INTRODUCTION

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Before introducing the speakers, some background on the role of data linkage in mortality research might be in order. Three basic applications deserve mention: obtaining correspondence between information on the death certificate and the population base, adding information to the certificate, and matching studies for epidemiological purposes. As will be seen, the five papers at this session fall, at least loosely, into one of these categories.

Correspondence of Information.--The mortality rate is traditionally computed by relating the statistics derived from death certificates to the corresponding population data. Problems arise when there is a lack of correspondence between the information recorded on the death certificate and on the population census schedule. The problem is more serious when the information called for differs in the two source documents. An example of this is the occupation item. The death certificate calls for the usual occupation, whereas the census schedule asks for the present occupation. One way of eliminating this lack of correspondence is to match the death certificate to the census schedule, and use the census information on occupation for both the numerator and denominator of the rate. (The Koteen-Grayson and Rosenberg, et al papers at today's session belong in this general area.)

Adding Information.--Another important aspect of record linkage is the possibility of extending the study beyond the information available on death certificates by using the data in the linked record. For example, the death certificate does not contain any income or education information, but it is possible to produce death rates by income or education as a result of linkages to surveys, censuses, or administrative records. (The Caldwell-Diamond and Rosen-Taubman papers at this session exploit information not available from death certificates.)

Death Determination.--Data linkage is central to epidemiological studies. Especially in examining industrial mortality, heavy reliance has been placed on a system which employs, in part, Social Security Administration (SSA) records to identify who, from an exposed population, may have died. This convenient and relatively inexpensive procedure is not without deficiencies, since all deaths are not reported to Social Security. However, even with the installation of the proposed National Death Index, SSA information may continue to serve as an endpoint in prospective epidemiologic studies involving a cohort of individuals. To take one example, the Oak Ridge Associated Universities is now utilizing SSA records in their studies of mortality among the atomic workers in the various Department of Energy installations at Oak Ridge. (The Alvey-Aziz paper provides some preliminary indications of the degree to which SSA mortality data is complete and in agreement with death certificates.)

The importance of data linkage for mortality research has long been recognized. For example, Dr. Halbert L. Dunn, then Chief of the Federal Division of Vital Statistics, introduced the social security number into the 1940 revision of the standard death certificate to make possible the linking of death certificates to social security records. Dr. Dunn had a great interest in the general problem of record linkage, but he was regarded as something of a visionary and his interest was not shared broadly by his peers. A meeting such as this one would have been a source of great gratification to him.

NOTE

This session was organized in order to provide an opportunity to present research results that are related to the proposed Linked Administrative Statistical Sample (LASS) project. The LASS effort has as its goal the creation of a common statistical sample for mortality research by linking data from the record systems of the National Center for Health Statistics (NCHS), Internal Revenue Service (IRS), and the Social Security Administration (SSA). The system would include:

1. mortality information from NCHS's statistical processing of death certificates;
2. individual income tax items obtained as a by-product of IRS Master File processing (detailed income data, deduction and tax data, residence information, and the occupation entry from Forms 1040 and 1040A); and
3. longitudinal earnings and benefit histories developed at Social Security as part of its Continuous Work History Sample.

An interagency planning process for LASS has been underway now for nearly a year. In conjunction with this collaborative effort, the Social Security Administration's Office of Research and Statistics is producing a series of working notes as a means of documenting the project's progress. Thus far, the LASS Working Notes Series provides meeting notes, agency correspondence, and related papers and documents in six reports. Additional reports will be compiled as the planning process continues. Copies are available upon request by writing to:

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