

MEDICO-ACTUARIAL MORTALITY INVESTIGATION.

Effect of Occupation on Mortality in one Hundred and Sixty-Eight Classes—Only those Investigated for which there was Considerable Demand—Two Groups Made "Required" and "Optional."

The third volume of the report of the joint committee on the Medico-Actuarial Mortality Investigation has been published and will be found fully as valuable as the preceding volumes. As is well known this investigation is being conducted by the Association of Life Insurance Medical Directors and the Actuarial Society of America through a joint committee. This third volume deals with the Effect of Occupation on Mortality.

OCCUPATIONS SELECTED.

When the plans were being prepared for the investigation the committee requested suggestions from the actuaries, medical directors and other officers of the forty-three companies invited to contribute their statistics. There were fully 600 suggestions made as to the occupations which it would be desirable to investigate. From these the committee selected 168, which were divided into two sets—one comprising the occupations suggested by a number of the companies, and the other, those for which there was little demand, or for which it was not believed that a sufficient amount of data existed at the time the investigation was commenced. The former were designated "Required," and the latter "Optional" occupations, for the reason that the companies were all required to give their experience in the former class, while it was optional in the latter class.

COMPANIES' DIFFERENT CUSTOMS.

The occupation was taken as of the date of application for the insurance, and no subsequent changes were recorded. This was considered to be the practical course in view of the different customs of the companies. For example, one company charged extra premiums for hazardous occupations, and did not remove the extras on changes to favorable occupations until one year after the insured had left the former, and were proved by medical examination to be first-class risks. Another company charged a lien against the policy in certain occupations, and removed it without evidence of insurability after the insured had been a sufficient length of time in a non-hazardous occupation to justify the expectation that he would not again enter his original or any hazardous occupation.

SLIGHTLY HAZARDOUS OCCUPATIONS.

A number of the occupations were only slightly hazardous, and, accordingly, the companies accepted applicants at the regular rate of premium, using more care in other respects than if the occupation were non-hazardous. In other cases an extra premium was charged, the policy placed in a special dividend class, limited to a high-premium plan, or issued subject to a lien against the insurance. These cases were all included in the investigation, provided the reason for such treatment was the occupation alone. If the insured were overweight or underweight, or had a poor family history, or had a minor medical impairment, the case was included, provided these factors were not in themselves of such moment as to make the insured a sub-standard risk. The committee

states that there was no reason to assume that the occupation classes thus constituted included a larger proportion of risks with medical impairments than entered into the data upon which the standard table of mortality (Vol. I, page 80) was based. In order to confirm this impression an investigation was made into the effect of including these minor impairments, and a synopsis of the results indicates that the effect is to raise the mortality to a slight extent only.

When there was a considerable departure from the normal proportion of overweights in any class, an investigation was made to determine the effect. As the effect of underweight is much less than that of overweight, it was deemed necessary to investigate only one class in which the proportion of underweights was larger than the average.

EFFECT OF MEDICAL SELECTION.

Attention is drawn to the fact that in many of the classes the medical selection was more severe than among policyholders whose occupations were not hazardous. It was also pointed out that in certain of the wage-earning occupations the risks accepted by the companies were chiefly drawn from the more favorably placed workers. In some cases, therefore, the ratio of actual to expected mortality may be lower than 100 per cent., although there may be a distinct hazard from occupation; or the ratio may be above 100 per cent., and such excess not measure the full hazard from occupation.

In this volume Table I shows the standard rates of mortality per 1000 used to obtain expected deaths; Table II gives a general summary of all the occupations investigated, while Table III shows the exposed to risk, the actual and the expected deaths by policy years and by groups of entry ages in the various classes of "Required" occupations.

COMMERCIAL UNION TO TAKE CALIFORNIA FIRE.

San Francisco advices announce that the directors of the Commercial Union Assurance Company at a meeting held in London this week had voted to exercise the option on the stock of the California Insurance Company, and, in accordance, an acceptance of the terms under which the option was given was wired to San Francisco. Under the arrangements already formulated the Commercial Union will continue the California Insurance Company under its present title, as a separate agency plant.

The California Insurance Company was organized in 1861 and retired in 1892, reinsuring all its outstanding risks. It resumed business in 1905 and was very heavily hit in the San Francisco conflagration of April, 1906. These losses were met in full by assessments on the stockholders aggregating \$1,830,000 or 762½ per cent. Early in 1912 the California retired from the Eastern States and confined its operations principally to the Pacific Coast. Its premiums written last year aggregated \$493,000 net. As noted last week, the California entered Canada last year, transacting business in the Western Provinces.

Mr. F. M. Griswold of the Home of New York, the well-known American fire insurance authority, is a visitor to Montreal at present.