The Changing Nature of Respiratory Diseases in Industry

Neill K. Weaver, M.D.

Ten years ago, on May 14, 1962, the first Skytop Conference on Respiratory Disease in Industry convened. The basic objectives of the Conference, as defined by the Co-Chairmen and Planning Committee, were to:

- Assemble currently available information.
- Stimulate more and better basic research.
- Point up the need for well-designed pilot studies, cooperative in nature where possible.
- Provide responsible leadership in an effort to achieve some standardization of approach to the problems discussed.[1]

To meet these objectives, the Conference participants were selected from a variety of scientific disciplines to make presentations and conduct free and open discussions on topics relating basic concepts of respiratory diseases to the clinical disorders experienced in industrial populations.

The passing of a decade for further research, acquisition and evaluation of knowledge pertaining to respiratory diseases affords an advantageous opportunity to look back and assess the accomplishments of the initial Conference. How well were the objectives of the Conference met? What significance can be attributed to the reports and discussions which took place here ten years ago? Have developments of importance occurred on the respiratory-disease-in-industry scene which can be credited, even in part, to the previous Conference?

The answers to such questions can be determined on much more secure ground two and one-half days hence, at the conclusion of the second Conference. For those of us privileged to participate in the original meeting, certain cursory values can be placed on the achievement levels attained for the Conference objectives announced ten years ago:

- The information then available was assembled and set forth for study and analysis in an admirable manner; the published proceedings of the first Conference provided an eloquent display of the "state of the art" at the time.
- A recognition of the need for more and better basic research certainly emerged from the Conference.
- A variety of pilot studies, some of a cooperative nature, have been conducted during the last decade.
- A number of participants in the Conference have continued in roles of responsible leadership in studies of respiratory diseases, resulting in efforts towards standardization of approach to the solution of problems.

However, a reasoned and sober appraisal of overall progress made in the practical technology of control of respiratory disease in industry reveals scant cause for pride in achievement. In fact, respiratory disease continues to be not only the leading cause of disability absenteeism in industrial worker populations, (predominantly the result of the acute respiratory conditions), but also the major cause of permanent disability benefit payments (as represented by the combination of Social Security payments for chronic obstructive pulmonary disease and "black lung" compensation programs). These overpowering indicators of the continuing disastrous effects of respiratory disease on the health of mankind raise questions concerning the effectiveness of control efforts by medical scientists. In this context, two basic questions are selected for further examination. First, is the approach to respiratory disease problems through the industrial population and environment a logical one? Second, recognizing that alterations are present in the respiratory disease patterns reflected by industrial populations and environments which, in turn, are subject to permutations and transformations, is it the changing nature of respiratory problems in industry which defy analysis and solution?

Why the Emphasis on Respiratory Disease in Industry? — Interest and concern regarding respiratory disorders in industry stem from population and environment. The industrial population is a defined population, accessible for study and evaluation. Employees are subject to costly disability absences from work, for which acute respiratory disorders constitute the leading cause. Workers are also subject to permanent impairments, which may progress to total disability for work; here too, respiratory diseases—this time of a chronic nature—are the leading cause.

With respect to the role of the environment in respiratory disease, the editorial introducing the published papers of the first Skytop Conference on Respiratory Disease in Industry expressed the relationship most eloquently, as follows: "No group of diseases is so definitely related to environment. The marvelous delicate intricacies of the pulmonary tree respond to inhaled irritants, and infectious agents. The vector sum of lifetime exposure to such materials may add up to the state of respiratory health in adulthood. Un-

Associate Medical Director, Exxon Company, USA, P.O. Box 2180, Houston, Tex. 77001.