The National Hospital Discharge Survey (NHDS) is a continuous survey conducted by the National Center for Health Statistics (NCHS), now one of the Centers of the Centers for Disease Control. The survey is one of a number of voluntary surveys conducted by NCHS and is the longest-running of its institutional surveys.

The survey has been in the field since 1965 with a sample of approximately 500 hospitals, the majority of which have been in the sample the whole time. Abstracted medical record data is requested from the facilities on a monthly basis. Weighted data provide scientifically valid estimates of short-stay nonfederal hospital utilization. This paper discusses the various strategies that we have used over the two decades to maintain and increase participation in the NHDS.

Let me first briefly describe the design and operations of the NHDS for you. The survey has traditionally consisted of a two-stage stratified design whereby a sample of hospitals was selected into the survey and from those hospitals, a sample of their discharges is selected and data on these discharges abstracted from the hospitals' medical records. The majority of hospitals were selected into the survey in 1965 and 1968 with several small additions of hospitals being added on a periodic basis over the years from lists of newly-opened facilities. The Bureau of the Census has traditionally been the field agent for the NHDS handling most activities related to induction, facility follow-up, monitoring of data collection, etc. The hospitals, once selected into the survey, were expected to participate for a number of years. In 1965, that number of years was anticipated to be approximately 5, and we said so in some of our early correspondence. We shouldn't have done that. For a number of reasons, especially budgetary reasons, the same hospitals remained in our sample for more than two decades.

How can you convince the management of an institution that they want to supply data to you, especially when the survey you are representing is a voluntary Federal Government survey. Possibly more in the hospital field than others, there is no love of Federal surveys. For example, hospitals are already required to provide a tremendous amount of data for Medicare and Medicaid reimbursement, as well as being asked to participate in numerous other one-time survey. Here is a list of many of the methods that have been utilized in our survey to improve response rates over the years.

- Association Endorsements
- Letters
- Personal Contacts
- Payments
- Alternate Data Collection Methods
- Provision of data back to the facility

These methods for increasing participation have been used in combination for the life of the survey. Few studies have been undertaken to assess the success of any specific method. These activities have evolved as part of the everyday operations of the NHDS.

Association Endorsements

Since the original planning efforts for the NHDS in the early 1960's, we have sought and in most cases received the endorsements of leading associations, such as the American Hospital Association and the American Medical Record Association. The support of the national organizations was considered essential at that time. Copies of endorsement letters were always sent to the facility with the NCHS introductory letter and/or were provided at the time of the personal visit. In the earliest years, a letter was provided directly from the American Hospital Association.

In recent years, there has been an increase in the visibility and influence of State and local hospital associations as well as many more specialized associations that has resulted in substantially more effort to obtain an ever-
increasing number of endorsements. In fact, if we visit a hospital and they decline to participate, we try to obtain information on what type of endorsement might make them reconsider. We then make a special effort, where possible, to obtain that endorsement. However, even with that endorsement, there is no guarantee that on the follow-up contact, the hospital will agree to participate.

Letters

Letters to hospital administrators to introduce them to the NHDS have been sent from different levels of the Public Health Service over the years. The letters are traditionally sent by the Director, NCHS. Sometimes, the letters are sent from the Director, Division of Health Care Statistics, and on rare occasions from higher levels. There appears to be no difference in reaction to letters from government officials at different levels. To date, to the best of my knowledge, we have not used letters from the very highest levels of the Department of Health and Human Services, such as the Secretary or the Surgeon General. That is a possibility for the future. In addition to the letter, information about the Center as well as copies of NCHS publications, such as Health, US, are enclosed.

Personal Contacts

The field operations of the survey, including induction, are the responsibility of the Bureau of the Census. This is undertaken using a Federal Government Interagency Agreement. At the outset of the survey, a hospital is contacted by letter, telephone, and then by a personal visit to secure agreement to participate in the survey. If the hospital declines to participate in the survey, after all various data collection options have been presented, the hospital becomes a refusal hospital for that data year. (Data collection options are described later.) If there were an indication that staff might be changing or that circumstances might improve, the field agent would reconnect the hospital at a specific time interval. If not, each refusal hospital is contacted by letter or phone at a minimum of once a data year. If acceptable to the hospital, another personal visit is made to try to secure participation.

Payments

At the outset of the survey in the mid-60's, it became obvious that most facilities expected to be paid for their continuous participation in the NHDS. There is work involved in selecting a sample of patients (usually through a line by line review of the hospital's daily discharge list of patients), locating and pulling the medical records, abstracting patient and diagnostic data on forms, refiling the records, completing transmittal sheets and forwarding the data.

Twenty years ago, we paid a hospital about $.20 for each record abstracted. Now most hospitals are paid a few dollars a record. We are always willing to negotiate price with a hospital. It currently costs between $5-6 a record to pay the Census Bureau staff to visit a hospital to sample and abstract data. When a hospital indicates that they cannot participate for the rate that we offer, we ask them to provide us with a cost estimate. It's very interesting to note that when we do this, the hospital does not come back with an off-the-wall estimate such as $50 per record. They usually sincerely estimate the time and expense. We receive estimates such as $2.60 per record or $5.10 with a description of how they arrived at that estimate.

Additional payment is often successful in cases where the hospital can identify someone in the Medical Record Department who is willing to perform these activities on her own time in exchange for the NHDS payment. However, for those who field Federal surveys, let me state that the paperwork and hassle surrounding payment to facilities is not inconsequential. It requires approval at the Office of Management and Budget level and takes substantial time for internal staff to handle the paperwork involved for paying each facility.

Alternate Data Collection Methods

This paper has already alluded to alternate data collection methods. The preferred method for the NHDS has traditionally been to have the sampling and abstracting performed by hospital staff. Not only has it been the most cost-effective method, it also utilized medical record personnel most familiar with a
hospital's data. When a hospital indicates that they do not have the manpower to participate in the survey, the Census staff offers what we call the 'alternate' method of data collection. In this instance, a Census representative visits the hospital to select the sample and complete the abstracting. Because of confidentiality concerns, the hospital staff usually continues to pull and refile medical records. Over the years this has been a very powerful incentive for continued participation in the NHDS. At the outset of the survey less than 10 percent of the hospitals refused the hospital-based collection and were offered the alternate method. By the late 1980's, over half of the hospitals were utilizing this method. Usually a hospital participated for several years using their own internal staff, then indicated they could participate no longer, but were persuaded to accept the alternate method of data collection.

In recent years, some hospitals have, for a fee, provided abstracted medical record data to private commercial services which summarize the individual hospital utilization data and return tabulations to the facility. Following several evaluation studies, we decided to purchase data in machine readable form from these services, where available, for NHDS sample hospitals not willing to provide manual data.

In fact, in the redesigned NHDS, brought into the field in 1988, one aspect of the redesign was to stratify, where possible, for hospitals belonging to abstract services. The evaluation studies showed that significantly higher rates of participation would be obtained if hospitals were asked to provide data at virtually no burden to them. That decision has turned out to be problematic as increasingly, hospitals are using new inhouse computers to produce their summarized data and are not renewing their contracts with the abstract services. In addition, our survey has not been very successful, to date, in obtaining data tapes directly from the hospital. It is usually a matter of lack of hospital priority and hospital programming staff for our survey that precludes us obtaining these data tapes.

Provision of Data Back to Hospital

The NHDS responds to approximately 3000 requests for data per year. Most of these requests are from government agencies, research firms, insurance companies, universities, etc. Relatively few are from hospitals, and only a portion of these are from hospitals which participate (or know they participate) in the NHDS.

We have begun using a proactive approach to the provision of data to sample hospitals. At induction, we emphasize to them the use of our national and regional published and unpublished data for comparison purposes with data that they may have available on their own hospital. Since our public use data tapes usually require a fair size mainframe often not in use at the hospital level, we have produced data on diskettes that are available for PC users. These diskettes provide some of the most commonly requested summary weighted data. On occasion, we also provide data we have collected on the facility back to the facility. However, since we only collect data on a small percentage of their patients, we do not encourage the availability of this information. The provision of data, especially diskettes, has converted some refusals.

In conclusion, obtaining and maintaining participation is an ongoing activity within the National Hospital Discharge Survey. We are vying for scarce hospital resources to participate in voluntary surveys. In addition, often the CEO who needs to approve the survey is not familiar with the research needs of its own hospital staff. Within the Center, limited staff are assigned to the NHDS. And, finally, we are dependent on the Census Bureau field staff to carry out our plans for better response in several of the areas discussed. The Census staff, itself, is assigned to several surveys and is not devoted full-time to NHDS activities.

To date, through ongoing hard work we have managed to keep the participation of hospitals in the NHDS at a sufficiently high level to produce quality annual national estimates of hospital utilization.