...	1.770	11,461	20,272	19,226	95	38,068	58,490	45,904	78
55 " " 60 ...	2.963	8,488	25,231	21,140	84	24,697	73,413	53,017	72
60 " " 65 ...	5.424	5,966	32,111	22,738	71	17,166	92,393	58,250	63
65 " " 70 ...	10.291	3,129	30,611	23,310	76	8,697	85,082	57,721	68
Total ...	—	271,582	181,387	236,865	131	820,013	530,581	620,040	117



MARRIED WOMEN.  
TABLE B (M.W.).  
Selected Societies' Sickness Experience, 1921-23.  
After six months' sickness.

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.L.	Year 1921.				Year 1922.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Under 20	Weeks. .071	588	42	135	321	538	38	68	179
20 and under 25	.157	6,097	1,019	2,301	226	5,675	948	2,314	244
25 " " 30	.244	11,226	2,746	4,282	156	10,650	2,605	4,967	191
30 " " 35	.336	11,371	3,836	5,934	155	10,755	3,628	5,888	162
35 " " 40	.501	10,756	5,413	7,434	137	10,438	5,252	7,073	135
40 " " 45	.746	9,220	6,855	7,549	110	9,039	6,722	8,586	128
45 " " 50	1.074	6,637	7,135	8,775	123	7,035	7,564	10,117	134
50 " " 55	1.770	4,488	7,882	6,945	88	4,603	8,083	8,667	107
55 " " 60	2.963	2,931	8,670	6,435	74	3,092	9,147	7,906	86
60 " " 65	5.424	1,771	9,424	6,299	67	1,795	9,551	8,514	89
65 " " 70	10.291	723	7,071	5,775	82	794	7,765	7,252	93
Total ...	—	65,808	60,093	61,864	103	64,414	61,303	71,352	116

Ages last birthday at beginning of year of exposure.	Rate of Sickness provided for in present basis of N.H.L.	Year 1923.				Years 1921 to 1923.			
		Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.	Years of life exposed to risk.	Expected weeks.	Actual weeks.	Percentage of Actual to Expected.
	(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Under 20	Weeks. .071	692	50	162	324	1,818	130	365	281
20 and under 25	.157	6,489	1,083	3,793	350	18,261	3,050	8,408	276
25 " " 30	.244	11,346	2,776	6,602	238	33,222	8,127	15,851	195
30 " " 35	.336	11,155	3,763	7,397	197	33,281	11,227	19,219	171
35 " " 40	.501	10,481	5,274	8,744	166	31,875	15,939	23,251	146
40 " " 45	.746	9,516	7,075	11,195	158	27,775	20,652	27,330	132
45 " " 50	1.074	7,337	7,888	11,634	147	21,009	22,587	30,526	135
50 " " 55	1.770	4,954	8,700	12,044	138	14,045	24,665	27,656	112
55 " " 60	2.963	3,193	9,446	8,959	95	9,216	27,263	23,300	85
60 " " 65	5.424	1,940	10,322	10,585	103	5,506	29,297	25,398	87
65 " " 70	10.291	855	8,361	8,685	104	2,372	23,197	21,712	94
Total ...	—	67,958	64,738	89,800	139	198,180	186,134	223,016	120

MEN.  
Maternity.

TABLE C (M.).  
*Selected Societies Maternity Experience.*  
Years 1921, 1922 and 1923 combined.

Ages last Birthday at beginning of Year of Exposure.	Years of Life exposed to Risk.	Expected Claims.	Actual Claims.	Percentage of Actual Claims to Expected.
Under 20 ... ..	159,183	1,052	1,145	109
20 and under 25 ... ..	192,560	16,820	15,416	92
25 " " 30 ... ..	165,789	28,477	24,854	87
30 " " 35 ... ..	165,809	30,088	23,590	78
35 " " 40 ... ..	163,901	22,632	17,413	77
40 " " 45 ... ..	160,175	12,756	9,765	77
45 " " 50 ... ..	151,498	5,678	4,035	71
50 " " 55 ... ..	125,282	1,905	1,203	63
55 " " 60 ... ..	95,757	512	398	78
60 " " 65 ... ..	67,236	123	149	121
65 " " 70 ... ..	38,739	15	54	360
Total ... ..	1,485,929	120,058	98,022	82

General average percentages of separate years :

1921 ... ..	89
1922 ... ..	80
1923 ... ..	78

SPINSTERS AND WIDOWS.  
Maternity.

TABLE C (S. & W.).  
*Selected Societies Maternity Experience.*  
Years 1921, 1922 and 1923 combined.

Ages last Birthday at beginning of Year of Exposure	Years of Life exposed to Risk.	*Claims.
Under 20 ... ..	223,271	777
20 and under 25 ... ..	230,710	1,348
25 " " 30 ... ..	133,743	649
30 " " 35 ... ..	86,625	326
35 " " 40 ... ..	66,778	129
40 " " 45 ... ..	54,681	47
45 " " 50 ... ..	45,680	2
50 " " 55 ... ..	34,166	—
55 " " 60 ... ..	25,439	—
60 " " 65 ... ..	17,601	—
65 " " 70 ... ..	8,839	—
Total ... ..	927,533	3,278

\* Excluding posthumous births.

MARRIED WOMEN  
Maternity.

TABLE C (M.W.).  
*Selected Societies Maternity Experience.*  
Years 1921, 1922 and 1923 combined.

Ages last Birthday at beginning of Year of Exposure.	Years of Life exposed to Risk.	Expected Claims.	*Actual Claims.	Percentage of Actual Claims to Expected.
Under 20 ... ..	1,985	1,282	1,113	87
20 and under 25 ... ..	21,508	9,396	5,772	61
25 " " 30 ... ..	40,025	12,125	6,491	54
30 " " 35 ... ..	39,858	9,081	4,102	45
35 " " 40 ... ..	36,488	5,583	2,118	38
40 " " 45 ... ..	31,205	1,934	584	30
45 " " 50 ... ..	23,233	159	43	27
50 " " 55 ... ..	15,278	—	1	—
55 " " 60 ... ..	9,775	—	—	—
60 " " 65 ... ..	5,738	—	—	—
65 " " 70 ... ..	2,436	—	—	—
Total ... ..	227,529	39,560	20,224	51

General average percentages of separate years.

1921 ... ..	53
1922 ... ..	51
1923 ... ..	49

\* Including posthumous births.

## MEMORANDUM.

## AN EXAMINATION OF CERTAIN FEATURES OF THE SICKNESS AND DISABLEMENT CLAIMS OF THE SELECTED SOCIETIES IN THE YEARS 1921-23.

1. The records of the sickness and disablement claims of the "Selected Societies" were sufficiently complete in detail to enable the investigation to include enquiries as to the proportion of members claiming benefit of each kind in each year at the various age groups, with the related average duration of claim. Statistics were also obtainable as to the working of the three days' waiting period and as to the extent to which the claims for disablement benefit represented other than permanent incapacity. The information thus secured is believed to be both of interest and of importance to those engaged in the administration of sickness risks as well as to actuaries who are called upon to deal with the financial aspect of these risks, and it is accordingly presented in Tables I, II and III appended to this memorandum. These tables relate, respectively, to the experience of men, unmarried women (spinster and widows) and married women.

2. It was desired to compare the new experience with earlier (friendly society) experience in regard to some of the points covered by these tables, but this was only possible in the case of men, since women were not insured against sickness to any material extent before the institution of National Health Insurance and no women's sickness experience of any authority has previously been obtained. The features examined in paras. 3 to 9 below relate exclusively therefore to the experience of men and no corresponding investigation can be made in the case of women.

3. On examining Table I it was found that the sickness claims of men were relatively fewer than in the Manchester Unity Experience, but that the average duration of sickness and disablement was longer than in that experience. This feature has been further investigated and use has been made of the analysed table of the Manchester Unity Sickness Rates contained in p. 593 of the Report for 1912-13 on the Administration of National Health Insurance (Cd. 6937) to obtain approximations to the "proportion sick" in the "first six months" and "after six months" periods respectively and to the proportions entering on the "after six months" period which are necessary for a complete comparison of this standard experience with that of the Selected Societies.

4. The following table relates to sickness benefit (1st six months of sickness). The headings are self-explanatory.

TABLE 1.

Central Age of Group.	Proportion of Members Claiming Benefit in the Year (per thousand).		Average Duration of Attack in the Year (stated in weeks).	
	M.U., 1893-97 (approximate). (1)	Selected Societies, 1921-23. (2)	M.U., 1893-97 (approximate). (3)	Selected Societies (adjusted for 1st 3 days). (4)
18 ...	302	158	3.0	4.0
22½ ...	236	151	3.3	4.4
27½ ...	232	147	3.4	4.6
32½ ...	232	152	3.7	4.7
37½ ...	236	155	4.0	4.8
42½ ...	246	160	4.3	5.0
47½ ...	258	171	4.8	5.3
52½ ...	273	195	5.4	5.7
57½ ...	300	221	6.1	6.3
62½ ...	328	263	7.0	7.1

5. After making due allowance for the fact that Col. (1) includes all claims, however short, while with few exceptions Col. (2) excludes cases that did not extend to at least four days, it is clear from Table 1 that in National Health Insurance there have been relatively many fewer claims than in the Manchester Unity Experience but that the duration has been more prolonged, especially at ages under 45. These results do not give us any clear indication of what to expect in regard to the corresponding factors in the experience of disablement benefit. On the whole, since the differences between Cols. (2) and (1) are more marked than the differences between Cols. (4) and (3), it would perhaps be reasonable to look for a smaller proportion drawing disablement benefit in the case of the Selected Societies than in the case of the Manchester Unity, especially if the theory that the disablement benefit experience has not yet reached maturity is well-founded. The facts obtained are shown in Table 2. It is necessary to explain in regard to this table that there are two factors as to the proportions receiving benefit which should be distinguished (a) the proportion completing sickness benefit and entering on disablement benefit during the year and (b) the full proportion in receipt of disablement benefit. This latter includes with (a) those on the disablement list at the beginning of the year and those who on first claiming during the year were only entitled to disablement benefit under the "linking-up" provision of the Act.\*

TABLE 2.

Central age of group.	Proportion of members reaching disablement benefit in the course of the year (per thousand).		Proportion of members drawing disablement benefit in the course of the year (per thousand).	
	M.U. (approx.) (1)	Selected Societies. (2)	M.U. (approx.) (3)	Selected Societies. (4)
18	3	3	4	5
22½	4	4	6	8
27½	5	6	8	12
32½	6	6	10	13
37½	7	7	13	16
42½	9	8	19	19
47½	12	10	27	23
52½	17	13	42	29
57½	26	19	69	47
62½	40	31	119	81

6. It will be seen that up to age 40 the proportion reaching disablement benefit during the year in the Selected Societies was practically identical with the Manchester Unity Experience, although the proportion who had sickness benefit was very much smaller. This seems to throw up in strong relief the effect of "longer duration." The full proportion drawing disablement benefit is actually greater up to 40 than in the standard experience. This may be due to the existence of a greater proportion of "linked-up" cases. If the greater average duration of sickness benefit is attributable in part to frequent claims from a small section of persons of inferior health at entry, a class which, owing to medical examination,

\* Where a person has received sickness or disablement benefit and recovers, any subsequent incapacity is treated as a continuation of the previous incapacity unless a period of one year has elapsed. Otherwise the two attacks are "linked-up" and in such case if sickness benefit is payable at the beginning of the second attack the claimant is not subject to the waiting period of three days. This explains the difference between Cols. (2) and (3) in Tables I, II and III appended.



would certainly have been much smaller in the Manchester Unity Experience, it would necessarily have as its consequence more linking-up, and therefore more short attacks paid at the disablement rate. In the nature of the case this feature would be of less importance at ages over 40 than at the younger ages. The experience at ages over 40 appears, in fact, to confirm the corresponding experience in respect of sickness benefit.

7. The average duration of disablement claims within the year is shown, in weeks, by Table 3.

TABLE 3.

Average number of weeks of disablement benefit within the year.

Central Age of Group.	M.U. (approx.). (1)	Selected Societies. (2)
22½	17.3	20.5
27½	20.6	21.6
32½	23.1	21.9
37½	27.3	24.3
42½	28.8	25.4
47½	30.0	26.3
52½	32.8	26.9
57½	34.2	29.7
62½	37.1	31.4

8. The average duration within the year is, of course, substantially less than the total duration of disablement benefit, since cases of prolonged disablement may extend over several years. In consequence the differences in average duration of claim in the two experiences are somewhat masked in the figures shown above.

By making certain assumptions it is possible to calculate approximately the average total duration of disablement claims, and the resulting figures are shown, in weeks, in Table 4 below.

TABLE 4.

Average total duration of disablement claims stated in weeks.

Central Age of Group.	M.U. (approx.). (1)	Selected Societies (approx.). (2)
22½	26	39
27½	33	44
32½	38	46
37½	51	56
42½	61	58
47½	67	62
52½	81	61
57½	91	72
62½	110	82

9. As might be anticipated the figures confirm those of Table 3, and emphasise the striking differences between the Manchester Unity Experience and that of the Selected Societies.

The duration under National Health Insurance conditions is the longer at the younger ages, but at the older ages the Manchester Unity duration is the greater. At ages over 50 the difference is considerable, and, combined with the smaller proportion of cases, as shown in Table 2 (cols. 3 and 4), explains the relatively favourable experience at these ages brought out in Table B (M.) appended to the Report of the Actuarial Committee.

The results given in Tables (3) and (4) seem consistent with the theory advanced above that the claims contain an appreciable element of "linked-up" illnesses, of relatively short duration, in regard to which the claimant has been disqualified during the year from receiving the higher rate of sickness benefit. This feature may help to explain the high figures shown in column (17) of Tables I, II and III.

10. In view of the rising cost of disablement benefit the "full proportion receiving"—Col. (4) of Table 2—and the "average duration"—Col. (2) of Table 3—have been computed for each of the years 1921, 1922 and 1923. To indicate the run of the figures from year to year it is sufficient to give general averages for all ages. These have been obtained for women (spinsters and widows) as well as for men, and the results are given below.

TABLE 5.

	Men.			Women (S. & W.).		
	1921	1922	1923	1921	1922	1923
Proportion receiving disablement benefit.	.018	.022	.023	.021	.024	.027
Average duration (weeks).	25.7	25.9	27.5	28.6	28.5	29.4

These results seem quite consistent with the theory that disablement benefit is growing towards the equilibrium that should be represented by the maturity of the experience. The proportion in receipt of the benefit grows because the new permanent cases in which the disablement benefit stage is reached are not yet balanced by deaths. The average duration shows, as would be expected if this theory is correct, a small upward tendency. The growth in the claims of men appears to show an indication to end, but no such feature is found in the case of women.

11. Reference is made in para. 9 above to the figures shown in Col. 17 of Tables I, II and III. These figures show for each age group the proportion of those receiving disablement benefit in a year who have "gone off the fund" during the year. These proportions are very instructive, and will dispel any idea that disablement claims in all cases arise out of permanent sickness. So far as men are concerned, it appears that on the average of the years 1921-23 about 45 per cent. of all who claimed disablement benefit in a particular year at ages under 40 ceased to draw it during that year. In the case of unmarried women, the corresponding proportion is about 40 per cent. Among married women, on the other hand, the proportion is over 50 per cent. In each class the proportion "going-off" diminishes as ages advance, but even at ages over 60 it is about 20 per cent.

12. There is no corresponding friendly society experience with which this feature can be compared and it is impossible to form an opinion therefore as to whether it is more prominent under compulsory insurance than under a voluntary system. In any case it seems to invite examination; it suggests that more active administration and especially an increased resort to the medical referee system might result in an earlier termination of many claims that are now prolonged for a brief period into disablement benefit, with resultant saving on both sickness and disablement claims.

13. The differences between the experiences of unmarried women and married women are particularly arresting. Comparison of Cols. (12) and (14) of Tables II and III respectively shows that among married women, both the proportion claiming sickness benefit and the duration of attack were considerably greater than in the case of unmarried women. Comparison of Col. (15) of the two Tables shows that the proportion of married women drawing disablement benefit was also greater, but on contrasting Col. (16) it is found that except at the higher ages the average duration of disablement benefit claims was much less among the married than among the unmarried. This is complementary to the excess in the proportion "going-off" among the married, but it seems quite inconsistent with the general features of the two bodies of experience and, taken in conjunction with the figures set out in the next paragraph, seems to suggest that societies are applying to the disablement claims of married women a degree of activity that might well be exerted, and at an earlier stage, on all claims of prolonged duration.

14. In view of the features shown by Col. (17) of each of the Tables I, II, and III, it was thought probable that instructive results would follow from an investigation of the after-history, up to the end of 1924, of a large number of cases in which insured persons had gone off the fund after drawing disablement benefit. It was not worth while in this connexion to investigate cases in which the "declaration off" had been so recent as 1923, while the necessary data were not available in respect of cases arising in 1921. The work was necessarily limited therefore to the 1922 cases, and even so it would have been prohibitively heavy had it extended over the whole field. A selection was therefore made of societies with a widely distributed membership and representing a substantial proportion of the whole of the data. This selection yielded 1062 cases of men, 609 of unmarried women and 214 of married women, who had ceased to receive disablement benefit in 1922. Each case was then traced through 1923 and 1924 and its benefit history in these years ascertained. The results are set out statistically in Tables IV, V and VI appended. It is proposed to give here no more than a summary of sufficient extent to indicate the conclusions obtained.

15. Taking first the 1062 cases of men it was found that in no fewer than 554 cases the insured person was again a claimant in 1923 and/or in 1924. In 400 of these cases he claimed in 1923 and 254 of the 400 claimed in 1924 as well as in 1923. Further, among the 400 who claimed in 1923, 289 had not been off the funds for 12 months since they ceased to claim in 1922 and these returned to disablement benefit. In 111 cases the member had been off the funds for the full 12 months and, on again claiming, drew sickness benefit. These cases constitute 11 per cent. of the whole number of "declarations off" disablement benefit in 1922. In 34 of them the insured person on resuming benefit drew sickness benefit for 26 weeks and then went on to disablement benefit. In 34 other cases among the 111 the average amount of sickness drawn in 1923 was 7 weeks and in the remaining 43 cases the insured person claimed both in 1923 and 1924 for an average total period of 14 weeks.

16. The same features present themselves in the women's experience. Of the 609 unmarried women who "declared off" disablement benefit in 1922, 286 returned to benefit in 1923 and/or in 1924. Of these, 200 again claimed in 1923 and 54 of them were able to claim sickness benefit. Of this latter number no fewer than 24 remained on the funds to draw the full 26 weeks of sickness benefit and then went on to disablement benefit.

Of the 214 married women who went off disablement benefit in 1922, 102 again claimed in one or other of the two following years, 49 of them claiming in both years. Of the 74 among these 102 who returned to benefit in 1923, 23 had been off the funds for 12 months and returned to sickness benefit; 5 of them remained on the funds for over 26 weeks.

17. It is thus evident that in respect of both men and women the cases of frequent claims (which include many prolonged claims) must account for an appreciable amount of the total expenditure on sickness and disablement benefits. From the point of view of public health as well as from that of administration there is undoubtedly much that deserves attention in this feature of the working of the Health Insurance system.

18. Another matter calling for attention, and in this case calling urgently, is the excess of the claims of married women over those of the unmarried. From Tables II and III (Col. 12) it will be seen that the relative proportions of the total membership claiming benefit in a year are as follows:—

Ages.	Percentage of Insured Women Claiming Sickness Benefit.	
	Married.	Unmarried.
20-25	32	16
25-30	24	14
30-35	21	13
40-45	21	14
50-55	23	16
60-65	28	20

At the younger ages there may be reason to explain some part of this difference, and in addition, possibly, the greater average length of the claim. But what reason which does not evoke serious reflections can explain the great excess at the higher ages. The figures given, moreover, are an average of the three years. The disproportion, either in the number of claims or in the duration of claim, is rapidly growing, for the main investigation shows that the relation of the average amount of the sickness claims of married women to that of the unmarried is becoming more unfavourable with each succeeding year. For example, at the important groups of ages 20-25, 25-30 and 30-35, the married women's rates of sickness are found to represent the following percentages of those of the unmarried class.

Ages.	1921.	1922.	1923.
20-25	242	284	299
25-30	174	198	242
30-35	158	171	198

On these figures it is impossible to resist the belief that the sickness claims of married women require more effective supervision than they are at present receiving.

The disablement benefit experience is singularly different from that of sickness benefit. Although the proportion of married women who draw disablement benefit is greater than the like proportion among unmarried women, the average duration of the disablement benefit claims among the unmarried is the greater at all ages, and it is much the greater at ages under 45. The figures suggest that the societies tend to concentrate attention on the claims of married women when these have reached the disablement stage. It would seem that a much more comprehensive policy of supervision is called for.

Government Actuary's Department,  
Treasury Chambers,  
Whitehall, S.W.1.  
September, 1925.

A. W. W.

MEN.

TABLE I.

Selected Societies Sickness Experience (Years 1921, 1922 and 1923 combined)

Number of Sickness and Disablement Benefit Claimants, Proportion Sick and Average Weeks of Sickness per Claimant.

Ages last birthday at beginning of year of exposure.	Sickness Benefit.				Disablement Benefit.				Sickness and Disablement Benefits.		
	Years of Life Exposed to Risk.	Number of Claimants.	Number of Claimants subject to waiting period of 1st 3 days.	Weeks of Sickness.	Years of Life Exposed to Risk.	Number of Claimants.	Weeks of Sickness.	Number of cases in which Disablement ceased in the Calendar year other- wise than by death.	Number of Claimants to both Sickness and Dis- ablement included in (2) and (6).	Number of Claimants all periods (2)+(6) —(9).	Weeks of Sickness all periods. (11).
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Under 20	165,154	26,651	21,867	93,499	102,772	538	9,040	267	367	26,222	102,539
20 and under	178,205	26,990	21,419	108,518	189,608	1,602	32,895	739	850	27,742	141,413
25 "	162,214	23,857	18,799	100,097	162,918	1,893	40,936	875	933	24,817	141,033
30 "	164,776	25,039	19,490	106,923	163,134	2,201	48,279	998	1,048	26,192	155,202
35 "	163,800	25,400	19,591	112,996	161,470	2,612	63,405	1,082	1,137	26,875	176,401
40 "	160,444	25,712	19,772	119,820	158,058	2,989	75,925	1,117	1,301	27,400	195,745
45 "	151,850	26,026	19,668	127,793	149,793	3,466	91,189	1,278	1,482	28,010	218,982
50 "	125,591	24,515	18,057	129,772	124,010	3,653	98,255	1,161	1,615	26,553	228,027
55 "	95,962	21,198	15,037	126,479	94,889	4,500	133,826	1,170	1,849	23,849	260,305
60 "	67,356	17,693	12,076	119,466	66,724	5,416	169,832	1,178	2,081	21,028	289,298
Total	1,435,352	242,481	185,776	1,145,363	1,373,376	28,870	763,582	9,865	12,663	258,688	1,908,945

Ages last birthday at beginning of year of exposure.	Sickness Benefit.			Disablement Benefit.			Sickness and Disablement Benefits.			
	Proportion Sick.	Proportion of Claimants subject to waiting period of 1st 3 days.	Average duration per Claimant in Calendar year.	Proportion Sick.	Average duration per Claimant in Calendar year.	Proportion of Claimants whose claims ceased in Calendar year otherwise than by death.	Proportion of Claimants to both Sickness and Disablement in Calendar year.	Average Duration per Claimant in Calendar year.	(11)÷(10)	(19)
	(2)÷(1) (12)	(3)÷(2) (13)	(4)÷(3) (14)	(5)÷(4) (15)	(6)÷(5) (16)	(7)÷(6) (17)	(8)÷(7) (18)	(9)÷(8) (19)	(10)	(11)
Under 20	.158	.839	3.6	.005	16.8	.496	.003	3.9		
20 and under 25	.151	.794	4.0	.008	20.5	.461	.004	5.1		
25 " " 30	.147	.788	4.2	.012	21.6	.462	.006	5.7		
30 " " 35	.152	.778	4.3	.013	21.9	.453	.006	5.9		
35 " " 40	.155	.771	4.4	.016	24.3	.414	.007	6.6		
40 " " 45	.160	.769	4.7	.019	25.4	.374	.008	7.1		
45 " " 50	.171	.756	4.9	.023	26.3	.369	.010	7.8		
50 " " 55	.195	.737	5.3	.029	26.9	.318	.013	8.6		
55 " " 60	.221	.709	6.0	.047	29.7	.260	.019	10.9		
60 " " 65	.263	.683	6.8	.081	31.4	.218	.031	13.8		
All ages ...	.169	.766	4.7	.021	26.4	.342	.009	7.4		



## SPINSTERS AND WIDOWS.

TABLE II.

*Selected Societies Sickness Experience (Years 1921, 1922 and 1923 combined).*

Number of Sickness and Disablement Benefit Claimants, Proportion Sick and Average Weeks of Sickness per Claimant.

Ages last birthday at beginning of year of exposure.	Sickness Benefit.			Disablement Benefit.			Sickness and Disablement Benefits.				
	Years of Life Exposed to Risk.	Number of Claimants.	Number of Claimants subject to waiting period of 1st 3 days.	Weeks of Sickness.	Years of Life Exposed to Risk.	Number of Claimants.	Weeks of Sickness.	Number of cases in which Disablement caused in the Calendar year other- wise than by death.	Number of Claimants to both Sickness and Dis- ablement included in (2) and (6).	Number of Claimants all periods (2) + (6) — (9).	Weeks of Sickness all periods.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Under 20	238,189	37,106	30,928	172,721	138,992	1,141	19,889	557	803	37,444	192,610
20 and under 25	232,488	36,261	28,408	188,194	222,692	3,488	84,101	1,621	1,749	38,000	272,295
25 " " "	134,749	18,525	14,437	108,516	129,329	2,936	84,237	1,104	1,213	20,248	192,753
30 " " "	87,304	11,544	9,016	72,028	83,743	2,140	65,130	741	822	12,862	137,158
35 " " "	67,315	8,653	6,575	58,572	64,531	1,822	52,983	671	732	9,743	111,555
40 " " "	55,114	7,500	5,712	53,011	52,859	1,668	50,351	542	678	8,490	103,362
45 " " "	46,019	6,814	5,061	50,299	44,239	1,608	48,457	528	656	7,766	98,756
50 " " "	34,422	5,563	4,083	42,608	33,068	1,476	45,904	442	585	6,454	88,512
55 " " "	25,612	4,434	3,197	36,602	24,697	1,544	53,017	354	567	5,411	89,619
60 " " "	17,696	3,576	2,485	31,406	17,166	1,655	58,250	319	570	4,661	89,656
Total	938,908	139,976	109,902	813,957	811,316	19,478	562,319	6,879	8,375	151,079	1,376,276

Ages last birthday at beginning of year of exposure.	Sickness Benefit.			Disablement Benefit.			Sickness and Disablement Benefits.		
	Proportion Sick. (2)÷(1) (12)	Proportion of Claimants subject to waiting period of 1st 3 days. (3)÷(2) (13)	Average duration per Claimant in Calendar year. (4)÷(2) (14)	Proportion Sick. (6)÷(5) (15)	Average duration per Claimant in Calendar year. (7)÷(6) (16)	Proportion of Claimants whose claims ceased in Calendar year otherwise than by death. (8)÷(6) (17)	Proportion of Claimants to both Sickness and Disablement in Calendar year. (9)÷(6) (18)	Average Duration per Claimant in Calendar year. (11)÷(10) (19)	
Under 20	.156	.834	4.7	.008	17.4	.488	.006	5.1	
20 and under 25	.156	.783	5.2	.016	24.1	.465	.008	7.2	
25 " " 30	.137	.779	5.9	.023	28.7	.376	.009	9.5	
30 " " 35	.132	.781	6.2	.026	30.4	.346	.010	10.7	
35 " " 40	.129	.760	6.8	.028	29.1	.368	.011	11.4	
40 " " 45	.136	.762	7.1	.032	30.2	.325	.013	12.2	
45 " " 50	.148	.743	7.4	.036	30.1	.328	.015	12.7	
50 " " 55	.162	.734	7.7	.045	31.1	.299	.018	13.7	
55 " " 60	.173	.721	8.3	.063	34.3	.229	.023	16.6	
60 " " 65	.202	.695	8.8	.096	35.2	.193	.033	19.2	
All ages ...	.149	.785	5.8	.024	28.9	.353	.010	9.1	

## MARRIED WOMEN

TABLE III.

Selected Societies Sickness Experience (Years 1921, 1922 and 1923 combined).

Number of Sickness and Disablement Benefit Claimants, Proportion Sick and Average Weeks of Sickness per Claimant.

Ages last birthday at beginning of year of exposure.	Sickness Benefit.			Disablement Benefit.				Sickness and Disablement Benefits.			
	Years of Life Exposed to Risk.	Number of Claimants.	Number of Claimants subject to waiting period of 1st 3 days.	Weeks of Sickness.	Years of Life Exposed to Risk.	Number of Claimants.	Weeks of Sickness.	Number of cases in which Disablement ceased in the Calendar year otherwise than by death.	Number of Claimants to both Sickness and Disablement included in (2) and (6).	Number of Claimants all periods — (9).	Weeks of Sickness all periods.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Under 20	2,063	1,029	779	7,538	1,818	39	365	29	32	1,036	7,903
20 and under 25	22,466	7,152	5,255	50,325	18,261	575	8,408	371	384	7,343	58,733
25 " " 30	41,720	9,978	7,396	69,306	33,222	917	15,851	546	531	10,364	85,157
30 " " 35	41,375	8,855	6,517	60,157	33,281	920	19,219	485	500	9,275	79,376
35 " " 40	37,592	7,894	5,728	55,218	31,675	1,078	23,251	531	546	8,426	78,469
40 " " 45	31,985	6,716	4,898	48,470	27,775	1,114	27,330	473	564	7,266	75,800
45 " " 50	28,727	5,085	3,525	38,080	21,009	1,087	30,526	404	475	5,697	68,606
50 " " 55	15,543	3,611	2,549	27,343	14,045	948	27,656	318	388	4,171	54,999
55 " " 60	9,893	2,428	1,668	19,217	9,216	740	23,300	216	296	2,872	42,517
60 " " 65	5,784	1,625	1,072	13,747	5,506	734	25,398	136	230	2,079	39,145
Total	232,148	54,373	39,487	389,401	195,808	8,152	201,304	3,509	3,996	58,529	590,705

54702

Ages last birthday at beginning of year of exposure.	Sickness Benefit.			Disablement Benefit.			Sickness and Disablement Benefits.		
	Proportion Sick.	Proportion of Claimants subject to waiting period of 1st 3 days.	Average duration per Claimant in Calendar year.	Proportion Sick.	Average duration per Claimant in Calendar year.	Proportion of Claimants whose claims ceased in Calendar year otherwise than by death.	Proportion of both Sickness and Disablement in Calendar year.	Average Duration per Claimant in Calendar year.	
	(2)÷(1) (12)	(3)÷(2) (13)	(4)÷(3) (14)	(6)÷(5) (15)	(7)÷(6) (16)	(8)÷(7) (17)	(9)÷(8) (18)	(11)÷(10) (19)	
Under 20	.499	.757	7.3	.021	9.4	.744	.018	7.6	
20 and under 25	.318	.735	7.0	.031	14.6	.645	.021	8.0	
25 " 30	.239	.741	6.9	.028	17.3	.595	.016	8.2	
30 " 35	.214	.736	6.8	.028	20.9	.527	.015	8.6	
35 " 40	.210	.726	7.0	.034	21.6	.493	.017	9.3	
40 " 45	.210	.729	7.2	.040	24.5	.425	.020	10.4	
45 " 50	.214	.713	7.5	.052	28.1	.372	.023	12.0	
50 " 55	.232	.706	7.6	.067	29.2	.335	.038	13.2	
55 " 60	.245	.687	7.9	.080	31.5	.292	.032	14.8	
60 " 65	.281	.660	8.5	.133	34.6	.185	.051	18.8	
All ages ...	.234	.726	7.2	.042	24.7	.430	.020	10.1	

2

TABLE IV.  
MEN.  
*Analysis of after-history (in 1923 and 1924) of members of certain societies who ceased to draw disablement benefit in 1922 otherwise than by death.*

	Number who ceased to draw Disablement Benefit in 1922 (excluding deaths).	Number of those in col. (1) who drew further Benefit in 1923 and/or 1924.	Number of those in col. (2) who				Average duration of Sickness per claimant in			
			(a) drew further Disablement Benefit only (not having had a year's off-period).	(b) had an off-period of at least a year and then		(c) drew further Disablement Benefit in 1923, then had an off-period of at least a year and then drew Sickness Benefit.	Col. (3) Disablement.	Col. (4) Sickness.	Col. (5) 26 weeks Sickness, rest Disablement.	Col. (6) Disablement and Sickness.
			(3)	(1) drew Sickness Benefit only.	(2) drew Sickness Benefit and further Disablement Benefit.					
(i) Ages 16-40	330	170	70	76	13	11	29.0	8.3	37.3	12.4
(ii) " 41-60	538	285	140	105	28	12	33.6	9.0	39.0	11.7
(iii) " 61-70	194	99	53	28	15	3	37.8	9.7	52.9	5.3
(iv) all ages...	1,062	554	263	209	56	26	33.2	8.8	42.4	11.2
Analysis of (iv) claimants in { 1923 only 1924 only both years	—	146	112	34	—	—	11.5	7.0	37.4	—
	—	154	—	132	22	—	49.4	7.6	45.6	—
	—	254	151	43	34	26		14.1		11.2

TABLE V.  
SPINSTERS AND WIDOWS.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(i) Ages 16-40	360	175	81	65	23	6	28.7	8.3	44.7	13.9
(ii) " 41-60	201	87	45	30	11	1	43.4	10.3	46.6	5.0
(iii) " 61-70	48	24	13	8	3	—	46.6	11.0	36.3	—
(iv) all ages...	609	286	139	103	37	7	35.1	9.1	44.6	12.6
Analysis of (iv) claimants in { 1923 only 1924 only both years	—	64	50	14	—	—	12.9	8.0	—	—
	—	86	—	73	13	—	—	8.8	35.5	—
	—	136	89	16	24	7	47.6	11.6	49.5	12.6

TABLE VI.  
MARRIED WOMEN.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(i) Ages 16-40	116	59	28	25	2	4	22.4	7.0	34.0	20.7
(ii) " 41-60	88	39	14	18	4	3	23.4	13.2	41.0	8.3
(iii) " 61-70	10	4	2	2	—	—	88.5	22.0	—	—
(iv) all ages...	214	102	44	45	6	7	25.7	10.2	38.7	15.5
Analysis of (iv) claimants in { 1923 only 1924 only both years	—	25	19	6	—	—	11.9	9.2	—	—
	—	28	—	27	1	—	—	9.2	35.0	—
	—	49	25	12	5	7	36.2	12.7	39.4	15.5

## SECOND REPORT OF THE DEPARTMENTAL ACTUARIAL COMMITTEE.

To the Right Honourable Lord LAWRENCE OF KINGSGATE,  
Chairman of the Royal Commission on National Health Insurance.

MY LORD,

WE submit the following Report on the Questions referred to us in the Secretary's letter of the 20th November, 1925:—

### I.—SICKNESS BENEFIT.

1. We are asked to advise as to the cost of raising the standard rates of sickness benefit for men and women respectively to the rates of unemployment benefit. These rates are 18s. a week for a man and 15s. a week for a woman. We assume that in the first two years of insurance the present sickness benefit of 9s. and 7s. 6d. a week respectively, being one-half of the rates above stated, would be retained. We assume, further, that in the event of the sickness benefit being increased the rate of disablement benefit would be increased to 9s. in the case of men, thus retaining the present relation between sickness and disablement benefits. In the case of women, where the available margin in the contribution is relatively very small, we assume that disablement benefit would remain at its present amount of 7s. 6d. a week. On this basis the rate of disablement benefit would be half the rate of sickness benefit for both sexes.

2. In paragraph 30 of our Report of 13th October, we set out the full contributions required on the assumption that existing benefits would be retained and that new charges taking the form of a payment throughout life of 7s. a year per insured man and 3s. 9d. a year per insured woman would be added to the liabilities. We now understand that the Commission has decided to recommend that charges in respect of medical benefit amounting to 3s. a year per insured person throughout life shall be placed on the ordinary benefit funds. Apart, therefore, from such further benefits as may be added to the scheme, the necessary contributions to provide for seven-ninths of the liabilities would be as follows:—

	Men.	Women.
	d.	d.
Benefit Fund ... ..	7·15	7·49
Reserve Values ... ..	·71	·60
Contingencies Fund ... ..	·25	·25
	8·11	8·34

The proposed extension of sickness and disablement benefit would add about £14,500,000 to the Reserve Values and would involve the following additions to the above contributions:—

	Men.	Women.
	d.	d.
Benefit Fund ... ..	·60	·58
Reserve Values ... ..	·30	·17
	·90	·75

The full contributions required would thus be brought up to 9·01d. (men) and 9·09d. (women). The present contribution is 9d. for a man and 8½d. for a woman. The suggested extension of sickness and disablement benefit would therefore be almost exactly covered in the case of men without an increase of the present contribution provided that the contributions to the Contingencies Fund were not increased as a consequence of the increase of one-fifth in the rates of sickness and disablement benefits. So far as women are concerned, the contribution would have to be increased to at least 9d. a week, and if it were no higher than this rate a reduction in the contribution of women to the Contingencies Fund from 25d. per week to 16d. would be necessary. In our previous report (paragraph 27) we stated reasons which led us to the conclusion that the contribution to the Contingencies Fund should be the same for persons of both sexes. Apart from the question of equity which is involved we should view with some apprehension any alteration which substantially reduced, in the case of either sex, the low rate at which we have recommended that the future contribution to the Contingencies Fund should be fixed, even if no extension of risk connected with an increase of benefits were contemplated.

### II.—DISABLEMENT BENEFIT.

3. As an alternative to 1, the possibility of an increase of disablement benefit only is submitted to us for examination. So far as men are concerned, we pointed out in paragraph 17 of our previous report that the expenditure on this benefit appeared likely to become stabilised at 33½ per cent. above the average of the Selected Societies' Experience in the years 1921-23. This conclusion was, however, founded on observations of expenditure at the rate of 7s. 6d. a week, and we cannot assume that if in cases of protracted sickness this rate were materially raised, with a consequent reduction of the difference between the rates of sickness benefit and disablement benefit, the volume of claims for disablement benefit or their average duration would remain unaffected. In computing the liability involved in an increase of the rate of benefit we feel compelled, therefore, to provide for a greater amount of claims than will arise with the benefit at its present rate. The extent of the further provision to be made to meet this factor is a point of great difficulty. We do not think that until actual experience has been gained of the cost of the benefit under the new conditions it can safely be put at less than 20 per cent. If it be taken at this rate the margin in the contribution would permit of an increase in the benefit of 2s. 6d. a week. We recommend, therefore, that if it should be decided to apply the available margin to the increase of disablement benefit, the rate of this benefit should not be raised to more than 10s. a week in the case of men.

4. In the case of women, the margin in the contribution is only 16d. a week (after providing for the increased cost of medical benefit), and it is sufficient to say that this margin, with the related State grant, would not allow of the increase of the present disablement benefit of 7s. 6d. a week by more than ninepence.

### III.—BENEFIT TO DEPENDANTS.

5. We are asked to advise on the cost of providing allowances, similar to those under the Unemployment Insurance scheme, in respect of the wives and children of insured persons in receipt of sickness or disablement benefit. We assume, in regard to the wives of insured men, that the proposal is to pay the dependants' benefit in all cases in which an insured man is married, not excluding those cases in which the wife is herself a wage earner. Such a wife is not ordinarily a dependant for the purpose of Unemployment benefit, but if it were proposed to exclude her from this benefit under the Health Insurance system, while retaining the "flat rate" contribution for the whole body of insured men, a point of some difficulty in the financial operation of the system would arise.



We estimate that of the married men who are insured under the scheme of National Health Insurance about one-seventh have wage-earning wives. The distribution of this class of wives with reference to industry as a whole is, however, very uneven, a large proportion of the whole number being employed themselves, and being the wives of men employed in the textile industry, while among other industries, as for example, coal-mining, the employment in industry of the wife of the insured man is very rare. It follows that if wage-earning wives were excluded from the definition of dependants and financial provision made accordingly, the present deviations from the general average, which result from the system of insurance through approved societies, would be accentuated. At the same time we do not regard the point as one of such importance as to justify us in advising that dependants' benefits should be insured through a central fund, with all the complications of finance and administration that such an arrangement would involve. The alternative is to provide actuarially for the payment of the benefit in all cases in which an insured man is married, in which event a small margin would enure to the financial advantage of the societies concerned should it be decided to exclude the employed wife from the definition of a dependant.

6. With regard to children the qualification in the Unemployment Insurance and Widows' &c., Pensions Acts is that the child is under the age of 14 or the age not exceeding 16 up to which the child remains under full-time instruction in a day school. In view, however, of the administrative difficulties which would arise in establishing the dependency of children over the age of 14, we are asked to frame our estimates on the basis that benefit would be limited to cases of children not exceeding the age of 14. Further, we are instructed that in all cases children should be regarded as dependent upon the father only, whether he is insured or not and without regard to the question whether the mother is herself insured.

7. The estimates set out below relating to insured men provide therefore for the payment of sickness or disablement benefit in all cases in which the man is married or, being a married man or widower, has children under the age of 14. The special data required are given in Tables B and D of the Report of the Government Actuary on the Contributory Pensions Bill (Cmd. 2406). In other respects the basis of the calculations is in conformity with that adopted for our previous estimates as explained in our Report of 13th October, 1925.

We have ascertained in the first instance the contribution necessary to provide for sickness benefit for dependants at the rates of the Unemployment Insurance scheme, namely, 5s. a week for a wife and 2s. a week for each child, with one-half of these rates during disablement benefit, with an additional allowance of 5s. a week (corresponding to the wife's benefit in the case of a married man) for a widower with children. The administration of benefits of this type would, we presume, impose some additional labour on the approved societies; we have accordingly assumed that it would be necessary to make some increase in the present administration allowance, and for this purpose have assumed that the rate of 4s. 5d. would be increased to 4s. 8d. We estimate that the necessary contribution for seven-ninths of the new charges would be as follows:—

	d.
To the Benefit Fund per week ...	1·00
To Reserve Values ...	·60
	<hr/> 1·60

As we have explained earlier in this Report, the contribution required to support the present liabilities of the system, with a further charge of 3s. a year in respect of medical benefit is 8·11d. a week. If to this

rate of 8·11d. there is added seven-ninths of the cost of dependants' benefits for wives and children at the rates above set out the total contribution required is brought up to 9½d. a week, being an increase of ¾d. a week over the present joint contribution of employer and worker.

It will be observed that the actual margin in the present contribution after providing for the extra 3s. for medical benefit is 89d. per week, being the difference between 9d. and 8·11d. We find that this margin, with the related State grant, would be sufficient to provide an addition of 2s. a week to sickness benefit and of 1s. a week to disablement benefit in respect of the wife of an insured man (corresponding sums being available in the case of a widower with children) and the same sums in respect of each child of a married man or widower; the administration allowance being increased as explained above.

8. As regards insured women, we are instructed, as stated above, that in the case of an insured married woman her children are to be regarded as dependent on her husband, whether he is insured or not. We are asked to advise as to the weekly addition to sickness benefit (with one-half the addition to disablement benefit) which the margin in the women's contribution would provide in respect of each child under the age of 14 of an insured widow and in respect of the dependent widowed mother of an unmarried insured woman. We have assumed that the latter category may include widows.

As stated in paragraph 4, the margin in the woman's contribution after providing for a further charge of 3s. a year in respect of medical benefit is 16d. per week. We find that this margin is sufficient to provide an addition to sickness benefit of 2s. a week and to disablement benefit of 1s. a week for the classes of dependants mentioned, with the same increase in the allowance for administration as stated above.

We are, My Lord,

Your obedient Servants,

ALFRED W. WATSON (*Chairman*).

A. D. BESANT.

LOUIS E. CLINTON.

ALFRED HENRY.

R. G. MAUDLING.

M. B. KNOWLES (*Secretary*).

7th December, 1925.

### THIRD REPORT OF THE DEPARTMENTAL ACTUARIAL COMMITTEE.

To the Right Honourable Lord LAWRENCE OF KINGSGATE,  
Chairman of the Royal Commission on National Health Insurance.

MY LORD,

1. We have received from the Secretary to the Royal Commission a request to advise on the question of the cost which would be involved in replacing the present maternity benefit by a new service to include all necessary medical attendance during pregnancy, the services of a midwife and (where required) a doctor at confinement, ante-natal and post-natal examinations and a money payment. An estimate of the fees to be paid to doctors and midwives under various headings of the projected service has been prepared by the Ministry of Health, and we have taken these estimates, which we are, of course, not in a position to review, as the basis of our calculations. At the present stage we have deemed it sufficient to take the cash payment as £1.

2. The problem is complicated by considerations as to the liability to be provided for in those cases in which both husband and wife are insured. The new services will only have to be provided in respect of one insurance and the question arises whether in the case where both are insured the provision should be made under the insurance of the husband or under that of the wife. Having regard to the amounts of the available margin in the respective contributions of men and of women, we have assumed that the liability would be placed upon the husband's insurance.

3. A somewhat analogous question arises as to the cost of ordinary medical attendance during pregnancy. In this case a married woman who is herself insured is entitled to this service as part of medical benefit, and we assume it to be inexpedient that this arrangement should be disturbed. So far, therefore, as concerns this particular item in the services proposed to be given, we assume that a charge will only be imposed on the insurances of men to cover the cases in which the wives are not insured.

4. The several items of the service, with their estimated cost which have been supplied to us, are as follows:—

	s.	d.
(1) Fee to midwife ... ..	30	0
(2) Fees for ante-natal and post-natal examinations ...	10	0
(3) Fee for risk of doctor's personal attendance on confinement ... ..	5	0
(4) Fee for medical attendance during pregnancy ...	10	6

To these should be added:

(5) Cash benefit, which is taken at ... ..	20	0
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5. The various combinations of these items which arise and the distribution of their cost are as follows:—

(A) *Husband insured: wife uninsured.*

The charge of £3 15s. 6d., comprising items (1) to (5), arises and falls on the husband's society in lieu of the present provision of £2—an additional liability of £1 15s. 6d.

(B) *Husband insured: wife insured.*

Item No. (4) is covered by existing medical benefit provided by the wife's society. The husband's society will, therefore, bear a charge of £3 5s. It is assumed that as the wife is independently insured a sum of £1 in cash will be paid to her by her society in addition to the payment of £1 by her husband's society. At present a payment of £2 is made by both the husband's society and the wife's society. The new provision thus represents an increase in the liability on the former of £1 5s. and a decrease in the liability on the latter of £1.

(C) *Husband uninsured: wife insured.*

The new medical charges (items (1)-(3)) will amount to £2 5s., item (4) being already covered.

As regards the cash benefit, under the existing Act an *employed* married woman's society pays two maternity benefits of £2 each in the exceptional case in which the husband is not an insured person. This provision does not, however, apply in the case of a woman who has ceased to be employed on marriage, and who is entitled to special benefits for a limited period (Class K).

The provision of a double benefit from the one society in the case under consideration has been much criticised, and in view of the fact that under the proposals before us the woman's society would have to pay £2 5s. for new medical services in this case, whereas it would have to pay nothing under this head where the husband was also insured, we consider that the double cash payment by the woman's society, where the husband is not insured, should be terminated. The new cash benefit, where the woman only was insured, would thus be limited to a single sum of £1 both for the employed married woman and the "Class K" woman, making a total payment of £3 5s. in each case. The society would thus pay 15s. less in the case of an employed married woman and £1 5s. more in the case of a "Class K" woman than at present.

(D) *Unmarried Women.*

The new services would be items (1), (2), (3) and (5), No. (4) being already covered by medical benefit.

6. The relative numbers of the cases A, B and C have next to be considered. As a preliminary, it is necessary to determine the proportion of married women, either employed or "Class K," whose husbands are not insured. We find that in settling the present financial basis of the system the former Actuarial Advisory Committee assumed that one-tenth of the married women who were employed contributors would have uninsured husbands and, on such facts as we have been able to obtain, we do not consider that any other proportion would be more appropriate. As regards the women of "Class K," we recognise the probability that among this class, consisting of recently married and therefore, for the most part, young women, the proportion whose husbands are not insured would be materially less than that obtaining among the married women who are working for employers. The question of discrimination is not, however, of material importance to the estimates of cost (though the matter assumes another aspect in regard to the arrangements to be made to meet the actual cost of the medical service contemplated), and we propose, therefore, to adopt the same proportion, namely, 10 per cent.

7. Coming now to actual numbers, we have obtained the following estimate, on the basis of the rates of issue adopted in our first Report,

of the expected number of claims for maternity benefit in Great Britain in the year 1926:—

I. Wives of insured men	...	...	684,000
II. Insured married women	...	...	94,000
III. " " " (Class K)	...	...	91,000
IV. Insured unmarried women	...	...	15,000

Since 90 per cent. of II and III, or 166,500, are also included (as estimated) in I, there are taken to be 517,500 confinements of uninsured wives of insured men, or say 76 per cent. The average liability falling on a man's society in respect of the confinement of a wife of one of its members is therefore:—

76 per cent. of £3 15s. 6d. (Case A)	...	...	£ 2·87
24 per cent. of £3 5s. (Case B)	...	...	·78

3·65

Towards which the present maternity benefit provides	...	...	2·00
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Further provision required	...	...	1·65
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The average liability falling on a woman's society in respect of the confinement of an insured married woman is:—

90 per cent. of £1 (Case B)	...	·900
10 per cent. of £3 5s. (Case C)	...	·325

1·225

Against which there is a present (average) provision of	...	2·200 (2·0 "Class K")
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The new provision therefore involves a reduction of	...	·975 (·775 "Class K")
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In the case of an unmarried woman the new charge on her society is £3·25 against a present provision of £2: increase, £1·25.

8. The effect of these provisions on the contributions, including the necessary adjustments of the contributions applicable to the service of Reserve Values, and after making allowance for the State grant, is as follows:—

(a) The necessary increase of contribution in respect of men is 44d. per week. We have previously reported that after providing an additional 3s. per year (throughout life) in respect of medical benefit the contribution required for existing benefits is 8·11d. a week, leaving a margin of 89d. The projected new provision in respect of maternity services would therefore absorb almost exactly one-half of this margin. This estimate would, however, be varied if the cash payment of £1 to the mother, on her confinement, were altered.

(b) In the case of women, the saving on the present payments in respect of married women would much more than counterbalance the additional expenditure on the cases arising among unmarried women. The net effect would be to reduce the requisite contribution for all benefits from its present figure of 8·34d. to 8·23d., thus increasing the margin from 16d. to 27d.

The annual sum (inclusive of State grant) which would emerge if these margins were applied to provide benefits throughout life would be about £1,050,000 in the case of men and £300,000 in the case of women.

9. It will be seen that we have related the charges arising under the new proposals to the expected number of claims for maternity benefit. We understand, however, that charges in respect of certain of the items of medical service would arise in cases of miscarriage, particularly where there is no present liability to provide medical benefit. We have made enquiries as to the probable weight of these charges, and are advised that relatively to the total number of cases they are likely to be few in number and are expected to involve a very small addition to the total cost. We deem it unnecessary, therefore, to make specific provision for this factor, regard being had to the small margins which are likely to arise in respect of other elements in the cost of the scheme.

10. While we have found ourselves able to supply a reasonably close estimate of the cost of the proposed new services on the aggregate resources of the Approved Societies, we have become impressed in the course of our work by the fact that difficult administrative problems are involved in the scheme and that the methods adopted for the solution of these must to some extent affect its financial incidence. We have shown that as between different types of cases, e.g., where the husband of an insured woman is himself insured or is not insured, there are considerable differences in the liabilities respectively falling upon particular societies. There are, however, no records in the system of National Health Insurance with reference to the insurable status of spouses, and it is not easy to see how in these circumstances the total charges can be distributed equitably between the different societies. Whether the distribution should be effected on some approximate basis, or whether an exact distribution should be attempted seems to involve the question whether widespread enquiries as to the insured status of wives and husbands of insured persons could be undertaken with the hope of success and without prohibitive cost. We cannot ourselves pursue this point further, but submit it to the Royal Commission as one which would have to be dealt with if the projected extension of services were undertaken.

11. One other point in connection with this reference remains to be mentioned. It has been assumed that an insured married woman is to be entitled to medical benefit throughout the period of pregnancy. In fact, the woman in "Class K" is entitled to maternity benefit on her first confinement after marriage if it occurs within two years of the date of marriage, while her title to medical benefit runs to a particular 30th June or 31st December, as dictated by the date on which she ceased to be employed, and may therefore cease in some cases before her confinement. We understand it to be intended that the new services would be available for all women at present entitled to maternity benefit while in "Class K"; it would, therefore, seem that the provisions of the Act as to medical benefit in these cases should be examined.

We are, My Lord,

Your obedient Servants,

ALFRED W. WATSON (*Chairman*).

A. D. BESANT.

LOUIS E. CLINTON.

ALFRED HENRY.

R. G. MAUDLING.

M. B. KNOWLES (*Secretary*).

18th December, 1925.

## APPENDIX B.

Alphabetical List of Persons and Representative Bodies by  
whom evidence was submitted to the Commission.

## I.—PERSONS.

Witness.	Statement of Evidence. Pages in Appendix to Minutes of Evidence.	Oral Evidence. Pages in Minutes of Evidence.
Addy, T. J. ...	584-585	987-990
Arbuckle, W. ...	579-581	961-969
Asher, A. ...	553-555	915-921
Aves, O. ...	500-511	836-847
Badcock, J. H. ...	259-264	432-447
Bailey, H. ...	213-217	306-319
Barker, Miss J. C. ...	565	944-951
Barker, W. B. ...	518-524	855-861
Barnby, J. H. ...	598-599	1024-1028
Baskett, B. G. M. ...	748-749	—
Bateman, F. W. ...	511-517	847-855
Bickerton-Edwards, W. ...	436-438	778-783
Bilbey, V. L. ...	421-424	646-649
Blizard, G. P. ...	614-622	1047-1066
Bolam, R. A. ...	443-461	693-735
Bott, E. G. ...	594-595	1019-1021
Bowden, L. ...	585-586	991-1000
Bowen, W. F. ...	295-297	519-527
Brackenbury, H. B. ...	443-461	693-735
Braithwaite, W. J. ...	612-613	1043-1047
Bremner, Miss G. ...	563-564	940-944
Brenchley, A. D. ...	594-595	1019-1021
Broadbent, B. ...	275-276	478-482
Brock, L. G. ...	76-101	44-87
	170-172	
	664-674	1160-1194
	674-683	1229
Buchan, J. J. ...	493-497	807-818
Buchanan, J. C. ...	497-498	819-826
Bunnett, F. ...	587-588	1000-1004
Butterfield, F. ...	295-297	519-527
Cadell, H. F. ...	560-563	930-940
Cameron, Miss A. H. ...	440-442	687-693
Canter, G. W. ...	252-259	413-432
	614-622	1047-1066
Cardale, H. J. ...	443-461	693-722
Cave, J. ...	210-213	293-305
Chambers, T. ...	431-434	661-668
Clements, P. A. ...	585-586	991-1000

Witness.	Statement of Evidence. Pages in Appendix to Minutes of Evidence.	Oral Evidence. Pages in Minutes of Evidence.
Cohen, J. ...	566-576	951-959
Collins, E. T. ...	524-527	861-869
Colyer, Sir F. ...	264-268	447-455
Comber, C. T. ...	480-482	755-766
Condry, A. H. ...	271-275	465-478
Conway, W. ...	492-493	798-806
Corbey, E. ...	614-622	1047-1066
Cox, A. ...	443-461	693-735
Cox, G. Lissant ...	622-624	1067-1070
Crew, T. ...	362-367	591-595
Dain, H. Guy ...	443-461	693-735
Daniels, F. W. ...	242-249	371-392
		409-413
Davis, C. ...	461-480	735-755
	547-548	893-905
Davis, S. G. ...	461-480	735-755
Deacon, H. W. ...	497-498	819-826
Dobson, Dr. Margaret B. ...	511-517	847-855
Donaldson, J. ...	593	1010-1019
Doubleday, Miss E. ...	565	944-951
Dudley, H. ...	177-200	140-188
Duff, S. L. ...	200-203	189-218
Duncan, J. ...	213-217	306-319
Dutton, T. ...	767	—
Eason, H. L. ...	527-531	869-875
Emmott, Lady ...	277-285	482-489
England, E. E. ...	249	392-400
Falconer, J. ...	300-302	544-552
Farmer, E. C....	285-289	489-499
Farris, W. ...	624-630	1070-1076
Fish, E. W. ...	264-268	447-455
Fisher, J. H. ...	524-527	861-869
Fletcher, Miss A. E. ...	547-548	893-905
Forrest, J. ...	500-511	836-847
Fox, F. ...	635-637	1084-1089
Francis, H. W. S. ...	674-683	1178-1194
Fraser, D. C. ...	292-295	511-519
Gaugain, Sir H. ...	622-624	1067-1070
Gilligan, Miss M. ...	565	944-951
Glyn-Jones, Sir W....	694-696	1204-1216
	763-764	—
Gold, J. ...	218-222	320-331
Goodacre, C. ...	362-367	591-595
Goodwin, F. A. ...	438-440	675-687
Gordon, A. ...	232-241	351-371
	277-285	482-489
Gordon, J. C. Lee ...	312-315	571-580
Grant, H. D....	547-548	898-905



<i>Witness.</i>	<i>Statement of Evidence. Pages in Appendix to Minutes of Evidence.</i>	<i>Oral Evidence. Pages in Minutes of Evidence.</i>
Greenyer, V. T. ...	480-482	755-766
Gregg, E. A. ...	461-480	735-755
Gregg, F. T. ...	500-511	836-847
Gregorson, J. A. ...	696-701	1216-1229
Grieve, J. ...	435-438	668-675
Hadow, Sir H. ...	498-499	826-830
Hall, G. Rome ...	750-752	—
Hall, J. ...	547-548	898-905
Hambleden, Viscount	497-498	819-826
Hamilton, A. ...	491-492	791-798
Hamilton, Miss M. W. ...	440-442	687-693
Harford, C. F. ...	527-531	869-875
Harman, N. B. ...	443-461	723-724
Hatton, J. ...	635-637	1084-1089
Heather, E. ...	206-210	267-292
Henderson, J. C. ...	555-560	922-929
Henry, A. ...	595-598	1021-1024
Hibbert, E. ...	223-230	332-341
Hilbery, Miss M. A. ...	638-639	1089-1095
Hill, J. R. ...	548-553	905-915
Hill, Sir N. ...	302-311	552-568
	311-312	568-571
Hilton, J. E. ...	438-440	675-687
Hodgson, S. ...	443-461	724-726
Holdway, E. G. ...	250-251	392-400
Holmes, D. ...	491-492	791-798
Howkins, C. H. ...	271-275	465-478
Hubback, Mrs. ...	645-646	1104-1107
Huntley, T. W. ...	599-606	1028-1037
Huntrods, W. ...	541-542	888-894
Hutchinson, A. ...	541-542	888-894
Hyde, W. ...	297-300	527-544
Illingworth, J. P. ...	210-213	293-305
Jeffrey, J. ...	115-157	87-121
Jones, F. L. ...	367-401	595-625
	413-414	—
Jones, R. H. ...	743-745	—
Kershaw, F. ...	614-622	1047-1066
Kewley, W. ...	499-500	830-836
Kinnear, Sir W. ...	3-75	1-43
	158-170	1130-1194
	664-674	—
	674-683	—
Lamb, S. R. ...	498-499	826-830
Leach, R. A. ...	607-612	1037-1043
Legge, Sir T. M. ...	424-431	649-661
Leishman, Sir J. ...	115-157	87-121
	684-693	1195-1204

<i>Witness.</i>	<i>Statement of Evidence. Pages in Appendix to Minutes of Evidence.</i>	<i>Oral Evidence. Pages in Minutes of Evidence.</i>
Lesser, H. ...	419-421	631-646
	639-645	1096-1104
Lewis, H. E. ...	414-417	625-629
Lewis, J. P. ...	177-200	140-188
	—	349-351
Lloyd, F. G. ...	—	—
Lyster, R. A. ...	493-497	807-818
MacIachlan, A. B. ...	674-683	1178-1194
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