Developing a Central File of Facilities for Long Term Care in the United States

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DEVELOPING and maintaining the central file of long term care facilities in the United States is an activity of the Community Profile Data Center, Division of Medical Care Administration, Public Health Service. This file is the principal source of data on the number, distribution, control, and size of long term care facilities in the United States.

The data center was established at the direction of the Surgeon General in June 1966 and is part of the Bureau of Health Services. Its first responsibility was to provide the Public Health Service with the information needed to implement Medicare and Medicaid, which were then about to be initiated. The center continues to be responsible for providing Medicare data to all components of the Service, but it is now also used to meet the Service's current and future requirements for information about health resources throughout the country.

At present the center obtains and makes available detailed inventory data on health resources in the United States, including health manpower and community agencies and services; prepares statistical summaries of the characteristics of health resources on State, county, and local bases; assists States to develop their own resources for data collection and analysis; develops profiles of the availability and use of

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health resources for major communities; develops indices of levels of community health services; and applies new technology to data handling and transmission.

The data center's primary concern is with subnational, State, and local data rather than with broad national summaries. The data center reworks information from the National Center for Health Statistics and many other sources for analysis on a local level.

The data center defines a long term care facility as an institution licensed by the State as a nursing home or related facility, or one organized and staffed to provide services of a prolonged nature for persons who do not require the specialized service of hospitals, or both. This definition covers not only general nursing homes, but also homes for the aged, personal care facilities which may or may not provide nursing service, and facilities which may or may not come under Medicare.

An institution is included in the file of long term care facilities primarily because it fits the definition used to establish the file, not because it is certified as an extended care facility under Medicare.

A facility may be included in both the hospital file and in the long term care facility file, in which it is identified as a distinct part of some other institution.

In some jurisdictions certain facilities are licensed by city departments of public health or

welfare and do not come under the jurisdiction of any State agency. In this instance, it is necessary to obtain data directly from the local licensing agency.

About 1–1½ years are needed to prepare a complete file. The center staff has been working on the central file for approximately 10 months, and about 75 percent of the file is complete. The final 25 percent, however, is most difficult to obtain, and we anticipate it will take us an additional 6–8 months to complete the file.

Long Term Care Facility File

Input. The long term care facility file is derived from directories of State-licensed facilities, annual State inventories of hospital and medical facilities required for Hill-Burton funds, certification data for extended care facilities generated through the Medicare certification process, and other lists of facilities. Additional sources provide limited data on some unlicensed facilities.

Several problems arise in identifying long term care facilities, the primary being that in many States no single agency is responsible for licensing all long term care facilities. It is necessary, therefore, to obtain from each State licensing agency a directory of all facilities which it licenses and to determine which facilities are not licensed, and obtain information about them from other sources.

For example, in California facilities may be licensed by the departments of public health, mental hygiene, and social welfare, and it is necessary to consult the directories of all of these agencies to obtain a complete facility count.

Content. It was originally planned to construct a single master record file containing all possible information on each long term care facility, but we were forced to revise this conceptual approach. As an alternate measure we developed a subsystem which will lead ultimately to the creation of the master record. The subsystem file is now being prepared for the 20,000 facilities throughout the United States on which we currently have information.

Provision is being made to update and expand existing subsystem files as new information becomes available for a sufficient number of facilities.

Every long term care facility in the country will be classified in the master file by name and address, Public Health Service region, State, county, city, ZIP code, congressional district, standard metropolitan statistical area, and census tract, licensed bed capacity, facility classification according to data center and Department of Health, Education, and Welfare definitions, services provided, staffing patterns, and special characteristics including Medicare status.

The subsystem now being developed will contain all but the standard metropolitan statistical area, special services, and staffing pattern data.

The facility record will initially contain a Medicare certification code. Ultimately, both subsystem and master file will contain a location item carrying the Medicare provider number of the facility to be used as a link with an additional record on extended care facilities. This additional record will be created because perhaps only 5,000–6,000 of a total 20,000 or more long term care facilities in the country will be certified under Medicare. The Medicare record will contain information provided by the facility at the time it applies for certification, including the classification of beds by use, staffing pattern, and services provided, and generated through the Social Security Administration system.

The Medicare file, which is guaranteed confidentiality by law, will carry also the coded items produced through the Medicare survey of the facility, and the subsidiary file will contain details of the extended care facility utilization review plan. Since the Medicare program requires periodic resurvey and recertification of facilities, the file will be updated as new information becomes available.

Construction and Maintenance of File

Many problems in the development of a computer system of this type are routine and easily handled after several encounters. However, some problems are serious and require constant attention.

Completeness of information. Because data stem from many different sources we must be

able to identify rapidly each source of information on long term care facilities and know its derivation, how it is processed, and how frequently it is updated so that we may develop a comparable updating schedule.

Our biggest single problem concerning completeness is updating of information. The States vary significantly in the frequency of file updating and the issuance of new directories. The center routinely receives this information and has instituted a system to update the central file as new data become available from each State.

Data accuracy. We have found much variability in information about the same facility from different primary sources. For example, for bed capacity we may get different figures from the State licensure agency, the State Hill-Burton agency, and the Medicare agency. Licensing agencies regard bed capacity as the maximum number of patients who legally may be housed in the facility at any given time. Hill-Burton agencies frequently give data in terms of architectural capacity of the facility, while the Medicare agencies speak of bed capacity as those beds within a facility which are certified for extended care.

Finally, identifying the facility, which may be listed under different names from time to time, under different ownership or control, and under either the actual street address or post office mailing address is crucial if the master file is to be accurate.

Facility classification. Until recently all long term care facilities were classified as nursing homes. However, new definitions have been developed as a result of new Federal and State programs and the need to reflect more accurately what exists in our communities for health planning purposes. The data center currently uses several different facility classifications. Foremost among these designations are extended care facility to identify those facilities certified under Medicare and skilled nursing homes and intermediate care homes to identify facilities for Medicaid. The distinction between skilled nursing homes and intermediate care homes is based essentially on the level of nursing services provided.

A complicating factor is that any facility meeting the requirements for certification as an extended care facility under Medicare also meets those for classification as a skilled nursing home under Medicaid. In certain instances, especially those in which there are many extended care facilities as distinct parts of other institutions, it may become a major classification issue if beds for extended care (including those in distinct part facilities) exceed the maximum number of beds for skilled nursing care within an area.

Classification by nursing service. In order to indicate specific types of nursing services available, facilities must be classified on a base other than just skilled nursing, intermediate care, or extended care. The data center has developed four major care classifications with 32 subclassifications based on nursing service provided within the facility as defined by State law. This classification system required a great deal of time to develop since significant variations exist between the States in terms of nursing requirements and facility classification.

Internal handling of data. Since information is handled so many times and for so many reasons by the data center, we must be aware of potential sources of error in the coding of facilities during the basic input process. We have therefore established a number of checkpoints and validation procedures. In addition, data which are coded outside the center are subjected to quality control checks by both the contractor and the data center staff. As a result we are confident that the system is currently operating at a high level of accuracy.

Handling and Computer System

Incoming data are collated, validated, coded, punched, and entered into the computer system. The subsystem record will contain 143 characters on a single tape record. The master file will contain a computer file record of approximately 630 characters.

The system now calls for data to go from punched cards to magnetic tape for processing on an IBM 1401 or, for certain purposes, on an IBM 1401–7010 configuration. We anticipate conversion to an IBM 360 or another third generation computer in 6–9 months, using a hardware configuration of magnetic tape and disk pack storage. We hope that ultimately we can have access to data files in a shared time mode

via a terminal installed in the data center.

Requests for information on long term care facilities generally are handled on a first come, first served basis. Requests are processed in 2–3 days if only limited tabular preparation is required. Since the data center maintains lists of various facility characteristics and a great deal of statistical material at all times, certain requests are handled immediately by telephone. These requests are generally related to a single facility which can be readily identified. In the near future all data will be generated by the computer system in complete tables.

System Output

The list of data currently available from the center covers a variety of subjects of interest to health agencies. At this time we are primarily generating inventory information rather than detailed statistics on each facility. We anticipate being able to generate detailed analyses shortly, as the subsystem is expanded with more information.

In general, the system is designed to produce a flexible output of both detailed listings and statistical summaries. In the near future this system will produce substantially more information in greater detail, better quality, and less time than the current turn around period. However, requests that we have received normally fall into certain well-defined patterns and, except in the most unusual cases, a 2-day wait is not too long for most systems users. We believe that this pattern will continue for at least the next several years as system capacity increases, although the request volume, which is already high, is expected to increase.

PHS Staff Appointment

Dr. Francis R. Abinanti has been named associate director for Extramural Programs of the National Institute of Allergy and Infectious Diseases, National Institutes of Health.

Dr. Abinanti will direct the NIAID Extramural Programs which now support approximately 1,400 research grants amounting to more than $45 million, 200 training grants totaling $9 million, and 200 fellowships for research which amount to $3 million. He will be responsible for the coordinating, planning, and policy development of the seven branches of the extramural programs, and will help coordinate grant programs with those of the collaborative, contract-financed programs of the Institute.

Dr. Abinanti received a Ph.D. degree in virology from Cambridge University in England, and a D.V.M. degree from Washington State University. Since 1965 he has been chief of the Virology and Rickettsiology Branch, Extramural Programs, NIAID. He joined NIH in 1955 as a commissioned officer and served 2 years in the Division of Biologics Standards before joining the staff of the Laboratory of Infectious Diseases, NIAID, 9 years ago. His previous experience included research with the California State Department of Health on Q fever and other animal diseases. In 1953–55 he held a postdoctoral NIH fellowship at Cambridge University.

During 15 years as a research scientist, Dr. Abinanti concentrated on studies of animal diseases and their relationship to human disease and on viruses which cause similar infections in man and animals. He recently organized a series of regional conferences on the possible role of viruses with long incubation periods in human diseases. From these conferences, expanded studies in chronic virus diseases are being developed by the grants program in cooperation with National Institute of Allergy and Infectious Diseases' Rocky Mountain Laboratory at Hamilton, Mont.