

EDITORIAL

## Occupation on the Death Certificate: To Use or Not To Use, That Is the Question

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In January 1987 the National Institute of Occupational Safety and Health (NIOSH) and the National Center for Health Statistics (NCHS) jointly sponsored a 2-day workshop in Washington, D.C., to advise both agencies concerning the need for nationwide coding of occupation and industry on the death certificate. The workshop drew some 200 participants (including this author), who weathered a "15-inches-plus" surprise snowstorm to complete the agenda. Much discussion at the meeting centered on the low-cost, ready access to these data, a feature which should not be overlooked in assessing their usefulness in surveillance. The NIOSH and the NCHS were therefore advised to institute a nationwide death certificate occupational coding effort while undertaking validation studies for these data. Also recommended were studies to assess the validity of other information on the certificate, such as the cause-of-death statement. One recurring question throughout the meeting concerned the accuracy of death certificate occupation information. For a nationwide coding effort to be effective (even if the data were to be used only for surveillance), such information should be somewhat representative of lifetime work history.

In the present issue of the *Journal*, Schade and Swanson report that death certificate statements concerning occupation do not correspond to lifetime occupation between 30 and 50% of the time [1988]. Their data were based upon occupational histories collected at the Metropolitan Detroit Cancer Registry, a population-based cancer surveillance system [Swanson and Brennan, 1981]. The number of deaths examined (about 2,500) is among the largest studied in this type of investigation. These deaths covered a wide variety of cancer sites. The study design was suited to the question being investigated. Perhaps most important, the authors' conclusions seem well supported by the study's findings.

Given the problems that seem to underlie the epidemiologic use of death certificate occupation statements, what is the next step? It is necessary to remember that Schade and Swanson conducted their study in a major industrial urban center. Indeed, it has the greatest concentration of heavy manufacturing in the nation. Perhaps in rural areas, such as in Iowa or Wisconsin (where mobility may be less than in Detroit), the validity of death certificate occupation information may be much greater. If so, then initiatives by the NCHS toward either nationwide or regional coding of death certificate occupation statements would be worthwhile. However, if validity is as great a problem in a rural area as it appears to be in an urban one, then either improvements must be made in the quality of the data or the national coding

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program should be reconsidered, if not halted entirely. Neither of these options is particularly palatable. Pragmatically, though, if the statement of occupation on the death certificate is too misleading, then the funds used to support the coding activity may be better spent elsewhere.

Another utilization of such occupation information is in surveillance [Schwartz and Landrigan, 1987; Sundin et al., 1986; Rutstein et al., 1983]. As discussed in the literature during the past decade, the surveillance function of vital data can direct epidemiologic efforts in a very efficient manner [Dubrow et al., 1987; Frazier and Wegman, 1979]. Of course, some of these studies deal with sentinel diseases, such as mesothelioma. It is possible that for diseases that are not sentinel, such as leukemia or lung cancer, the problems described by Schade and Swanson overwhelm whatever information can be gleaned from the data. Further insights in this area are clearly overdue.

The NIOSH and the NCHS have shown much interest in the use of death certificate occupation information. Certainly, current activities in this area should be continued until the validation issue has been fully resolved. Both institutions must now undertake those validation studies, either intramurally or extramurally. Until such studies have been completed, two nagging questions in every epidemiologist's mind when reviewing an investigation based upon death certificate occupation data will be: "Are these data valid? Should they have been used?"

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