book by reducing the dominance of the chapter on Unemployment Benefit.

The chapters on sickness and industrial injury are of particular interest to practitioners of occupational medicine. The former chapter provides an account of the rules governing entitlement to Sickness and Invalidity Benefits while the latter provides a clear account of the legal niceties to be overcome by claimants of Industrial Injuries Benefits.

Throughout the book, the author offers a critical appraisal of the operation of the law and a discussion of the policy behind the various rules, and these two elements highlight the inadequacies of our present system of income security.

The book is to be recommended subject to two reservations. First, it is a matter of regret that all references are placed in a somewhat clumsy fashion at the end of the book, for this does make them difficult to follow. Second, it may be that readers of this journal will find the book as a whole too technical and detailed for their needs. It is, however, a low-priced law book which would serve well, in Professor Calvert's own words, as a useful point of reference.

A. M. WILTON

Mortality Surveillance 1968-76: England and Wales. (Pp. 172; £14.50 + 50p p. & p. + VAT.) Office of Population Censuses and Surveys, Medical Statistics Division. HMSO: London. 1978.

The previous publication in this series (*Mortality Surveillance 1968-75: England and Wales*), which is intended to provide research workers, epidemiologists, health planners and others with a guide to recent changes in death rates, was reviewed in the *British Journal of Industrial Medicine* in November 1977. Like its predecessor, each page shows for a specific cause of death the number of deaths and death rates in five-year age groups for each sex and for each year since 1968. The 158 analysis sheets cover the 163 A list causes recommended by the World Health Organization including 'External Cause of Injury' (AE codes) and 'Nature of Injury' (AN codes), together with an analysis of all causes combined. There were no deaths associated with the six causes A1, A11, A26, A32, A33 and A35.

A number of changes have been made since the last analysis volume and each analysis sheet now contains an estimated

mean and median age at death for both men and women in each year. The results of four statistical tests are provided to assist the interpretation of trends in the death rates over the nine years 1968-76 from each cause in each age group. (The previous publication examined trends over the six years 1970-75 only.) Two of the tests, the Spearman rank correlation coefficient and the product moment correlation coefficient were included in the earlier volume. A third test is concerned with how well the death rate in 1976 is predicted by fitting a linear regression to the previous eight years' rates and the final test examines whether there is a constant or exponentially increasing or decreasing trend in the rates. The first three tests are also applied to the estimated mean and median ages at death. A description of the four tests, which have all been performed as 'one-sided' tests, is given at the front of the volume.

As well as being available as a complete set, spirally bound, individual sheets may be purchased at 12.5p each + 10p postage and packing + VAT. Alternatively the complete set may be obtained on 35 or 16 mm microfilm (£2.50 + 20p postage and packing + VAT) or on microfiche (£1.50 plus 20p postage and packing + VAT). Orders should be addressed to Mortality Surveillance, Statistics Servicing I, Office of Population Censuses and Surveys, 189-199 West Street, Fareham, Hampshire PO16 0HB.

Further analysis by ICD chapter and three- and four-digit ICD codes are also available and details of cost and means of ordering can be obtained from the address above.

ANN PETRIE

Mutagen-induced Chromosome Damage in Man. Edited by H. J. Evans and D. C. Lloyd. (Pp. 355; £15). Edinburgh University Press: Edinburgh. 1978.

Although this book is ostensibly concerned with the extent and significance of chromosome damage induced in man following exposure to any type of clastogenic agent, it will probably be received primarily as a timely guidebook for those considering the use of cytogenetic analysis as a means of monitoring human populations exposed to chemicals.

While substantial advances have recently been made in detecting *potential* human chemical carcinogens, little progress has been made in determining whether low-level exposure of humans to

such agents will be safe, or whether cancer or other effects can flow from transitory or permanent changes induced in human chromosomes by chemical mutagens. Currently, the only method that exists for determining whether a chemical can cause cancer in man is epidemiology, but this technique is usually retrospective and is often blunted by a variety of complicating factors. It is therefore not surprising that attempts are being made to develop an early warning system based upon changes induced in the chromosomes of humans exposed to biologically active chemicals.

As it is possible to sample the circulating lymphocytes of people who have been exposed to a mutagen, and then to determine the extent of chromosomal changes produced, it would appear that such an early warning technique already exists. The data presented in the majority of the 37 chapters contributed to this book, which forms the proceedings of a symposium of the same name held at Edinburgh in 1977, suggest that this is not so. Certainly, effects can be observed, but their significance, apart from establishing chromosomal contact with a mutagen, is far from clear.

The book makes four major contributions to this rapidly growing subject. First, a valuable bibliography has been provided. Second, the experience gained to date in man has been collected together. This includes a description of the chromosomal abnormalities induced in survivors of the Hiroshima A-bomb and in x-ray treated patients, the apparent absence of chromosomal changes in psoriasis patients treated with 8-methoxypsoralen and ultraviolet light and those produced in chemical workers exposed to benzene or vinyl chloride. The third major contribution is to focus attention on the uncertainty that currently exists concerning the phenotypic significance of the various types of chromosomal damage that can be chemically induced in either model systems (animals or cultured cells) or in man. For example, a simple link between specific, chemically induced chromosome abnormalities and the eventual chemical induction of cancer, or any other disease condition, has yet to be established. Similarly, there appears to be little evidence of permanent genetic damage induced in patients who survived intensive anti-cancer drug therapy, despite the fact that their peripheral lymphocytes had passed through a crisis of chromosomal damage during therapy.

At present it is difficult to disregard