

SELECTION
OF
THE PRINCIPAL CAUSE OF DEATH

STUDIES ON THE BASIS OF MORTALITY STATISTICS
FOR RHEUMATOID ARTHRITIS

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SELECTION OF THE PRINCIPAL CAUSE OF DEATH. Studies on the basis of mortality statistics for rheumatoid arthritis.

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SUMMARY

The official statistics of Sweden for 1971-75 show a 2.7-fold increase in mortality for men and a 3.0-fold increase for women attributed to rheumatoid arthritis (RA) as the underlying cause of death. In order to investigate the basis of this observed increase, all death certificates for 1971 and 1975 with a diagnosis of RA (N=1224) were studied. All information was re-coded according to the original entry on the death certificates.

The aims of the study were to seek an explanation of the observed increase by investigating the National Central Bureau of Statistics' (NCBS) registration procedure, and to identify inadequacies in the completion of death certificates and major interpretation problems facing the certifiers and coders in the reporting and registration of the causes of death.

The investigation showed that the observed increase was due to changes in the NCBS' registration procedure: An increased tendency by the NCBS to favour RA in the registration of the underlying cause of death even when RA was not reported as the underlying cause on the death certificates. Physicians had reported a slight decrease for men and practically no change at all for women between the years when RA was considered the underlying cause of death.

The major inadequacies identified on the certificates were (1) an inadequate causal sequence, (2) diagnoses making the conditions difficult or impossible to code, (3) more than one diagnosis for each link in the causal sequence leading to death, and (4) an underlying condition not stated in accordance with other provisions of the official WHO instructions. The NCBS was found to have registered RA as the underlying cause instead of physicians' stated underlying condition (i) when RA was likely to have caused the stated underlying condition, (ii) when the non-RA diagnosis was the only entry in part I of the certificate and rendered an incomplete description of the fatal course of events, (iii) when the non-RA condition could only be classified by a rest-category code of the International Classification of Diseases (ICD), and (iv) when the non-RA condition was considered 'trivial'.

The NCBS' increased registration of RA as the underlying cause of death in the period examined could not be explained by inadequately made out death certificates, nor by a strict application of the rules for coders on selection of the underlying cause of death issued in the ICD.

Several interpretation problems were identified of significance to cause-of-death statistics in general and different interpretations were discussed. Some of these problems were caused by inadequacies on the certificates. Others concerned incompleteness, ambiguities, and manifold meanings of the basic concepts and rules governing the reporting and registration of causes of death.

Key-words: Rheumatoid arthritis, cause-of-death statistics, classification, causal selection, causality, death certificate, mortality.