



FIG. 1. *William M. Haenszel.*

A Conversation with William M. Haenszel

Benjamin Hankey

Abstract. William M. Haenszel was born on June 19, 1910, in Rochester, New York. He received a B.A. degree in 1931 and an M.A. degree in 1932, both from the University of Buffalo. He is an elected Fellow of the American Statistical Association, the American Public Health Association and the American Association For the Advancement of Science. He has been awarded a Doctor Honoris Causa en Salud Publica from the Universidad del Valle in Colombia. He has held positions as Secretary of the Statistics Section and member of the governing Council of the American Public Health Association, Chair of the Biometrics Section of the American Statistical Association and member of the Regional Advisory Board of the Eastern North Atlantic Region of the International Biometric Society. During his tenure at the National Institutes of Health (NIH) from 1952 through 1976, he served as Head of the Biometric Section and the Chief of the Biometry Branch at the National Cancer Institute. Since leaving the National Institutes of Health he was on staff at the Illinois Cancer Council, Professor of Epidemiology at the University of Illinois (he is currently Professor Emeritus) and a consultant to the World Health Organization.

Hankey: How did you decide to come to NIH?

Haenszel: I suppose it was just a matter of serendipity. I happened to be in the right place at the right time.

Hankey: Were there any individuals in particular that influenced your decision?

Haenszel: The major influences at NIH were Harold Dorn and Sid Cutler. Sid Cutler and I first met in 1946, in the immediate post-War era. I was in New York City at the time, recruiting statisticians for the New York State Department of Health. People in the City Health Department recommended quite strongly that I contact Sid Cutler. I followed their advice and discussed with him the possibilities for work in the State Health Department. However, he turned me down.

It turned out that it was probably a good thing that I didn't recruit Sidney because I myself accepted a position in the Connecticut State Health

Department as Director of the Bureau of Vital Statistics the following year in 1947.

At the time of my going to Connecticut, there was the embryo of a Cancer Registry in the State Health Department. The staff of the Registry was headed by Dr. Griswold, a physician, and Eleanor McDonald, a well-known statistician versed in cancer registries. For my first two years in Connecticut, I had no direct working relationship with the people in the Cancer Registry. Then Eleanor McDonald accepted a professorship in Epidemiology at the M. D. Anderson Hospital in Houston in 1948, and there was no identifiable replacement for Eleanor in the department. The Commissioner of Health, Dr. Stanley Osborne, called me into his office and indicated his great desire to have the Cancer Registry continue. In effect, he asked that I find a suitable replacement for McDonald. I identified Earl Pollack, who was in the New York State Health Department. With the recruitment of Earl in 1948–1949, we were in a reasonable position insofar as statistics and data management were concerned. This was when the use of marginal punch cards gave way to IBM punch cards and the early phases of computer applications.

What we did not have at the time was a person knowledgeable in cancer epidemiology or in the role of the registries in generating cancer incidence and

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survival data. I approached Harold Dorn, who was then at the National Cancer Institute (NCI), and asked him if he could serve as a consultant to the Cancer Registry. He wrote, saying he was extremely supportive of the concept of maintaining the Connecticut Cancer Registry, but said that he was tied up with the Ten City Morbidity Survey and his duties as General Secretary of the International Union Against Cancer. However, Dorn said that there was a man on his staff that he had recruited from the armed forces who he thought would be very helpful. The man he was referring to was Sid Cutler.

Sidney then became the staff member at NCI, serving as a consultant to the Connecticut Registry. He was able to make a substantial contribution in the limited amount of time available.

Hankey: Was Sid Cutler instrumental in your decision to come to the NCI?

Haenszel: Not exactly, but his presence as a consultant was an important consideration. The next thing that happened was that Harold Dorn approached me as a potential replacement for himself in the National Cancer Institute. Dorn was going to a newly created Office of Biometry at the National Institutes of Health. This was a time when the Institutes were going through a phase of decentralization. When Dorn recruited me, that completed his recruitment activities at NIH. He had earlier recruited Mort Kramer for the Mental Health Institute and Felix Moore for the National Heart Institute.

I was then in a very unusual situation. I had started out as a staff member of the Connecticut State Health Department soliciting consultation services from NIH; this ended up as an avenue for my own recruitment to NCI. When I accepted the position in the NCI, I was in effect going to be responsible for making a determination on how much of the resources of the statistics group in NCI could be devoted to the establishment and operation of the population-based Cancer Registry in Connecticut.

Hankey: Were there scientific advisory groups at that time?

Haenszel: No, not at that time. There was very little emphasis on formal committee review in the early years. In those days the NCI Laboratory and Branch Chiefs made most of the decisions. Budgets in the form of money and personnel slots were fixed at the Branch and Laboratory level. The final decision, for example, on how much money we wanted to support Cutler working as a collaborator in Connecticut was up to me.

Hankey: What do you feel were some of the most important things that you worked on? I am familiar

with at least some of them because I shared an office with Nathan Mantel.

Haenszel: I would have to name two: (1) the collaboration with Nathan and (2) initiating a program of studies of migrant populations which called for collaborative arrangements with investigators in the U.S. and in countries of origin. The major theme of the migrant studies was the investigation of the role of host and environmental factors in the etiology of disease.

Hankey: What were some other seminal events that occurred during your career? Work that you would have been aware of, within the NCI or NIH?

Haenszel: I think the distinctive feature event occurred in the regime of Dr. Endicott, who succeeded Dr. Heller as Director, NCI. It was the establishment of statistical consulting support for the Cancer Chemotherapy Service Center (CCSC).

Hankey: That would also be an event that contributed to the establishment of statistics as a recognized discipline at NIH as well, with statisticians having visible, decision-making responsibilities.

Haenszel: Yes. For example, Marvin Schneiderman was promoted out of the Biometry Branch of NCI and assigned to the CCSC. That launched Marvin on his whole career in clinical trials. Marvin became Associate Director for Field Studies in the 1970s.

Another example was Mike Shimkin. He was Dr. Heller's (Director, NCI) coadvisor on cancer research, and he established the joint Biometry and Epidemiology Branch. Shimkin also had an appointment as Assistant Director of CCSC. Schneiderman and Shimkin, and later Sid Cutler, all became very active in clinical trials.

Hankey: Would you consider clinical trials to be the major area where statistics contributed to the science of NIH? Or do you think there were other areas such as epidemiology that were even more important?

Haenszel: Well, I would think they were equally important.

Hankey: Could you give some examples of the contributions from epidemiology during those earlier years? You mentioned the migrant studies; were there others as well?

Haenszel: I think the earlier years were primarily devoted to descriptive epidemiology. We were starting from a fairly low knowledge base in those days. So, I think that the descriptive epidemiology, drawing mainly on the morbidity surveys and cancer registries would be an important first example. The analytic epidemiology came later, after Nathan and I wrote our paper in 1959 [3].

Hankey: Do you have any comments on your work with Nathan on the Mantel–Haenszel procedure? Clearly that’s one of the major contributions to both statistics and epidemiology.

Haenszel: Well, I wouldn’t have anything to add to what Nathan might say. Case–control studies were coming into vogue at that time, and I felt that there should be examination of the statistical issues involved in data analysis. Nathan says that I approached him when I was doing some case–control studies on smoking and lung cancer. The 1959 paper was a result of this collaboration [3]. I believe that Nathan and I did contribute a very useful statistical/epidemiologic analytic approach to case–control studies.

Hankey: Can you think of any particular studies or work that either you or other statisticians on your staff or at NIH worked on where they were prime players but didn’t get recognition that they deserved? I am especially interested in the earlier years, when there might not have been recognition of the importance of statistics.

Haenszel: Well, in the early years, Dorn’s influence within the NIH was immense. He was given a pretty free rein by Dr. Heller, then Director, NCI. So the responsibility for statistical activities in the cancer field really vested in Dorn and me.

Hankey: Did you feel that you were ever slighted in regard to any results that may have been published by other people to which you contributed substantially?

Haenszel: No, I don’t think I really had any serious concerns over authorship issues. This may be, in part, the way that the Cancer Institute operated in its freewheeling days. The consulting statisticians had great latitude in work arrangements and worked with statisticians in other institutes. Statisticians, at least at the NCI, were given proper recognition.

Hankey: When he and I were both there, Nathan Mantel seemed to interact with people in the labs as well as people outside the Cancer Institute, with little direction from anybody else. He obviously was an exceptional individual but, I think “freewheeling” is probably a good way to describe the way that several of the individuals functioned.

Haenszel: I think the strength of the Institute in its early years was its unstructured nature. The unstructured approach and the free interplay between the consultant statisticians and the lab people at that time was the way to go.

Hankey: Do you have any other highlights or lowlights to tell us about regarding your career at NCI?

Haenszel: The migrant study program required collecting data from principal investigators in their countries of destination and origin. My activities in this area with Professor Correa (Colombia), Professor Segi (Japan) and Dr. Staszewskiv (Poland) led to complex arrangements that had to be supported by grants and contracts, and I think if I have any complaint about the way things went in NCI, it would be the amount of committee work that had to be done. I see in retrospect the need for some oversight, but I think that the yearning for micromanagement began to emerge in those days.

One of the highlights occurred when Mike Shimkin returned to the Bethesda campus from a West Coast NCI field station to become Chief of the Biometry Branch. He had a very positive influence on Branch activities, particularly in clinical trials. One example will give you a feel for what Shimkin was doing. There was a question of the appropriate surgical treatment for lung cancer. Dr. Ochsner of the Ochsner Clinic in New Orleans was advocating pneumonectomy, while investigators in Boston were doing more conservative lobectomies. Shimkin enlisted Sid Cutler and one of our reserve officers, Max Koppel, to work on the problem. As a result, Connecticut became the first population-based Registry in operation to report on survival as well as cancer incidence. There was a Cancer Registry in Denmark that collected the incidence data and studied the risk factors, but they never went after survival experience, except for one paper in NCI Monograph 15, edited by Sid Cutler [1]. Monograph 15 gave the NCI program credibility. The Connecticut Registry was used as a springboard for developing the Surveillance, Epidemiology and End Results (SEER) Program. It was much easier to talk to California about collaborating with them, if you could point to the success in Connecticut. If Connecticut had not turned out well, I think that would have changed the history of cancer registries in this country and abroad.

Sid thus deserves recognition as a major player. And, looking at the cover and legend to the cover in the November 15, 1993, issue of *Cancer Research* [5], I think there could have been more emphasis on Sid’s contribution.

Hankey: Yes. I think Sidney could be viewed as the initial manager of the SEER program.

Haenszel: The one disagreement Sid and I had concerned the registry material to be collected. A national meeting of cancer investigators in 1960 in Minneapolis gave rise to a report that included data from hospital-based registries in New Orleans, Roswell Park and M. D. Anderson and from two population-based registries, the Bay Area and Con-

necticut. After the meeting we discussed arrangements for continuing this effort. Eleanor McDonald and some of the other people, including Sidney, felt that pooled tabulations would be appropriate. I was having none of this, because I had had some unhappy experiences with lack of flexibility when you have just tabulations and not information on detailed cases. So, I said, "Do it via the collection of case reports, even if we have to lose half of the registries's coverage." In retrospect, I think, that was one of my major decisions; to go for collaboration with groups who would report data on individual cases. Without this element, the whole business of quality control could have been compromised.

Hankey: I think that one of the strengths of looking at survival following cancer incidence in our cancer registries is that the data are population-based. There are, however, difficult issues related to survival. For example, with the introduction of screening, we are now dealing with lead-time effects that make artifactual contributions as survival increases. But, from the standpoint of generalizability, the notion that the information is population-based is extremely important.

Haenszel: Yes. So that both Connecticut and the Bay Area were very important as potential checks on hospital registry data.

Hankey: Are there any other comments you would like to make, Bill?

Haenszel: I think it is a little hard to give you the flavor of the way things were, say, more than 15 or 20 years ago.

Hankey: Well, things have changed dramatically from that time in the way that business is done. There is a greater intrusion of politics.

Haenszel: Yes. For example, some of the activities of the Women's Health Initiatives may have been more politically than scientifically motivated. I mean, some studies will be more efficient when conducted on one sex; I don't see the need for gender equality considerations in planning. I think NCI

and NIH should take a more aggressive stance in defining what they believe is good science.

It is deplorable that part of the public doubts that NCI has been fully committed to a comprehensive program of breast cancer research and control. The benefits of the lumpectomy trial [2] and the evaluation of mammography as a breast screening modality need to be stressed. Few people really know the important role the NCI intramural staff (including the Biometry Branch) played in channeling support and consultation to Shapiro and Strax, the coprincipal investigators for the mammography study carried out in the Health Insurance Plan of Greater New York [4].

Hankey: This has been very interesting, Bill. I really have enjoyed your reminiscences. You are still continuing to work one day a week, is that right?

Haenszel: Yes, and sometimes I make it two days a week.

Hankey: Terrific.

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