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BOOK REVIEWS AND NOTICES*

M. Albert Linton, *How Life Insurance Can Serve You*, pp. ix, 107, Harper and Brothers, New York, 1958.

Mr. Linton took on a rather formidable job and has succeeded admirably. Consider that in this one short book he set out to describe and analyze virtually the entire scope of benefits offered by life companies. Consider that his text ranges from the rudiments of premium calculation to philosophies of social security financing, from family policies to group life, from the tax aspects of settlement options to the need for more vesting in pension plans. Then realize that he includes up-to-the-minute comments on such contemporary items as split-dollar coverage, insurance for business purposes, variable annuities, grading of premiums by size, abuses of major medical benefits and dangers of social security overexpansion. The fact that all this plus some personal thoughts on inflation and the national economy have been crammed into one short, readable book is truly remarkable.

Obviously, these many subjects had to be treated in a much condensed form. By so doing, though, Mr. Linton has enabled the noninsurance reader to acquire, in a couple of pleasant hours, a fairly good idea of the many uses and the aims of life insurance programs and a practical understanding of how life insurance's flexible products can be made to solve a large number of different personal and business problems.

But actuaries who have known and respected Mr. Linton for years must suspect that there is much more to this book than a popular primer on insurance benefits. They will not be disappointed. He has woven throughout the book, both openly and subtly, a central theme—reliance on term insurance (by itself or with a separate investment program) is dangerous and bound to create disappointments; permanent insurance combining protection and savings has given and will give better results for the policyholder.

With more than half of the amount of ordinary insurance currently issued being on the term or combination plan, perhaps a good deal of emphasis on the advantages of permanent coverage is justified. This reviewer believes, however, that the author has let his strong emphasis on the ultimate dangers of term insurance obscure some highly desirable uses of low-cost, though temporary, coverages. Mr. Linton has acknowledged that term insurance can be of value for the young man with children and little margin in his salary, but he urges conversion to permanent insurance at the earliest possible date. In fact, he suggests permanent rather than term coverage in the first place for young families where "income is sufficient to provide reasonably adequate" straight life coverage.

* Books and other publications noted with an asterisk (*) may be borrowed from the library of the Society of Actuaries under the rules stated in the *Year Book*.

The sad fact is that few young families have coverage that is anywhere near adequate. The latest figures I have seen (1956) show that for men under 35 with children, some 11% have no insurance and the median premium for the rest is only about \$135. Using some of Mr. Linton's illustrative premium rates, this \$135 will buy over \$20,000 of 5-year renewable term for a 30-year-old father but only about \$7,500 of straight life. If \$135, or under 3% of disposable income, is the best we can expect from young families who are seemingly committed to the hilt in acquiring their early possessions, then shouldn't we actually encourage a more adequate amount of coverage for the premium through term insurance? The various types of "modified" policies are a step in the direction of low-premium coverage in the early years but do not go as far as renewable and convertible term. True, as Mr. Linton says, the "insidious aspect" of renewable term insurance is the steady rise in cost of renewal and the increasingly greater jump in premium on conversion. But a properly indoctrinated and alert sales force should be able to persuade the young families to convert to straight life as rapidly as the necessary money becomes available. There is some advantage, too, in letting young families get adjusted to the idea of carrying large amounts of insurance. In other words, quantity of coverage should be given some priority over quality during a period when family responsibilities are greatest and the financial ability to purchase insurance protection is smallest.

Mr. Linton's arguments against "decreasing term plus separate investment" programs are persuasive and compelling. Actuaries are well aware of the advantages of the combined "savings plus protection" aspects of straight life coverage. Even assuming that a man would adhere with great determination to a separate investment program, the investments he acquires would probably not have the diversity and safety of the life company's portfolio, and, in case of death, could not be applied under settlement options or receive the same tax treatment as life insurance proceeds and might not be as promptly available (in full amount) to his widow as would insurance benefits. The author is somewhat more pessimistic than this reviewer in anticipating another major recession that would wreck many separate investment programs.

Furthermore, he discounts the contention that there will be a gradual and steady inflation that will make fixed-dollar life insurance seem a poor investment. With the ever-present danger of a severe reaction to increasing price levels, fixed-dollar benefits, be they cash and loan values or death proceeds, have a distinct advantage over investments that may have to be liquidated at the bottom of the market. He does acknowledge that there is another school of thought that government controls, union pressures, social programs, etc., are sufficient to prevent the wide swings in business cycles and living costs that we have occasionally had in the past.

This concise and readable book offers not only a nontechnical source of ideas for the buying public but a liberal sprinkling of Mr. Linton's thoughts on current developments in the business and the economy.

CHARLES D. WILLIAMS

Life Insurance and Medicine: The Prognosis and Underwriting of Disease, edited by H. E. Ungerleider and R. S. Gubner, pp. xviii, 994, C. C. Thomas, Springfield, Illinois, 1958.

This volume is based on a series of lectures conducted under the auspices of The Board of Life Insurance Medicine. Its purpose is to present the more important aspects of life and accident and health insurance medicine largely in terms of the long range prognoses for various medical impairments encountered among insurance applicants. In order to orient the reader not familiar with insurance practices, the first portion of the book is devoted to the fundamentals of life insurance. Subsequent portions of the book deal with the non-medical and medical aspects of life insurance and with accident and health insurance.

The book presents considerable statistical data but very properly emphasizes that familiarity with current developments in medical research and clinical practice is necessary for their application in life and accident and health insurance underwriting.

Since Dingman's very useful book *Risk Appraisal* is now out of date in many respects, this publication offers what is undoubtedly a most valuable and comprehensive treatise on medical underwriting. Several chapters are reprints of papers originally presented before the Association of Life Insurance Medical Directors and the Medical Section of the American Life Convention. It is regrettable, however, that fuller use was not made by some of the contributors of the findings of the 1951 Impairment Study which brought out the latest experience for many important impairments.

EDWARD A. LEW

J. F. Follmann, Jr., *Voluntary Health Insurance and Medical Care, Five Years of Progress 1952-1957*, pp. 79, x, Health Insurance Association of America, Chicago, New York and Washington, D.C., February 1958.

Voluntary health insurance has undergone phenomenal growth in the United States in the last two decades in response to the important social need for protection against the financial consequences of accident and sickness, of which the cost of health care is a significant part. Mr. Follmann, who is Director of Information and Research for the Health Insurance Association of America, prepared this monograph to give some indication of the role the insurance companies of America play in serving the health insurance objectives of the public. The monograph traces the growth in the number of persons protected by health insurance from 1952 to 1956. It also presents an analysis of the amounts of benefits paid in 1957 and goes on to indicate the substantial increase in the number of insurance companies writing different forms of health insurance.

In the very important area of extension of coverage beyond age 65, Mr. Follmann describes seven ways in which coverage is being provided for older persons. These include continuation of group insurance on older workers, continuation of group insurance on retired workers and their dependents, the con-

tinuation on an individual policy basis of coverage originally provided by group insurance, and the new issuance of group insurance at advanced ages. With respect to individual policies, reference is made to the continuation of insurance previously purchased, the issuance of new individual insurance at advanced ages and the issuance of individual insurance which becomes paid-up at age 65.

The broadening of health insurance in other respects is also discussed. The extension of group coverage to those employed in small groups is described, as well as coverage for substandard risks under individual policies, the broadening of company practices with respect to the renewal of individual policies, increased coverage of the population in the rural areas, and last, but not least, the development and extension of major medical expense insurance on both an individual and a group policy basis. A brief description is given of the Program of Research, Education and Information being carried on by the Health Insurance Association on behalf of its member companies, which include the major writers of health insurance. The monograph includes addenda relating certain principles of insurance and special problems of health insurance, and concludes with a list of suggested readings.

In looking to the future, Mr. Follmann states that private insurance is justifiably proud of its accomplishments while still fully aware of the challenge it faces to continue and further extend its services in this area. This ably-written monograph is worth-while reading for any student of health insurance and for many others who would learn something of the record of performance by the health insurance companies.

MORTON D. MILLER

Voluntary Health Insurance and the Senior Citizen, A report by the New York State Insurance Department on the problem of the continuation of Medical Care Benefits for the Aged in New York State, pp. xiii, 215, Insurance Department, State of New York, 1958.

In recognition of a need for factual data, the Insurance Department of the State of New York conducted a comprehensive study of voluntary health insurance in the State of New York, with particular emphasis on the extent of hospital, surgical and medical expense coverages for older persons and the related underwriting practices of insurers. Officials of other State agencies and representatives of insuring organizations assisted the Department in an advisory capacity and a special Actuarial Subcommittee studied the data submitted by insuring organizations on the cost of medical care benefits.

Two questionnaires—one on group insurance and the other on individual insurance—were sent to all insurance companies and hospital service and medical indemnity corporations (these include Blue Cross and Blue Shield) writing health insurance in New York State. The study based on the answers to these questionnaires makes an unusually informative document on the rapid development of voluntary health insurance for the aged. For New York State the report shows, as of December 31, 1956:

- (1) The extent to which hospital, surgical and medical benefits are continued for persons at older ages. Under group insurance, approximately one third of the persons covered are insured under plans with provision for continuance after retirement. The number covered is almost three times that five years earlier. A table shows the maximum age at issue and age at expiration of coverage under individual policies.
- (2) The extent to which the privilege of conversion from group contracts to individual contracts is provided at termination of employment or retirement. At the end of 1956 approximately 22% of those covered under group insurance policies had the conversion privilege. The number is about twenty times that five years earlier.
- (3) The current practices of insurers with regard to nonrenewal, cancellation or rescission of individual accident and sickness coverage. In the six-month period from October 1, 1956 to March 31, 1957 there were 4,122 terminations by action of the insurers of individual policies in New York State.

Over half of the report is devoted to the study of the cost of medical care insurance. In order to assemble statistical data on the utilization of medical care and facilities in a form appropriate for cost computations, the New York Insurance Department requested all organizations writing health insurance in New York State to submit any unpublished studies of their morbidity experience, especially if tabulated by ages. The report claims that the data submitted, together with other related material already available in published form, constitute the largest volume of statistical data on the cost of medical care that has been collected. The Actuarial Subcommittee, which included representatives of the New York Insurance Department and actuaries of insurance companies, hospital service and medical indemnity corporations, then studied the data and compiled a number of basic tables. These tables show, for each age from 20 to 99:

- (1) Frequency of hospitalization and average number of days of confinement, separately for males and females.
- (2) Frequency of surgery and average cost of surgical procedures, separately for males and females.
- (3) Frequency of maternity.

From the basic tables, annual claims costs were derived for 31 and 120 day hospital plans and a representative surgical schedule. Commutation functions were computed by combining values from the basic tables with mortality rates from the 1949-51 United States life tables for the total population, using a 3% interest rate. Net one-year term and net level annual costs were then obtained for a semiprivate hospital plan and a representative surgical schedule. On the basis of these results, aggregate costs were estimated for the total New York State population.

The Actuarial Subcommittee produced a number of other interesting results. Experience data according to age are shown for benefits of broader scope, such as number of physicians' services and costs of major medical expense benefits. Gross premiums were produced for individual policies cancelable at age 65, for

policies guaranteed renewable for life, and for converted policies. An example of advance funding of costs for the aged under a group policy is also included.

This report should be of vital concern to actuaries and all others engaged in health insurance. Some of the conclusions and recommendations are worth noting.

WILLIAM S. THOMAS

Commission on Chronic Illness, *Chronic Illness in a Large City, The Baltimore Study*, pp. xxii, 620, published for the Commonwealth Fund by the Harvard University Press, Cambridge, 1957.

This volume, by the Commission on Chronic Illness, follows earlier volumes on *Prevention of Chronic Illness* and *Care of the Long-Term Patient*; a volume on *Chronic Illness in a Rural Area* is to be published. The data for this study were derived from a sample survey of the noninstitutional population in Baltimore, Maryland; the field work lasted from September 1953 to April 1955.

The detailed techniques of the study are very impressive. The sample contained about 4,000 households with 12,000 persons regarding whom data were gathered by interviewing a responsible member of the household about himself or herself and all other members. From this sample, a subsample of about 1,000 persons was taken for a clinical evaluation consisting of a review of medical information from hospitals and physicians and a diagnostic examination at a medical center. Screening tests for the rapid detection of physical abnormalities were then given by clinical personnel to all household members over age 16 who were not selected for the detailed evaluation. The study also included a demonstration of vocational rehabilitation potential of a number of those selected for the clinical evaluation.

An outstanding feature of the study is the discussion and comparison of the results obtained through the usual survey technique of household interviewing with those from the screening tests and the clinical evaluation. Section VI of the study, which contains the Commission's views on the limitations of the household interview, should be interesting to students of sampling and interviewing methodologies.

The problem of defining chronic conditions is always troublesome. The Commission on Chronic Illness used three elements in its definition for this study. The first involved responses to the reading of a check-list of 34 specific chronic diseases. Secondly, all conditions reported to have started three months prior to interview were considered chronic. Third were any other conditions the respondent stated to be a chronic or repeated trouble. Even though the institutionalized urban population in Baltimore was excluded from this study, the Commission found 1.6 chronic conditions per person in the sample. This is a much higher prevalence rate than expected. However, of these conditions, 63 percent were classified as "mild" and only 12 percent as "severe." Nevertheless, when classified as to the degree to which these conditions limit or interfere with the patient's activity, 56 percent of these conditions were classified as "substantial."

The prevalence of the chronic diseases is described in Chapter 3 according to age, sex, color, family income and other common population classifications. Chapter 4 provides further detail with respect to selected diseases, such as heart disease and hypertension, diabetes, neoplasms, arthritis, syphilis, and mental disorders. A separate chapter is devoted to a discussion of dental conditions. The needs for care and rehabilitation on the basis of the observations derived from the sample form the subject of six chapters. The last of these is an enlightening chapter which discusses the attitude of the general public to its health conditions and the problems they present.

The chapter on screening for chronic disease is very informative for its account of a relatively new development. A point is made that these screening tests may sometimes indicate an abnormality where none exists, but, on the other hand, they may falsely indicate a normal condition. Some results of the screening tests are sets of height and weight tables and of blood pressure tables. The results of various tests for heart disease and for diabetes are also described. Subsequent chapters relate to the reporting of disability and the methods of studying chronic disease in the general population. For this study, a day of disability is defined as a day on which a person is kept from a usual activity because of a particular condition. It is noted that the presence and duration of disability are probably reported much more accurately than the prevalence of specific conditions. In fact, the prevalence of chronic conditions seems to be reported less than half as frequently as they were found by clinical evaluation.

The study is valuable not only for its results but also for its excellent suggestions on methodology. Very commendably it raises cautions with regard to the limitations of the household interview. These deserve particular attention since sickness data for the general population can rarely be collected in any other way.

CHARLES E. PROBST

Health in California, pp. 96, State of California, Department of Public Health, California State Printing Office, Documents Section, Sacramento, 1958.

This report summarizes the results of a sample survey of the general population in California from May 1954 through April 1955. The samples were taken over a 52-week period from 10,000 households approximating 30,000 persons; each week about 200 households were interviewed. Data were gathered regarding illness, population characteristics and medical care. The purpose of the report is to assist in planning programs and studies in public health. The techniques of sampling and the discussion of the qualifications in the results make interesting and valuable reading for the actuary, as well as for students of morbidity statistics. These are described in Chapter 7.

The detailed tables in Appendix E are well-conceived. The first four of these relate to demographic characteristics and the remaining eighteen contain a wide variety of morbidity indexes with regard to frequency and duration. Subdivisions are provided for age, sex, income level, and for various health impairment

categories. Proper interpretation of the results requires careful consideration of the definitions used in the report.

For actuaries with a special interest in this subject, Chapter 6 warrants careful reading for its description of the possible uses of the data in a state health department. Attention should also be given to Chapter 7 and Appendix C which describe the measures used in developing the tabulated results. The various rates for the several conditions of health are not entirely suitable for insurance purposes. On the other hand, some pertinent *relative* statistics can be deduced or used directly. A statement on page 56 draws attention to the large amount of unpublished data that is available.

CHARLES E. PROBST

H. J. Montoye, W. D. Van Huss, H. W. Olson, W. R. Pierson, and A. J. Hudec, *The Longevity and Morbidity of College Athletes*, pp. xvi, 139, Michigan State University, Phi Epsilon Kappa Fraternity, 1957.

This report analyzes in detail the results of a pilot study to determine the relative mortality and state of health of college athletes and nonathletes. The study was based on questionnaires sent to a sample of athletic lettermen and nonathletic controls who had attended Michigan State University prior to 1938. As such, it suffers from the usual shortcomings of questionnaire type studies, notably, a sizable number of questionnaires undeliverable or unanswered, or returned incomplete. In a discussion of the probable effects of these shortcomings, the authors attempt to answer in advance the objections which might be raised.

The many earlier studies of the mortality of athletes are reviewed critically and compared with the results of the present study. The authors show, in this study, that for the most part athletes and nonathletes do not experience different mortality, although there appears to be a difference by cause of death, with accidents accounting for a larger percentage of deaths in the athlete group.

The questionnaire asked for other information, such as present state of health, longevity and causes of death of parents, grandparents and siblings, number of siblings, weight in college and later, economic and marital status, smoking and drinking habits (former athletes do more of both), sports activity after college, and service in the armed forces. The analysis made of these quantities can be termed a statistical *tour de force* which, unfortunately, is hampered by small numbers of cases, a fact of which the authors are continually aware.

Even though many of the results are statistically inconclusive, the study does appear to refute statements to the effect that collegiate athletics have harmful later effects. From another standpoint, this report will prove most valuable to anyone contemplating a similar study and to students of vital statistics generally. The authors have discussed at length and evaluated the possible pitfalls into which the uninitiate may fall and the means of avoiding them, in addition to describing the statistical tests needed to interpret the results properly.

ROBERT J. JOHANSEN

*H. Malisoff, *Cost Estimation Methods in Unemployment Insurance, 1909-1957* pp. 153, New York State Department of Labor, June, 1958.

This report focuses attention on the actuarial techniques used in Great Britain, Canada, and the United States in connection with cost estimates for unemployment insurance. Professor Malisoff is concerned with the various attempts to improve the mathematical models for unemployment compensation systems. Even though it may be unrealistic to entertain great expectations for prediction in a field so susceptible to economic and political factors, he feels that the importance of the subject justifies considerable scientific research, keeping in mind that the goal is not so much precise cost estimation as balanced economic control of unemployment funds.

The book is valuable as a history of the development of actuarial methods in the field of unemployment compensation, and as a fairly complete mathematical description of these methods. In addition, the various statistical tables should be of considerable reference value to actuaries and others working in the field.

In format, the book consists of one chapter each on cost estimation in Great Britain, Canada, and the United States. Each chapter is subdivided on the basis of important actuarial studies, in chronological order. A fourth chapter is devoted to general comments on past and probable future developments in cost estimation for unemployment insurance. There is an appendix tracing the history of the British Unemployment Fund in the period 1920-48.

ROBERT J. MYERS

*H. E. RAYNES, *Social Security in Britain—A History*, pp. vii, 244, Sir Isaac Pitman & Sons, Ltd., London, 1957.

This slim book covers an enormous range. In time, it ranges from the 13th century to the middle of the 20th and in content it touches upon every important aspect of group effort to assist the needy. Naturally, with such a field to cover, a volume of this size cannot do more than present a very broad and general survey, but this it succeeds in doing. The view taken is sufficiently broad to enable the reader to gain a picture not only of specific government and private programs dealing with social security matters, but also of the ground swell of social and economic changes in England, Scotland and Ireland over some six or seven centuries, insofar as they had an influence on the public attitude towards assistance for the needy—as for example, the breakup of feudalism, the growth of industrialization, the enclosure of common lands for sheep raising, the French wars of the early 18th century, and the growth in economic thought.

In recording some of the history of social security, the author uses the broadest possible definition of the term. He thinks of it not only in its modern sense but also in the sense of including any group activity to bring relief and assistance to members of the group. The survey thus touches the early social and religious guilds, the craft guilds, and the trade guilds. It notes the rise of friendly societies and the welfare aspects of trade unions. The early efforts of some of the major cities towards relief of the poor are noted. Frequent quotations from con-

temporary documents and writings add to the interest and help to place the various developments in perspective.

The book is at its best in recording the early history of poor relief and the trials and efforts towards the working out of some manageable system of administration. Nothing in the way of uniform national effort was possible until there was a strong central government. This first came about in the reign of the Tudors, but, with the advent of the Stuarts, the split between the Crown and Parliament, and the subsequent revolution, the centralized administration broke down and was not really restored until the 19th century.

Social security programs, in the modern sense, had their start in England only in the present century. The author notes the legislative history and summarizes the terms of the various programs in effect. The book thus forms a reference for the current programs but its usefulness in this respect is, of course, limited by the never-ending series of amendments that modern national programs seem fated to undergo.

Often, in considering social security matters, the concentrated attention given to individual schemes and problems causes one to lose sight of broad trends. It is useful then to stand back and look at the whole trend of thought in this field over several centuries. Whatever one may think of the adequacy or inadequacy of modern programs, it is at least certain that great progress has been made since the day when a major part of a city's social security effort was to find storehouses and stock them with grain to feed the needy in time of famine. It is humbling, too, to note that the basic problems of employment and unemployment, and inflation and deflation, are only slightly more understood than they were when the rise of industrialization was dislocating established employment patterns, or when the importing of silver into Europe from the Spanish possessions in the New World was leading to a depreciation in currency and, consequently, to a steady rise in prices.

RICHARD HUMPHRYS

SELECT CURRENT BIBLIOGRAPHY

In compiling this list, the Committee on Review has digested only those papers which appear to be of direct interest to members of the Society of Actuaries; in doing so, the Committee offers no opinion on the views which the various articles express. The digested articles will be listed under the following subject matter classifications: 1—Actuarial and other mathematics, statistics, graduation; 2—Life insurance and annuities; 3—Accident and sickness insurance; 4—Social security; 5—Other topics.

References to allied subjects will be found in the following publications: *Mathematical Reviews*, published by the American Mathematical Society—Subjects: Theory of probability, mathematical statistics, mathematical economics, various other mathematical topics; *Monthly Labor Review*, published by Bureau of Labor Statistics—Subjects: Cost and standards of living, employment and employment services, fringe benefits, handicapped, industrial hygiene, industrial relations, labor organization and activities, manpower, older workers and the aged, personnel management, social security (general); *Population Index*, published by Office of Population Research, Princeton University, and Population Association of America—Subjects: Mortality,

fertility, marriage, divorce, the family, various other demographic topics; *Social Security Bulletin*, published by Social Security Administration—Subjects: Retirement and old age, employment, maternal and child welfare, health and medical care, various other topics in social security; *Journal of the Institute of Actuaries*—The review section contains digests in English of articles appearing in foreign actuarial journals.

ACTUARIAL AND OTHER MATHEMATICS, STATISTICS, GRADUATION

H. A. R. Barnett, "Experiments in Mortality Graduation and Projection Using a Modification of Thiele's Formula," *Journal of the Institute of Actuaries*, vol. 84, pt. II, no. 367, p. 212, September 1958.

In a previous article, "The Components of Mortality," the same author¹ sought to "build up a new mortality curve from its component parts." He finds that the most important of these components are represented in the equation

$$m_v = B_1 c_1^x + B_2 C_2^{-x} + A / (y + 1 \frac{1}{4}),$$

where y is measured from birth and x from an origin the position of which needs to be determined. He also considers a similar expression without the final term.

In the present article he uses these formulas to graduate certain mortality data, and then obtains mortality projections by extrapolating the parameters in the formulas. To test the method, he graduates the national male data of England and Wales for the periods 1910–12, 1920–22 and 1930–32, projects to 1951, and compares the results with actual data for 1951 (graduated in the earlier paper) and for 1950–52. As a further test he graduates the Continuous Mortality Investigation assured lives' data for the periods 1924–28, 1929–33 and 1934–38, projects to 1949–52, and compares with the 1949–52 experience and with the A1949–52 table. Finally, he extends both projections to 1961.

LIFE INSURANCE AND ANNUITIES

H. F. Dorn, *Tobacco Consumption and Mortality from Cancer and Other Diseases*, National Institutes of Health, U.S. Public Health Service, Bethesda, Md. Paper presented before the Seventh International Cancer Congress, London, July 1958.

This report, prepared from records of the Veterans Administration, covers 200,000 policyholders of U.S. government life insurance exposed between July 1954 and December 1956. The total number of deaths in the experience would appear to be a little over 7,000, of whom a little over 1,000 were among those who had never smoked. The majority of the policyholders (all of whom had served in the armed forces between 1917 and 1940) were between 50 and 70 years of age. Compared with the Hammond and Horn study reviewed in *TSA IX*, 491, this report has the advantage that the group studied has an independent existence and was not brought together for the purposes of the investigation. The policyholders were classified by type of smoking and amount of tobacco consumed. The mortality of smokers was measured against the mortality of nonsmokers within the group, rather than in terms of an absolute standard. The report is not too clear as to how some of the ratios were derived, but that does not vitiate the over-all conclusion.

The report gives the following conclusions: The death rate of smokers from all causes is 32% greater than for those who have never smoked; for those who have regularly smoked only cigarettes the death rate is 58% greater. A lower mortality was reported for persons who had given up smoking, but it was still significantly higher than that of

¹ See *TSA VIII*, 109.

nonsmokers. The unusual finding that ex-smokers of cigars and pipes had a higher mortality than continuing smokers of this form of tobacco suggested that the discontinuance of smoking in this group was due to ill health. The report confirms that mortality increases with the amount smoked and also confirms that the lung cancer mortality ratio is much higher for smokers than for nonsmokers. For the entire group the ratio is six to one; for smokers of cigarettes only it is nine to one. A further breakdown of the death rates for smokers gives higher ratios from the following causes: cardiovascular diseases; certain respiratory diseases (bronchitis and emphysema); peptic ulcer; and cirrhosis of the liver. Finally, there is a statement to the effect that smokers have no greater risk of committing suicide or of being killed in an accident than do nonsmokers.

In general, this report confirms the findings of the Hammond-Horn report, even though the exposure and the number of deaths is not as large as in that study. No effort was made to subdivide the material by occupation or by place of residence, both of which might have been helpful in the discussion as to the effects of air pollution on the incidence of lung cancer.

ACCIDENT AND SICKNESS INSURANCE

A. W. Brewster, *Health Insurance and Related Proposals for Financing Personal Health Services*, pp. x, 54, Division of Program Research, Social Security Administration, Washington, 1958.

This report is subtitled "a digest of major legislation and proposals for federal action, 1935-1957." The foreword states that "this review attempts to summarize, in a logical and systematic framework, the major features of the more important proposals and programs of the past two decades. It focuses primarily on the segments of the population to which the proposed action relates, the areas of medical care with which it is concerned, the sources of the money to finance the proposed program and the proposed methods of paying the providers of medical services. About 40 different proposals and programs are included in the review. . . ."

"Chapter One contains proposals which have been introduced as bills in Congress, or suggested by various governmental commissions and national voluntary organizations concerned with prepayment for medical care, none of which have been enacted into law. Chapter Two is confined to programs once operated by the Federal Government but no longer in existence. Two of these were special wartime measures which terminated with the end of the war; all four could conceivably be reconsidered in some form. Chapter Three describes existing Federal programs involving the provision of personal health services.

"Most of the programs or proposals summarized involve some element of direct and earmarked prepayment by consumers of the costs of medical services—whether through voluntary or compulsory health insurance. In addition, measures designed to encourage the spread of voluntary health insurance—such as loans or grants for prepaid medical care facilities (other than hospitals) or income tax credits for amounts spent for voluntary health insurance—have been included. The report also covers proposals or activities involving the provision of prepaid medical care by the Federal Government in its role of an employer, except that the system of occupational health units provided for Federal employees is not discussed."

E. A. van Steenwyk, *Statement Before the Honorable Francis R. Smith, Commissioner of the Commonwealth of Pennsylvania*, The Associated Hospital Service of Philadelphia, pp. 58, and *Exhibit I, Supporting Data*, pp. 16, January 1958.

The Statement describes in detail the present problems facing the operation of Blue Cross in Philadelphia. An account is given of the nature and purpose of Blue Cross and of its origin. The Exhibit traces the growth of the Philadelphia Blue Cross and some features in its development; cost comparisons are made with other cities. Hospital days per 1,000 subscriber years are shown in ten-year age groups up to 90-99. A proposed method of calculating basic per diem rates for each hospital and type of accommodation is described; this is similar to the method used in New York City.

T. D. Woolsey, "The Concept of Illness in the Household Interview for the U.S. National Health Survey," *American Journal of Public Health*, vol. 48, p. 703, June 1958.

This article describes techniques recommended for preparing morbidity surveys of a general population. Under the present National Health Survey Program, most morbidity data are gathered by means of household interviews. The details of the interview questionnaires and the nature of the diagnostic categories are discussed. Interpretation of the results of these surveys requires a complete understanding of the morbidity concept involved in them. It is stated that the emphasis of the National Health Survey will be on the social dimensions of morbidity by measuring the impact of disease on the lives involved.

U.S. National Health Survey, *Origin and Program of the U.S. National Health Survey*, pp. 36, Public Health Service, Washington, May 1958.

According to the subtitle, this report is "a description of the developments leading to enactment of the National Health Survey Act, and a statement of the policies and initial program of the Survey." The potentialities and limitations of the program are also discussed.

U.S. National Health Survey, *Preliminary Report on Number of Persons Injured, United States, July-December 1957*, pp. 36, Public Health Service, Washington, May 1958.

Numbers of persons injured and corresponding rates by age and sex are estimated for the total United States from a sample of the population. Corresponding data are shown separately for motor vehicle, work, home, and other classes of accidents. Rates for all injuries, according to age and sex, are presented separately for bed-disabling cases and those not so disabled; in like manner is presented the average number of person-days of restricted activity due to injuries per person per year. The report also contains a number of tabulations without regard to age and sex, in particular those relating to place of residence.

U.S. National Health Survey, *Preliminary Report on Disability, United States, July-September 1957*, pp. 30, Public Health Service, Washington, June 1958.

The data in this report are derived from a sample survey of households during a 13 week period ending September 29, 1957. The results have a seasonal influence, although they are presented on an annual basis. Disability is defined as "any temporary or long-term reduction of a person's activity as a result of an acute or chronic condition." The report shows the number of days per person per year of restricted activity and of bed-disability according to age and sex and according to cause of disability with regard to sex only. A day of restricted activity is defined as "a day when a person cuts down on his usual activities for the whole of that day on account of an illness or an injury." In view of the prevalence of the Asian influenza in the last month of the survey period, the estimates in this report for the July-September period are higher than might usually

be expected for that season. The report also shows the number of work-loss days per employed person per year because of disability according to age and sex, with the note that "some work-loss days may have been included for people who have permanently left the labor force because they are unable to work." The bias thus introduced is relatively greater for persons at ages 65 and over.

W. P. D. Logan and E. M. Brooke, *The Survey of Sickness, 1943 to 1952*, pp. v, 80, Studies on Medical and Population Subjects, No. 12, General Register Office, H.M. Stationery Office, London, 1957.

The authors describe the problems encountered and the techniques employed in the design of the schedule used in the survey, the method of interview, the definition of the various terms, the processing of the actual reports, and also present an account of the multistage sampling methods utilized. The results of the survey are set forth in the form of a series of rates of sickness (number of people sick or injured), prevalence (number of illnesses or injuries), incapacity (number of days away from work or confined to house), and medical consultation for the adult population of England by sex and age, from the middle of 1946 up to the end of 1951. Illnesses are also classified as to new, recurrent, or continued, as well as according to degrees of severity by the extent of incapacity to work. The more important statistical findings and conclusions are highlighted in the text. A comparison is made of the rates before and after the introduction of the National Health Service in July 1948. The authors conclude with a rather critical appraisal of the entire project. The details of the survey itself are prefaced by a brief history of social, including sickness, surveys.

An illness was defined as a condition included in codes 001-795 of the International Statistical Classification of Diseases, Injuries and Causes of Death which caused the subject to "suffer from" it and to be aware of its existence as something disturbing his state of health during the period covered. At any age and in any month at least 50 percent of adults who were asked about their health complained of an illness of some kind or another. Among the elderly, the proportion was at least 75 percent. With such a definition, the study was weighted with minor and trivial illnesses. It was felt, with the definition used, that a better picture of the national well-being or ill-being was produced than would have been available from either medical records or the various vital statistics. Because those in the sample were asked to recall sicknesses in the two months preceding interview and medical records were not referred to, the memory factor was considered in the design of the survey and interpretation of the results.

The authors conclude that the Survey was too wide in its scope, that such a study should supplement information from other sources and that a survey is valuable not as a permanent operation but for nonroutine information only.

SOCIAL SECURITY

Sound Policy for Social Security, pp. 16, American Life Convention and Life Insurance Association of America, February 1958.

This brief statement, consisting of 18 points, summarizes the policy position of the life insurance business in regard to the social security program in the United States. It is pointed out that, in general, the attitude of the life insurance business on social security has been one of support and cooperation, although certain legislative proposals have been criticized as not being in the public interest—such as proposals that would over-liberalize the level of benefits or would extend the program into compulsory health insurance or disability insurance.

The first four points are of a general nature, dealing with the soundness of the system, the interest of the life insurance business in it, and the necessity for a sound economic basis for the country as a whole. The next two points deal with the fundamental nature of the OASDI system, namely that it should provide only a floor of protection upon which can be built individual and cooperative measures for economic security.

The remaining points are concerned with various specific phases of OASDI and related programs. The following recommendations are made:

- (1) The principle that the system should be self-supporting from social security taxes should be continued; only a small contingency fund should be maintained (tax rates should be such that income is approximately equal to outgo).
- (2) Coverage should be applied to all employed persons, except that some account should be taken of the wishes of currently noncovered groups.
- (3) The maximum earnings base should not exceed the average full-time earnings of gainfully occupied persons.
- (4) There should be no increment provisions increasing benefits for length of coverage or for postponement of retirement.
- (5) The minimum retirement age should not be lowered, even if the benefit amounts are actuarially reduced.
- (6) The principle of the retirement test should be maintained, but under such conditions that there is some incentive for continued employment.
- (7) The lump-sum death payment is undesirable and in no event should its maximum amount be increased.
- (8) The monthly disability benefit provisions should not be extended until there is evidence that the inherent serious long-range dangers can be surmounted.
- (9) Overlapping of benefits with those of other governmental benefit systems should be eliminated where the combined amount is excessive.
- (10) Vocational rehabilitation is the best method of dealing with the problem of disability, and this program should be expanded.
- (11) Compulsory health insurance is undesirable, and any move in that direction, such as hospital and surgical benefits for OASDI beneficiaries, is undesirable.
- (12) Federal participation in the financing of old-age assistance should be gradually eliminated.

The Operations of the Bureau of Old-Age and Survivors Insurance, A report to the Secretary of Health, Education, and Welfare, by a group of especially appointed consultants, pp. v, 36, issued by the Social Security Administration, Washington, June 1958.

The consultants, who were seven businessmen, were appointed by the Honorable Marion B. Folsom, Secretary of Health, Education, and Welfare, to review the operations of the Bureau of Old-Age and Survivors Insurance. Mr. R. A. Hobaus was chairman of the group, which included two other men from insurance companies. Mr. J. J. Finelli, also a Fellow of the Society, was one of the technical assistants to the group.

The review concerned itself chiefly with two areas: the application of electronics and other recent inventions in the area of mass data processing; and the operations for serving the public as conducted in the local offices of the Bureau.

The major recommendations by the consultants relate to an integrated data processing approach to work organization; research and development of special automatic equipment; transfer of the check-writing function (for OASI benefits) from the Treasury Department to the Bureau of Old-Age and Survivors Insurance; combined annual re-

porting whereby the employer copies of Forms W-2 would constitute the wage reports to the Bureau in place of the present quarterly reports; and seeking, as needed, expert advice and assistance from any available governmental or private source. A number of recommendations for specific procedural changes are made.

The consultants summarized their impressions of the operations of the Bureau as follows:

"First, and perhaps most important, the consultants believe that the Bureau is carrying out its mission in a sound and vigorous manner. It should be a source of satisfaction to the Secretary to know that the Bureau has been a pioneer in the very difficult matter of introducing automatic machinery into the paperwork area with substantial savings to the trust funds.

"Second, and significant in relation to the first, the consultants were impressed with the effective and competent manner in which the staff of the Bureau appeared to be managing their responsibilities. It is the general view of the consultants that the quality of the staff compares quite favorably with the staffs of corresponding business organizations.

"Third, the subcommittee which studied the operations of the Bureau in the field—where the program comes in contact with the public—was well impressed with the way the Bureau personnel met and dealt with the public and with the impression of both efficiency and friendliness created by the typical OASI district office.

"Fourth, the fact that the consultants have made a number of suggestions and recommendations, some of major import, does not in any way reflect unfavorably upon the manner in which the Bureau is conducting its affairs. In fact, the consultants feel the Bureau is to be complimented for doing a very good job with a vast and unique office operation. It is the hope of the consultants that their recommendations will contribute, in some measure, to a continuing high level of accomplishment in the future."

Financing Unemployment Benefits, Report of the 1958 Committee on Benefit Financing to the Interstate Conference of Employment Security Agencies, pp. 19, September 30, 1958, mimeographed. (Copies available from Interstate Conference of Employment Security Agencies, Labor Department Building, Washington 25, D.C.)

This is the annual report of a technical committee of the Interstate Conference of Unemployment Insurance Agencies. The first of seven sections reviews 1958 developments in unemployment insurance. Section II discusses the need for increasing the Federal Loan Fund which is set up to bolster the state unemployment insurance trust funds. (Michigan borrowed \$113 million in August 1958.) Section III examines the problems involved in attempting to assure the adequacy of state unemployment insurance trust funds.

The fourth section discusses the need for a higher wage base. Most of the state laws and the Federal Unemployment Tax Act tax only the first \$3,000 of annual earnings of a worker with an employer. This limitation was introduced in 1939 for the sole purpose of bringing the unemployment taxes in line with the then existing old-age insurance tax base. Since then the OASI tax base has been raised several times and will be \$4,800 on January 1, 1959, but the unemployment insurance base is still \$3,000 in most states.

Section V reviews technical work on financing problems. Section VI offers various methods for adjusting contribution rates to fat and lean years as practical methods toward countercyclical financing. Section VII summarizes the recommendations of the committee for action by the individual states and the Interstate Conference on the above topics.

Social Security for Canada, pp. 20, The Canadian Welfare Council, Ottawa, June 1958.

The Canadian Welfare Council, a national voluntary association of organizations and individuals interested in social welfare in Canada, has for many years made a continuing study of welfare and social security programs. This pamphlet, issued at a time when the basic concepts of the Canadian program are being widely discussed, presents the policy statement of the Council, which has been arrived at following a major conference and extensive consultation with member groups and a number of smaller meetings. The report contains a total of 22 recommendations on various aspects of the subject.

The tenor of the Council recommendations is summarized as follows in the Preface:

"1. The Council is impressed with the great complexity of the issues, both financial and social, which are involved in a social security program. These complexities, present under any system of government, are magnified in a country such as Canada where responsibility is shared among the federal, provincial and municipal levels of government.

"The Council is concerned also with the inadequacy of statistical records and knowledge based on social research, both of which are essential to the development and assessment of sound programs.

"2. The Council believes that many of the inadequacies which now exist result from the differing historical backgrounds of various parts of our social security programs and from the difficulties and uncertainties inherent in the sharing of responsibilities among the three levels of government. Much could be done to improve the social security of Canadians without radical changes in the major elements if steps were taken to mold it into a more consistent whole. Many of the Council's recommendations are made with this in view.

"3. The Council shares the interest of many Canadians in such contributory social security schemes as now exist in the United States and some other countries. In its judgment, however, the addition of a contributory feature to existing arrangements for old-age security would involve important considerations which need to be carefully examined before action is taken."

As to the old-age security program, it is recommended that the present universal flat-rate program beginning at age 70 should be continued and that the possibility should be considered of bringing in some persons aged 65-69, such as those who have permanently and involuntarily left the labor market. It is also proposed that there should be a continuing review of the amount of the flat-rate pension and that supplementary assistance with federal sharing of costs should be available in respect to persons aged 65 and over in need, whether or not receiving the universal pension. It is suggested that a Joint Parliamentary Committee should study the desirability of a contributory wage-related program built on top of the universal pension. Finally, it is recommended that standards for private pension plans (such as requiring more liberal vesting provisions) should be established in connection with the qualification of such plans for income tax deductions.

The Council recommends that the Federal Government give leadership in working towards the elimination of categorical programs. A first important step would be setting up a general public assistance act which would provide for sharing of the costs by the Federal Government in respect to all types of assistance granted to needy persons (including medical care costs), with a higher proportion of the cost being granted for Provinces that have a relatively high case load. Also, clearly defined standards as to amount of assistance and administration should be established.

Concerning unemployment insurance, it is recommended that there should be a review of its basic principles in regard to actuarial cost estimates, the eligibility conditions, and the duration of benefits. It is further proposed that coverage should be broadened as much as possible, that the relative benefit level should be increased, that more emphasis should be given to retraining of long-term unemployed and marginal workers, and that general administrative procedures should be improved.

The remaining recommendations deal with various other programs such as studying the possibility of a cash sickness benefit program and a program for survivor benefits without a needs test. In view of the complexity of the problem, it is recommended that a Royal Commission be appointed to give this subject the thorough study that is desirable. The Council believes that this would be the most effective method of dealing with Canada's total social security system.

"State Pensions: Statement issued by a Joint Committee of the Institute of Actuaries and Faculty of Actuaries," *Journal of the Institute of Actuaries*, vol. 84, Part I, No. 366, p. 64, 1958.

This statement sets forth certain general principles relative to the economic and financial implications of pension benefits provided by the state. It points out that the fundamental issues in pensions on a national scale are the economic problem of providing the necessary resources in terms of goods and services, which will mean diverting future increases in production from improvements in the standard of living of those then working, and the financial problem of providing pensioners with appropriate purchasing power. It suggests no change from the existing British method of financing, under which contributions are shared by the employees, employers and taxpayers, as long as the state plan is to provide only the basic necessities. It supports the principle that the total contribution paid under the plan should be fixed by reference to the contribution calculated by the Government Actuary as required for an entrant in the plan and not a matter for political decision.

As for the question of future extensions to the basic state plan, the statement points out that consideration must be given to the financial burden to be borne by future generations, the limit imposed by the requirement that it be supported by increased productive capacity, and the position of existing private pension plans. Should it be desired to supplement inadequate private plans by a state plan, a contribution rate should be fixed at a level to support this supplementary plan, separate accounting should be made for this fund, and measures should be taken to relieve contributors under existing private plans of the burden of double contributions.

Adjustments because of inflation should be determined with due regard to the general economic and financial position of the country and to the other calls upon national resources.

Great Britain, Ministry of Pensions and National Insurance, *Provision for Old Age—The Future Development of the National Insurance Scheme*, pp. 23, Cmnd. 538, H.M. Stationery Office, London, October 1958.

This brief pamphlet is presumably the Conservative Government's response (or a first installment thereof) to the policy statement put out by the National Executive Committee of the Labour Party, in *National Superannuation*, and reviewed, along with various other publications, in *TSA IX*, 468. *National Superannuation* was a more ambitious work than that now under consideration, not only in bulk (123 pages), but also in the nature of its proposals. It included, along with the policy statement, a memorandum by a technical subcommittee.

The present study falls into two parts headed, respectively, "The Present Position and the Foundations for Future Development" and "The Government's Proposals." Chief among the "foundations" are:

1. The general social policy that there should be, within the resources available, a national contributory insurance scheme providing a pension for the old, free of means test. (This is independent of the question whether contributions and benefits should be at flat rates or graduated according to earnings.)
2. The impressive development of pension plans in private industry and commerce, referred to as occupational pension schemes. This makes possible an improved standard of living in old age more closely adapted to the individual and his employment than any universal scheme could be. It is also a major focus of national savings for investment, thus helping to create the real assets on which the future standard of living of the old must depend. However, despite the encouraging growth only one third of the workers in industry (and half the men) are covered by any such scheme.
3. The principle that required contribution to a state scheme should not go beyond what is needed for reasonable provision for old age. Otherwise the state would be arrogating to itself the individual's right to dispose of his income in what he thinks the right way and his sense of responsibility for his own affairs would be seriously undermined. "These questions of dimensions" are considered "critical to the success of graduated pensions and contributions."

The "proposals" are aimed at the following objectives:

1. To place the National Insurance Scheme on a sound financial basis.
2. To institute provision for employed persons who cannot be covered by an appropriate occupational scheme to obtain some measure of pension related to their earnings.
3. To preserve and encourage the best development of occupational pension schemes.

Briefly, the substance of the proposals is that, except for employed persons "contracted out" as members of occupational pension schemes and for self-employed and nonemployed persons, joint (employer-employee) weekly contributions above a specified minimum should be based on a percentage ($8\frac{1}{4}$) of a certain range of earnings (between £9 and £15 a week).¹ For those who pay these graduated contributions there would be graduated pensions over and above a basic flat rate pension somewhat lower than the present level. This graduated element in the retirement pension would be proportionate to the weekly earnings (between £9 and £15) on which graduated contributions have been paid, and the period over which they have been paid. Each £1 of graduated joint contributions paid on earnings between £9 and £15 a week by and for the insured person (but excluding subsequent quinquennial increases in contribution rate) would constitute a unit, and 30 such units in the case of a male, or 36 in the case of a female, would qualify the contributor for an additional 1s a week at age 65 (60 for females).

Except for these graduated additions to contributions and benefits, the flat rate system would be retained in essence. "Contracting out" for members of an occupational

¹ Average weekly industrial earnings of manual workers in Great Britain were £12-13s-2d for men aged 21 and over and £6-11s-3d for women aged 18 and over as of April 1958.

pension scheme would relate only to that part of the National Insurance Scheme providing the graduated element of contributions and pensions. (This is not "contracting out" in the all-or-none sense in which the term was understood in this country, when that approach was proposed but not adopted as a feature of the original Social Security legislation).

"Contracting out" would be subject to the requirements that:

- a) the occupational pension scheme makes provision for pension benefit rights at least equal to the additional maximum graduated rights otherwise provided by the government insurance scheme, *i.e.*, for an employee for whom contributions are paid on earnings of £15 a week;
- b) adequate provision is made for preservation of pension rights up to, but not necessarily beyond, the pension rights required to satisfy criterion (a) above if the employee ceased to be a member of the scheme (*e.g.*, on change of job); and
- c) the occupational scheme is financially sound.

An important advantage claimed for graduated contributions is that they would make it possible to concentrate the Exchequer contribution where it is most needed, namely, by the lower paid workers, who cannot, even with the aid of their employers, provide themselves with an adequate pension.

Still more important, however, is the claim that this new approach will help to eliminate the prospect of rapidly growing subsidies from general taxation. That prospect now constitutes the chief limitation of a flat rate system, since "the developing needs of the old in a community enjoying rising standards of life cannot be adequately met by contributions which have to be fixed at a level all can afford to pay. The speed of the convoy is that of the slowest ship."

"To leave the scheme dependent on rapidly growing subsidies from general taxation," according to the Government, "would amount to drawing a blank cheque on the future. It would also undermine the protection given to the individual by the fact that the benefits he receives depend on the contributions he personally makes. The Government have no hesitation in rejecting a system of pension benefits predominantly financed from taxation, even as a temporary expedient, as dangerous in itself and likely to be unacceptable to the people as a whole."

However, the mere shift from a flat to a wage-related system of contributions will not, we are told, suffice to fully eliminate the deficits by enabling income to keep pace with the growth in the cost of pensions. "The Government, therefore, while limiting contributions initially to the levels given above, propose to provide for increases in all the rates of contribution to take effect in 1965 and thereafter at three five-yearly intervals for the purpose of meeting the deficits on the flat-rate pension as they emerge." These quinquennial increases will not affect the "units" used to obtain the graduated additions to pensions, which will be based solely on the initial graduated contributions.

"There will be similar provision to increase the flat-rate contributions concurrently with the graduated contributions, for the purpose of avoiding deficits which would otherwise arise on the cost of the flat-rate pensions."

International Review on Actuarial and Statistical Problems of Social Security, No. 1, 1958, International Social Security Association, Geneva, Switzerland.

The first issue of this periodical, to be published twice a year, has just become available. It is sponsored by the International Social Security Association, affiliated with the International Labor Office. Its purpose is to bring together work in the social security

actuarial and statistical field that is at present either unpublished or dispersed in publications that are difficult to obtain in various countries. The *Review* has a technical part consisting of original articles in one of four languages (English, French, German, or Spanish), accompanied by a summary in all four languages. In addition, there is a general part in English containing information on international meetings of particular interest from the viewpoint of actuarial and statistical techniques.

The first issue contains an account of six actuarial and social security meetings held in the past two years. The second part contains seven scientific contributions, including three in English, namely: a study of antiselection in the joint-and-survivor annuity option system for the uniformed services, by Robert J. Myers; an analysis of queuing problems as they arise under social insurance, by L. Yntema of the Netherlands; and a paper on the tabulating programs for valuing the Railroad Retirement system, by Abraham Niessen. The other four papers, for which there are English summaries, deal with the nonnecessity for accumulating full reserves in a social security system covering the entire population, the use of Wilcoxon's test for checking distributions of random samples of social security data, a statistical study of the theory of stationary processes with a view to its application to the study of time series, and a statistical analysis of the Spanish labor force by age groups.

OTHER TOPICS

Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, 1955 Revision, vol. 1, pp. xli, 393, and vol. 2, pp. xxvi, 540, World Health Organization, Geneva, 1957, International Documents Service, Columbia University Press, New York.

These volumes are based on the recommendations of the Seventh Revision Conference on the International Classification of Diseases. Volume 1 includes a detailed list of three-digit categories of diseases and injuries and the tabular list of medical terms included under each category. In addition, it contains a copy of the international medical certification form and rules for classification, as well as special abbreviated lists recommended for tabulation purposes. Volume 2 contains a complete alphabetical index of terms for use in coding.

Because of the limited experience with the Sixth Revision by many countries, no major changes were made in the Seventh Revision classification. The three-digit categories have not been changed, with the exception of the wording of a few titles which produced transfers of specific medical terms in some instances. Other changes consist of the transfer of included terms from one category to another, changes in joint cause preference and/or inclusion or exclusion notes for particular categories. There were also some additions, deletions, and changes of four-digit subcategories. The changes in joint cause preference notes and inclusion or exclusion notes will affect the assignment within the cardiovascular-renal diseases to a greater extent than anywhere else in the classification.

The intent of the Seventh Revision rules for the selection of the cause of death where two or more are stated is essentially the same as that of the rules for the Sixth Revision, namely to select the underlying cause. However, the rules were rewritten and reorganized in an attempt to simplify them and to arrange them in accordance with the steps which a coder would take in making the underlying cause assignment. First, there is the General Rule which is applicable to any properly reported certification; then there are eight Selection Rules which are to be used in determining the underlying cause for improperly reported certifications. After the underlying cause has been selected, it may

be necessary to modify it so that assignment will conform with special provisions of the International Classification for two or more causes jointly mentioned. This is done by recourse to one or more of the seven Modification Rules.

There have also been some modifications in the interpretive notes, for example, malignant neoplasms of multiple sites and circulatory diseases and intracranial lesions "due to" malignant neoplasms, diabetes, or asthma. With few exceptions, the new Selection Rules will usually result in the same assignment as in the Rules of the Sixth Revision. The combination of changes in classification and the use of new joint-cause Selection Rules will affect the trend in mortality for various causes of death to a limited extent. However, it is expected that the new rules will result in more uniformity in coding.

The use of the Seventh Revision Manual is facilitated by reference to the *Vital Statistics Instruction Manual—Part II—Cause-of-Death Coding*, which is available without charge from the National Office of Vital Statistics, U.S. Department of Health, Education, and Welfare, Washington, D.C. This instruction manual not only presents the international rules for joint-cause selection, but also contains special rules and decisions which adapt the coding procedures to cause of death reporting practices in the United States. It also includes other editing and procedural instructions for use in the United States.

W. H. Grabill, C. V. Kiser, and P. K. Whelpton, *The Fertility of American Women*, pp. xvi, 448, John Wiley and Sons, Inc., New York, 1958.

This is a volume in a series of census monographs prepared through a cooperative arrangement between the Social Science Research Council and the Bureau of the Census. The book is "concerned with past and present variations in fertility rates by such factors as geographic and urban-rural residence, color, nativity, and age, and a variety of indicators of socio-economic status, such as occupation, education, income, and monthly rental value of the home." Although based largely on census data, use is also made of birth registration data and of special studies. A chapter deals with the fertility of cohorts of native white women traced through time; the method of constructing cohort fertility tables is described in an appendix. A closing chapter discusses birth projections. Another appendix is concerned with the definition of terms, explanations, and the quality of the data.