

ALLIED HEALTH OCCUPATIONS:
CAN THEY BE A SOURCE OF NEW CAREER OPPORTUNITIES FOR MINORITY
AND OTHER DISADVANTAGED WORKERS IN BOSTON?

by

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ABSTRACT

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The rapid growth of the health sector and the increasing pressure upon it to serve the needs of previously neglected populations have caused planners to view the health industry as a major source of new employment and career opportunity for minority and other disadvantaged workers. By examining a number of hospitals, health centers, nursing homes, and community agencies in the City of Boston, this study attempts to assess the relative opportunities to be found among different categories of allied health occupations and different health care settings. The study also considers the variety of environments in which training for allied health occupations is now being offered and examines certain developing trends in terms of their potential significance for the training and advancement opportunities of disadvantaged workers.

In the attempt to determine relative opportunities among various allied health occupations, both "health industry specific" and "non-industry specific" occupations have been evaluated. Based upon skills required for satisfactory job performance, allied health occupations were considered to fall into six functional categories: service, clerical, administrative, nursing, technical, and "social." Within each of these categories, a number of traditional and new allied health occupations representing the range from entry to middle- and upper-level positions were selected for study from the standpoints of both employment and training. Data on current salary levels, mobility patterns, employment of minorities, hiring standards, and turnover and vacancy rates provided the basis for judging the possibilities offered by the different functional categories and by various occupations within each category.

It was found that with the exception of the very lowest level service positions, all allied health occupations now provide annual starting salaries of at least \$5000 and annual maximum salaries of at least \$6000. Many of the occupations that are available through on-the-job training and promotion from lower-level positions provide salaries in the \$6000-\$8000 range. Both in the hospital and the health center setting, career opportunities for disadvantaged workers are found almost exclusively in clerical, administrative, and newly developing technical occupations. Barriers of credentials and licensure are blocking access in established fields such as nursing. Lack of role definition and pro-

fessional acceptance have prevented new "social" occupations such as "neighborhood aide," "home health aide," and "family health worker" from offering significant employment and advancement opportunity.

The large increases that have occurred in "managerial," "professional," "technical," and "clerical" positions in teaching hospitals within the past five years, combined with the pressures exerted by equal employment opportunity regulations and growing activism in the low-income and minority populations, make these institutions particularly suitable as sources of new opportunity for disadvantaged workers. The philosophical commitments of neighborhood health centers have made them very desirable sources of employment for low-income and minority workers; however, the relatively small size of health center staffs and the low turnover among non-professional personnel have limited the number of disadvantaged workers who can benefit from employment in this setting. The small staff size and lack of middle-level positions in nursing homes and community health agencies prevent these institutions from offering significant opportunities to disadvantaged workers.

Formal and informal on-the-job training in hospitals and formal programs in vocational schools, community colleges, and universities now provide most of the preparation for employment in allied health occupations. Many of these programs are presently making at least some effort to increase the number of minority and disadvantaged persons they train. In addition, in Boston there are three programs specifically designed to train disadvantaged persons for employment in allied health occupations. Because of the national trend to train a greater percentage of allied health workers through community-college based associate degree programs, all training programs, no matter what their location, are now trying to develop academic affiliations that will allow them to provide their trainees with some kind of credential or some basis for further education in a degree program.

Comparison of figures from the mid- to late 1960's and 1970 indicate that the number of minority group members employed at all levels in the health manpower hierarchy is increasing. However, the majority of such workers still are employed in lower-level service positions that offer little advancement opportunity. Teaching hospitals in particular are now in the process of developing programs that could enhance the possibilities available to these workers. How pervasive these efforts will be, however, remains to be seen. Thus, while a number of minority and other disadvantaged workers have indeed been provided access to new career opportunities through employment in allied health occupations, the number of such people awaiting these possibilities is still very large. Some consideration is given to the forces both within the health care industry and in the society as a whole that will influence the extent of future opportunities in allied health employment.

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gave me access to the 1970 survey of allied health training programs in Massachusetts before it was released for publication and offered valuable insights into the particular problems of disadvantaged workers trained for certain new allied health occupations. Mrs. Cecile Papirno at the Harvard Center for Community Health and Medical Care has from the very beginning of the project served as a "sounding board" for my ideas and hypotheses and has been of tremendous assistance in helping me to grasp an understanding of this difficult field.

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Finally, I would like to dedicate this thesis to my husband Stephen whose arduous schedule as an intern in Medicine at the Massachusetts General Hospital has provided me a very personal incentive for participating in the effort to bring about more effective utilization of "autonomous" and "allied" health manpower.

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CHAPTER 1

BACKGROUND

The health care industry is now one of the largest and most rapidly expanding in the American economy. In addition, it is coming under increasing pressure to redirect its orientation and to provide new services designed to meet the needs of previously neglected populations and classes. As a result, the health industry has been viewed by many social policy planners as one of the most promising sources of new employment and career opportunity for disadvantaged workers. The industry itself, however, has a long history and tradition and a resulting social structure that to a large extent influence the manner in which it can grow and respond to new demands. As Sumner Rosen, an economist and former program director for the largest union of health industry employees in New York City, has expressed it:

The health industry is probably the most hierarchic, with the possible exceptions of the military and the Church. Routes to particular occupations are carefully prescribed and circumscribed; jobs and tasks within the family of occupations are often specified in detail and deviations from the specified limits are subject to discipline. Concern with the relative status of each special group and subgroup is a prominent feature of the sociological setting of health care and is a constant preoccupation of those at each status level.¹

It is therefore necessary in assessing the potential of the health industry as a source of new opportunity for minority and other disadvantaged workers to consider the industry's present manpower structure, the manner of its development, and the various conflicting pressures

of tradition and change that are now being brought to bear upon it, for these will all influence the possibilities open to any group of workers newly introduced into the system.

Physicians have traditionally been and continue to be the dominant personages in the health manpower hierarchy. Their needs as practitioners, arising from the changing scientific, technological, and social concomitants of medical care delivery, have given rise to the myriad groups of "allied health workers" that now characterize the health care delivery system in this country. Their education, style of practice, and professional associations, in turn, have served as the model to which the various groups of allied health workers aspire.

In perhaps the most extensive study of allied health workers to date,² the broad classification "allied health manpower" has been divided into three major categories:

1. Allied health professionals, who are, with the exception of many nurses, college or university-trained, usually have at least a baccalaureate degree, and fill such roles as registered nurse, clinical psychologist, medical technologist, social worker, physical therapist, inhalation therapist, pharmacist, and hospital administrator.
2. Allied health technicians, who are trained primarily in community colleges, vocational schools, and hospital-based programs, and serve as registered nurses (associate degree), licensed practical nurses, x-ray technicians, medical records technicians, inhalation therapy technicians, and laboratory technicians.
3. Allied health assistants, who include all other workers employed in the provision of health services, have attained various educational levels up to and including high school graduation, and serve in such roles as nurse's aide, orderly, dietary aide, and laboratory assistant.

In a sense these three categories also represent the stages of development through which many of the existing professional occupations have passed and through which some of the new allied health occupations are progressing. Most of today's allied health "professions" developed from various kinds of assistants to physicians, originally trained on-the-job in a preceptor-apprentice type arrangement. As their tasks grew more complex and their roles more accepted, each kind of assistant sought to gain recognition as a distinct group, usually by forming an association. Concomitantly each group, in conjunction with sympathetic physicians, established more formalized training programs. Gradually these programs increased in length, added more didactic as well as clinical instruction, and demanded higher educational standards for admission. Whenever possible, programs moved out of the hospital (where they originated) and affiliated with an academic institution. In addition, certain titles and designations (e.g., "registered," "certified") were developed to be used exclusively by graduates meeting defined requirements of education and often examination. The history of nursing and medical technology are classic examples of this process.³ As a group achieved "professional" status, it also developed its own group of assistants to perform the more routine functions in the field; hence, the existence of licensed practical nurses and nurse's aides, of technicians and laboratory assistants.

It is important to realize that few (if any) of the allied health "professions" are really "professions" in the strict sociological sense. All of them have a service orientation, have developed formal professional associations, have established codes of ethics, and to a

greater or lesser extent have achieved community sanction and recognition, all features considered to be essential elements of a profession.⁴ None of them, however, with the possible exceptions of clinical psychology and hospital administration, has developed its own body of abstract knowledge; none is the "final arbiter" in a dispute about what is or is not valid knowledge; and none is autonomous.⁵

Physicians, dentists, podiatrists, osteopaths and optometrists are the only truly autonomous professionals in the health sector. Each allied health profession stands in a dependent relationship to some physician or group of physicians: the nurse must act under a physician's orders; the medical technologist functions under the direction of a clinical pathologist; the physical therapist works under the guidance of the orthopedist and the specialist in rehabilitative medicine; the hospital administrator is limited in his power by the medical staff. Nonetheless, the professional allied health worker does exercise a considerable degree of independent judgment and function not accorded to "technicians" and "assistants". Certain procedures and functions are reserved by custom and often by law to the registered nurse, the graduate (Masters of Social Work) social worker, the ASCP (American Society of Clinical Pathologists)-registered medical technologist. In addition, the educational standards that the professional organizations of these occupations have established as prerequisites for entry into the occupation are usually accepted by hospitals and other employers as necessary for employment within the field. While the allied health professional still must work under the orders of a

physician, such orders usually allow considerable discretion and freedom in the planning and performance of the therapy they specify. A professional usually is regarded as a person of considerable knowledge and skill and particularly in the neighborhood health centers and more progressive hospitals is considered an equal member of the "health care team". Professionals are also responsible for the supervision and often the training of the technicians and assistants in their field.

Allied health technicians, while they often have formed their own associations, have attempted to establish standardized training programs, and have tried to set minimum educational requirements for entry into training and employment in the occupation, usually have not gained the necessary acceptance by employing institutions to restrict entry only to persons who meet their qualifications. Thus, while most of these occupations have developed certification standards and examinations, certification (and, hence, conformity with specified formal education and training requirements) rarely is necessary for employment in the field and often makes little difference in terms of salary and advancement. The main exception to this statement is the occupation of "licensed practical nurse". The whole field of nursing has for some years now enforced its standards through the legal mechanism of licensure; persons without the requisite training and certification are prevented from practicing by state law; health care institutions, therefore, have no choice but to accept only licensed personnel. Other groups such as the x-ray technicians have tried this route but have been largely unsuccessful thus far. The

training of technical personnel usually involves heavy emphasis on clinical instruction of a practical nature with much less attention devoted to theory presented through didactic instruction; it has therefore often been provided on-the-job in the employing institution. There is a trend now developing, however, to combine such training with enough academic work to provide graduates with an associate degree. X-ray technicians and inhalation therapy technicians, for example, are beginning to be trained through associate-degree programs. Technicians work under much closer supervision than professionals; as their title implies, they carry out the technical aspects of their respective fields but always under the guidance of either a professional in their field or of a physician. They have less discretion in the performance of their duties than the professional allied health worker. While most technician groups are prevented from aspiring to "professional" status by the professional group already existing in their field, nonetheless they usually attempt to upgrade their positions through longer training programs, through the addition of formal education requirements as well as clinical experience as prerequisites for certification, and through the "capture" of certain procedures as their exclusive province.

If allied health assistants are organized at all, it is usually by a union. For the most part, they obtain whatever training is required for their positions through on-the-job training in the institution in which they are employed. Because they have been allocated only manual tasks by the technicians and professionals

above them in the hierarchy in their fields, their training is almost entirely practical with almost no theoretical didactic component. Allied health assistants often (but not always) have less commitment to the particular field in which they work than do technicians and professionals and change occupations as a means of advancement. In fields that have not yet become too entrenched, assistants can and often do advance to the technician level through experience and more advanced on-the-job training.

In addition to the above categories of workers, all of whom function solely within the framework of the health industry and all of whom therefore are subject to the varying constraints and pressures of the "health care hierarchy", there is also a large cadre of personnel employed in "non-industry specific" clerical, maintenance, and service positions; included in this group, for example, are clerk-typists, secretaries, switchboard operators, electricians, mechanics, and housekeeping personnel. While most studies to date have excluded this group and focused upon the "health industry specific" categories described above, a significant number of personnel employed in health care institutions are encompassed in this group. "Non-industry specific" occupations are therefore worthy of consideration by any study attempting to assess employment opportunities in the health industry, as this study is. Furthermore, because the "non-industry specific" job categories also exist in the broader labor market and workers therefore are not confined to employment solely within the health industry, this group of personnel is not governed

by and subject to the same hierarchy that defines the possibilities available to industry-specific workers. Hence, "non-industry specific" job categories have the potential for providing less restricted opportunities and are important to consider. Therefore, "non-industry specific" as well as "industry specific" personnel are included in the designation "allied health manpower" for the purposes of this thesis investigation.

In 1965 there were approximately 2.4 million people employed in health-specific occupations. Of these, 425 thousand were autonomous professionals; 795 thousand fell into the allied health professional category of whom more than 500 thousand were registered nurses trained in 3-year hospital-based schools of nursing; 700 thousand were in the allied health technician category; and 525 thousand fell into the allied health assistant category.⁶ It has been estimated that at least 2 million workers were employed in non-industry specific occupations within the health sector.⁷ Statistics from 1950 reveal that while total numbers of workers employed in health-specific occupations were considerably lower than in 1965 (1.5 vs. 2.6 million) and the distribution of personnel among occupations differed, the same basic categorization applied.⁸

A large number and variety of people from a range of socio-economic and educational backgrounds have been serving in allied health occupations for quite some time, quietly contributing to the daily provision of hospital and community-based health services. The "issue" of allied health manpower has recently come into such prominence only

because of changes taking place in the health services sector and in the society as a whole. The health services sector of the economy has experienced extremely rapid growth during the past few decades. In 1950 health expenditures totaled \$12.1 billion, 4.2% of the Gross National Product; in 1969, expenditures in the health sector totaled \$60.3 billion, 6.7% of the GNP. While 50 percent of this increase is attributable merely to a rise in the prices charged for medical services (i.e. to inflation), the remaining 50 percent arose because of increased use of medical services.⁹ Hospital admissions, for example, rose from an annual rate of 110.5 per 1000 in 1950 to 137.9 per 1000 in 1965 (16.7 million to 26.5 million).¹⁰ In addition, between 1946 and 1961 the number of laboratory procedures per hospital admission rose from 3.19 to 6.36; the number of diagnostic x-ray procedures increased from 1.50 to 4.42; and the number of different generic drugs prescribed rose from 4.67 to 7.30.¹¹ The 93 million outpatient visits reported for 1965 represent a 40 percent increase over 1957, the first year for which roughly equivalent data are available.¹² Physicians' visits per person per annum increased by 80 percent from 1930 to 1964 (2.5 to 4.5), totalling more than 844 million in 1964.¹³

This increased utilization of health services has been attributed to a number of factors: to rapidly advancing technology that has made available new and more sophisticated methods of diagnosis and treatment, to increased awareness and expectations on the part of the general public of the benefits that modern medicine can bestow, to federal legislation that has established medical care as a "right" of

all regardless of socioeconomic status, not a "privilege" reserved for the few who can afford to pay established fees, and to new sources of payment such as Medicare and Medicaid that have enabled the "medically indigent" to avail themselves of this right to medical care.¹⁴ In addition, new concepts of medical care that emphasize coordinated, comprehensive service and progressive patient management have led to the development of new facilities to be utilized, among them neighborhood health centers, group practice centers, and extended care facilities.

In response to the ever-increasing use of and demand for medical services, there has been a rapid increase in employment within the health sector. Employment within the health industry has increased at least 60 percent during each decade since 1940.¹⁵ Between 1950 and 1960, while the population of the United States rose 19 percent, hospital personnel increased 70 percent; personnel in other health services rose 32 percent. In the same period employment in the economy as a whole increased 15 percent.¹⁶ As noted above, employment within health-specific occupations alone increased from 1.5 million workers in 1950 to 2.6 million in 1965. Despite this increase, the cry of "Shortage!" has been raised by virtually every major commission organized to consider the problem of health manpower needs for the nation.¹⁷ From the standpoint of the health professionals comprising these commissions, this shortage is manifested by the large number of vacancies in budgeted positions for registered nurses, physical therapists, and other professional and technical

personnel and by the relatively small numbers of graduates from existing professional education programs compared to the projections of personnel necessary to maintain current (or "desirable") personnel to population ratios. Medical economists, on the other hand, while acknowledging the existence of shortages in certain categories of health professionals (e.g., physicians) and in certain geographical settings (e.g., inner-city hospitals and health centers), stress that most of the alleged shortages represent poor utilization of existing professional manpower and insufficient use of ancillary personnel, rather than inadequate numbers of professionals.¹⁸ Depending upon the particular outlook of the experts involved, "solutions" to the manpower problem range from increased government support for institutions and programs educating health professionals to a restructuring of the training, functions, and organization of health personnel at all levels. Experts of all points of view seem to acknowledge the need for a reexamination and reallocation of tasks among "professional" and "para-professional" personnel. The question of what functions require the proficiency and expertise of highly educated professionals such as physicians, baccalaureate degree nurses, and masters level social workers and what functions can be delegated to lesser trained "technicians" and "assistants" is one of the key issues in the area of "allied health manpower" at the present time. Closely tied to this issue is the heated debate over the formal education and training necessary to assume specific functions and to progress to positions of more responsibility and skill within

the manpower hierarchy. The delegation of tasks among existing categories of allied health manpower versus the creation of new categories of personnel to assume certain roles is also the source of much controversy in the field.

In addition to the pressures upon existing patterns of manpower utilization created by increasing external demand for medical care, pressures internal to the health sector have also drawn attention to current utilization practices. Employment within the health industry has been characterized by low wages, few fringe benefits, limited possibilities for advancement, generally poor working conditions, and resulting high turnover rates.¹⁹ Strikes, work stoppages, and unionization, both among service workers in entry-level positions and among professional nurses, occurring in the mid-1960's highlighted the poor employment practices in hospital settings and forced the initiation of efforts toward improvement.²⁰ First steps were directed at raising wage levels throughout hospital manpower structures. Because of the dominant position currently held by hospitals in the health sector (65 percent of all employees in the health industry are employed in hospitals), wage levels in other health care settings also increased. Demands for skill-upgrading and advancement opportunities have in the past few years been added to the pressure for improved salary scales and promise to increase in the future. One of the major factors determining the selection of a union to represent nurse's aides in New York City municipal hospitals, for example, was the offer by District Council 37

of the American Federation of State, County, and Municipal Employees to make job upgrading a major demand in contract negotiations with the City.²¹ In their efforts to improve hospital conditions and patient care, newly militant house officers (interns and residents) are adding their support to the demands of other hospital workers for adequate wage levels and on-the-job training and advancement opportunities.²² Hospital employees at many levels from the lowest paid entry position to the professional are thus bringing pressure to bear for a change in general personnel practices, for a redefinition of qualifications to assume higher level occupations within the manpower structure, and for the creation of "career ladders" that will allow such advancement.

Present attention to the area of allied health manpower created by forces in the health sector has been further heightened by significant changes occurring in the society as a whole. The demand of blacks for equal access to the services, benefits and opportunities previously denied them expressed through the Civil Rights movement and acknowledged through the creation of the War on Poverty and the OEO Community Action Program began to focus attention on the special needs of formerly neglected population groups. Of importance to the topic of allied health manpower are two particular areas of emphasis that developed out of this movement: the creation of neighborhood health centers as a means of providing services geared to the needs of inner-city populations and the focus upon equal employment opportunities and the development of meaningful jobs as important approaches

to the elimination of poverty and discrimination. Neighborhood health, mental health, and social service centers provided the stimulus for the creation of a whole new group of "allied health" positions intended both to provide jobs for members of the target populations and to create liaisons between the minority and low-income person and the foreboding health establishment. Positions such as "family health worker," "health aide," "mental health aide," "outreach worker," and "health advocate" are examples of this new category of health worker. The development of neighborhood health centers also offered new job opportunities in more traditional clerical, administrative, laboratory, and service occupations. Because of the heavy emphasis placed upon involvement of members of the health centers' target populations, many of these positions were filled by indigenous people who had never previously worked in a health care setting.

The potential of the health sector as a source of employment for "disadvantaged" workers, however, was recognized to extend far beyond the ability of neighborhood health centers to provide jobs to a small number from their potential clientele. Growing shortages of skilled manpower generated by increasing demand for medical care, particularly in low-income areas of large cities, existing simultaneously with large numbers of un- and under-employed workers seemed to present a natural opportunity to "kill two birds with one stone." As Dr. Roger Egeberg, former Assistant Secretary of Health, Education, and Welfare, has expressed it: "A major impetus toward creation of new health jobs has been the substantial number of disadvantaged

persons who are unemployed or under-employed in areas suffering great shortages of health manpower. This incongruity has been seen as an opportunity to achieve two social objectives at once -- jobs for those who need them, and better health care for poor neighborhoods by training residents as licensed practical nurses, nurse's aides, technician aides, and home health aides."²³ The possible roles envisioned for disadvantaged workers are usually broader than those enumerated by Dr. Egeberg, but the social objectives he presents are held by all of the people most actively seeking to make the allied health occupations both a means of improving the delivery of health services and of providing new opportunities for minority and low-income workers. How these goals can best be achieved is a subject of considerable debate and disagreement and current efforts run the gamut from intensive, specially designed on-the-job training programs for a variety of existing entry- and middle-level positions to the "new careers" strategy of creating new types of positions but training disadvantaged people for them through more traditional associate-degree and baccalaureate programs.

Because of the variety of forces that has come to focus upon "allied health manpower," this area of concern encompasses a number of major policy issues, each of which in turn breaks down into a host of questions regarding feasibility, strategy, political acceptability, etc. and each of which has its own following of committed, vocal proponents and interest groups. The issues that have been alluded to in the preceding discussion are among the most pressing and

can be summarized as follows:

1. Can the judicious use of allied health personnel increase the availability of and improve the delivery of personal health services?
2. Can the rigid manpower structure within the health sector be altered to allow the lateral and vertical mobility now being demanded by personnel at all levels of the manpower hierarchy (and the corollary: Can the hierarchy itself be dismantled and replaced by a less stratified system of organization)?
3. Can existing positions within the manpower structure and new positions being created serve as a source of employment and career opportunity for minority and disadvantaged workers?

It is obvious that these questions are not unrelated. The extent to which the use of allied health personnel can be demonstrated to improve the "quality of patient care" will in part determine the willingness of health institutions to commit the resources necessary for altering current utilization practices and for training and hiring new categories of personnel. The extent to which meaningful "career ladders" and "career lattices" can be created for personnel currently employed within health care settings will determine the opportunities available to minority workers now in entry-level positions and the possibilities open to new workers entering the industry. In the other direction, the level of pressure brought to bear upon the health sector to hire and promote "disadvantaged" workers will influence the numbers and kinds of allied health positions created and affect the manpower structure for minority and non-minority workers alike.

The first issue has attracted both medical economists and hospital administrators anxious to reduce costs and increase services by substituting "non-professional" for "professional" personnel and

physicians interested in unburdening themselves of the many routine aspects of patient care undeserving of the expertise they have spent so many years acquiring. It has also drawn the attention of baccalaureate nurses and returning medical corpsmen anxious to capture some of the "turf" that has traditionally belonged exclusively to the physician. The second issue is of vital concern to enlightened personnel directors and departments, to some hospital unions, and to thousands of employees locked into and dissatisfied with dead-end entry- and middle-level positions. The third issue has become the domain of the Equal Employment Opportunity Commission, numerous manpower training programs, and institutions and individuals anxious to change the health "establishment" by introducing at all levels people with a different perspective and background than those traditionally serving in these occupations. It is primarily to this third issue that this thesis is addressed. The second issue will also be considered to the extent that it impinges on the third. It will be assumed without further argument that the first question can be answered affirmatively, given careful analysis of and planning for the functions and roles to be served by allied health personnel.

CHAPTER 1FOOTNOTES

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CHAPTER 1
FOOTNOTES (continued)

15. Eli Ginzberg, Manpower Strategies for the Metropolis (New York: Columbia University Press), 1968, p. 85.
16. Somers and Somers, op. cit., p. 97.
17. E.g., National Advisory Commission on Health Manpower, Report Vol. 1, (Washington: Government Printing Office), 1967; Task Force on Health Manpower, National Commission on Community Health Services, Health Manpower: Action to Meet Community Needs (Washington: Public Affairs Press), 1967.
18. Dale L. Hiestand, "Research into Manpower for Health Service," Milbank Memorial Fund Quarterly, Vol. 44, No. 4, 1966, p. 158.
19. Greenfield, op. cit., p. 53.
20. Somers and Somers, op. cit., p. 117.
21. District Council 37, American Federation of State, County and Municipal Employees, and Health Services Administration, New York City Department of Hospitals, Toward A Career Ladder in Nursing: Upgrading Nurse's Aides to LPN's through a Work-Study Program, Final Progress Report, April, 1967 - May, 1970, p. 2.
22. Anthony Bottone, "Anatomy of a Non-Strike," New Physician, Vol. 19, No. 10, October, 1970, p. 835.
23. Roger O. Egeberg, "Allied Health Worker: Now and Tomorrow," Manpower, Vol. 2, No. 10, October, 1970, p. 7.

CHAPTER 2

RESEARCH DESIGN

This study was designed to explore a range of health care settings and training environments in the city of Boston from the viewpoint of their potential for offering new career opportunities to minority and low income workers. The intent was to discover, first, what in fact is being done at present in regard to the employment and training of "disadvantaged" workers in the allied health field and then, on the basis of observed efforts in Boston as well as readings and discussions about developments throughout the country, to determine in what occupations and in which health care institutions relative employment opportunities lie. In addition, attention has been directed toward assessing the relative effectiveness of different training environments and strategies in preparing minority and low-income workers for allied health occupations.

For the purposes of this study, the designation "disadvantaged" includes members of black and Spanish-speaking populations, people from low-income and poverty backgrounds, and present or potential members of the labor force who have less than a high school education and/or who lack training in a saleable skill. Focus was directed primarily on studying the employment and training of black and Spanish-speaking workers because race has so often served as a limitation to opportunity independent of other aspects of socioeconomic status and because so large a portion of this population

also possesses the other characteristics of being "disadvantaged" under study here. However, the concern of this study also lies with disadvantaged workers who are not minority group members. Wherever possible, therefore, data were collected based upon previous educational background and socioeconomic status as well as upon race. Often, however, such data were not available. Because federal reporting requirements now necessitate that institutions maintain records of employment and training of minority workers and therefore many data are available according to ethnic background, race in many instances had to serve as a "proxy variable" for the other employee characteristics with which the study was concerned.

In selecting allied health occupations upon which to focus, emphasis was placed upon those requiring less than a baccalaureate degree (the "allied health technicians" and "allied health assistants" in Greenfield's typology mentioned in Chapter 1) because of the feeling that for the majority of disadvantaged workers who are in or could enter the health field at the present time, the expense, length, and other demands of baccalaureate and graduate-degree programs make them an unrealistic goal. Allied health occupations were considered to fall into six basic functional categories:

1. Service, including dietary, housekeeping, and maintenance personnel.
2. Clerical, including clerk-typists, secretaries, and other "office" personnel.
3. Administrative, including admitting officers, unit coordinators and managers, and other personnel serving organizational and managerial functions.

4. Nursing, including nurse's aides, orderlies, licensed practical nurses (LPN's) and registered nurses (RN's).
5. Technical, including laboratory workers, radiologic technicians, EEG and EKG technicians, and a variety of other personnel requiring specialized training of a technical nature.
6. "Social," including social work aides, outreach workers, community workers, home health aides, and a number of other workers concerned with the social aspects of medical problems and medical care delivery.

These categories were chosen to represent functional groupings of allied health occupations based upon skills required for satisfactory job performance and orientation toward a particular aspect of medical care delivery. Within each of these categories, a number of traditional and new allied health occupations representing the range from entry- to middle- and upper-level positions were selected for study from the standpoints of both employment and training. Details concerning the specific occupations studied will be found in the discussion of research findings in Chapter 3.

Because of the primacy of hospitals in the delivery of medical care and the employment of health manpower, both locally and nationally, considerable attention was devoted to studying present employment practices within six hospitals in the city of Boston: four major teaching hospitals, the Beth Israel, the Peter Bent Brigham, Children's Hospital Medical Center, and Boston University Medical Center; a community hospital, the Faulkner; and a chronic care hospital located in the heart of Rosbury, Jewish Memorial. The three Harvard teaching hospitals were selected because of their

general reputation as innovative institutions, their involvement in the past few years in providing neighborhood health center-based care in Roxbury and Jamaica Plain, and their proximity to Roxbury. University Hospital was selected primarily because of its location and because of its affiliation with a medical school other than Harvard. The Faulkner Hospital was chosen in order to determine differences between medical school-affiliated and non-affiliated hospitals re attention to the status, employment, and training of minority employees. Jewish Memorial Hospital was studied because it is a chronic-care rather than a short-term hospital, because of its location, and because it is the most heavily unionized hospital in the city. Municipal, state, and federal hospitals were excluded from the study to avoid the additional complexity in manpower utilization imposed by civil service regulations.

In order to analyze the training and use of certain new categories of allied health workers not employed in hospitals and to get a sense of the range of salary levels, working conditions, and general employment possibilities in other health care settings, two neighborhood health centers, the Columbia Point Health Center and the Martha Eliot Health Center, the Elm Hill Nursing Home, and the Visiting Nurse Association of Boston were included in the study. Columbia Point and Martha Eliot were selected from the many health centers in the Boston area because they are among the oldest and most firmly established and therefore have a long enough history of operation to provide information on the effectiveness of new kinds

of allied health workers such as "family health workers," "outreach workers," and "health advocates" and to serve as a source of comparison for job mobility in the hospital setting. Elm Hill was chosen because its director has been in the nursing home field for many years and it was hoped that she could provide some perspective on past and future developments in the area of geriatric and long-term care. The Visiting Nurse Association was included because of its training and use of "home health aides" and because it provides a unique kind of community-based health care that could expand if the movement toward less institutionalized, more home- and community-based care gains wider acceptance.

For both minority and non-minority workers alike, the opportunities offered by allied health occupations are dependent upon the personnel practices, wage and benefit policies, possibilities for advancement, and recruitment efforts and standards of existing health care institutions. Therefore, a significant part of the field work for this investigation was devoted to gathering information that could delineate employment practices in the hospitals, health centers, nursing home, and community health agency selected for study, both at present and as they have changed over the past three to five years. Data were obtained on the numbers of minority and other employees in several different occupational categories (using for hospitals the information from EEO-1 forms filed annually in compliance with federal equal employment opportunity regulations specified by Title VII of the Civil Rights Act of 1964 and the

resulting Executive Order 11246 and for other health institutions staffing lists described or provided by administrators), on relative salary levels for selected allied health occupations as indicated by institution wage and salary schedules, on fringe benefits, on recruitment policies and practices, on turnover rates (when such information was available, and on job mobility (as indicated by lists of all personnel upgraded and/or promoted over a one-year period prepared by the Beth Israel and the Peter Bent Brigham Hospitals for 1970 Equal Employment Opportunity Compliance reviews and by verbal descriptions offered by personnel officers and administrators in other health care organizations studied). Information on hospitals was obtained by interview with the Directors of the respective Personnel Departments and/or members of their staffs. The administrators of the Martha Eliot Health Center, the Columbia Point Health Center, and the Elm Hill Nursing Home provided information about their institutions. The Director of Education was interviewed about the Visiting Nurse Association. With the exception of mobility data for the Brigham Hospital, only data that had been collected and compiled by the institutions themselves were used; employee files were consulted only to supplement information on upgrading and promotion that had been compiled by the Brigham Hospital.

As one means of ascertaining where future job opportunities might lie, personnel staff and administrators were asked to list those allied health occupations for which they had the most difficulty finding qualified employees. Relative salary levels, vacancy

and turnover rates, and mobility patterns indicated by promotion and upgrading data provided other inputs for analysis of job opportunity. Information on efforts specifically directed toward assisting minority workers was obtained where possible by looking at the Affirmative Action Programs that hospitals are now developing under new equal employment opportunity requirements and by discussing current and planned activities to increase the employment of minority workers in middle- and upper-level positions and to improve the lot of workers currently employed in entry-level positions.

The ten health care organizations in which employment practices were studied were also questioned about formal and informal training programs that they were currently providing or had previously offered. The following additional training programs and institutions were then selected to represent the range of other environments in which education and training are currently offered for allied health occupations: the Health Vocational Training Program at the Dimock Community Health Center, the Training Center for Comprehensive Care at the Lemuel Shattuck Hospital, the New Careers and Manpower divisions of Action for Boston Community Development (ABCD), the licensed practical nurse and dental assistant programs at Boston Trade School for Girls, five programs within Northeastern University's Division of Allied Health Sciences and School of Nursing, and the recently initiated inhalation therapy technician program at Massachusetts General Hospital. The Health Vocational Training Program and the Training Center for Comprehensive Care were chosen because they have

been developed specifically to train minority and other disadvantaged workers. ABCD's New Careers program was included because it espouses a different strategy of training "disadvantaged" workers that is becoming more widely accepted, namely the provision of on-the-job experience and guaranteed employment combined with formal education leading to the traditionally required academic degrees and credentials. The Manpower division of ABCD was interviewed because it is the monitoring agency for the funding supporting the inhalation therapy technician program at MGH. Girls Trade School and Northeastern University represent the traditional educational institutions that have trained so many allied health workers to date. The inhalation therapy technician program at MGH was selected from among other hospital-based training programs because of unique features of design and funding that have the potential for becoming more prevalent. In addition to examining specific programs, a recently completed survey of all allied health training programs at less than the baccalaureate level in the state of Massachusetts was used to develop a summary of training programs available in the city of Boston (see Table 7).

In order to determine for what occupations and in what settings minority students are now being trained and what barriers might prevent (or aids enhance) minority and disadvantaged students' possibilities in existing programs, information was obtained on total and minority student enrollment, entrance requirements, tuition, stipends and/or salaries, duration of training, the avail-

ability of supportive tutoring and counselling, and the success of job placement upon the completion of training for all programs studied. To get some sense of why present programs exist in the form they do, historical development and sources of support were also discussed. Plans for the future and the forces that would influence them were also given considerable attention. Information on hospital-based programs other than the one for inhalation therapy technicians at MGH was obtained during the same interview in which data on employment practices were sought. Information on all other programs was obtained from their respective directors.

Appendix I lists all persons interviewed for this study according to the institution or program with which they are affiliated. Appendix II presents the questionnaires used in gathering data.

Specifics regarding the rationale behind some of the data sought and the manner in which it was analyzed to draw certain conclusions relating to the major research questions of the investigation will be presented as part of the research findings in Chapter 3.

CHAPTER 3

THE CURRENT SCENE: EMPLOYMENT AND TRAINING OF MINORITY AND DISADVANTAGED WORKERS IN ALLIED HEALTH OCCUPATIONS IN THE CITY OF BOSTON

Whether or not allied health occupations can serve as a source of new career opportunity for minority and other disadvantaged workers was considered to be a function of a number of different factors:

1. The salary levels and advancement opportunities available in existing and newly created allied health occupations.
2. The commitment of health care institutions to hiring and promoting minority workers and workers from other disadvantaged backgrounds and to expending the effort needed for recruiting such potential employees.
3. Relative needs for different categories of allied health workers, the availability of vacancies in both entry and higher level positions, and the general economic condition within the city and the country as a whole as it bears upon such needs and vacancies.
4. The availability and accessibility of training within health care institutions and educational resources in the general community.
5. The "hiring-in" and certification standards for various allied health occupations and the commitment of health care institutions to altering the current manpower structure and creating "ladders" and "lattices" through which employees can advance.
6. The extent of pressures brought to bear upon health care institutions requiring the employment and promotion of minority workers and the availability of resources to assist these processes.

Assessment of these factors in the health care institutions and training programs indicated in Chapter 2 provided the main basis for addressing

the research question posed in the title of this thesis. This chapter will present the results of the field investigation. Chapter 4 will then consider the implications of these findings in the light of current thinking and developments in the training and use of allied health workers throughout the country and attempt to reach some conclusions to the study's major question.

3.1 Salary Levels and Advancement Opportunities in Selected Allied Health Occupations

It was postulated from the beginning of this study that allied health occupations could be grouped into certain functional categories that would, to a greater or lesser extent, represent kinds of training and skill required for job performance, employee interest in different aspects of medical care delivery (e.g., direct patient care versus diagnostic technical work versus concern with the social concomitants of health), and possibilities for job mobility and advancement. Based upon the 1970 survey of allied health training at less than the baccalaureate degree level¹ and a rudimentary knowledge of the personnel structure of hospitals, health centers, and community health agencies, four or five entry- to middle-level occupations and a few upper-level positions were selected within each of six basic functional categories (service, clerical, administrative, nursing, technical, and "social" as described in Chapter 2). An attempt was made to select occupations within each category that represented the range available to persons with less than a baccalaureate degree and to choose both traditional occupations in which large numbers of allied

health workers have been and are employed and new occupations that could potentially become widely accepted and serve as new sources of employment.

3.1.1 Salaries

All ten health care institutions studied were asked to specify minimum and maximum salaries for each of the selected occupations that exist in their personnel structures. Table 1 presents the complete list of occupations studied, grouped according to functional category and the minimum and maximum salaries for each occupation at the hospitals and health centers examined. Salaries at the Elm Hill Nursing Home and the Visiting Nurse Association have not been listed because they fall within the range of hospital salaries for the same occupation. Hospital data are presented as the two ranges that encompass the minimum and maximum salaries for the six hospitals questioned, together with the average minimum and maximum salaries for the six hospitals. By and large, the ranges for minimum and maximum salary for a given occupation are consistent: those hospitals that have minimum salaries in the low end of the minimum salary range also have maximum salaries in the low end of the maximum salary range; those at the high end of the minimum salary range also fall toward the high end of the maximum salary range. This same consistency also applies, for the most part, throughout the salary scales of the hospitals studied. Those hospitals that pay somewhat lower than average salaries within one occupational grouping also pay lower salaries in other occupational groupings; Jewish Memorial, for example, consistently has the lowest minimum salaries.

TABLE 1

1971 MINIMUM AND MAXIMUM SALARIES FOR SEVERAL LOWER-, MIDDLE-, AND UPPER
LEVEL ALLIED HEALTH OCCUPATIONS REQUIRING LESS THAN A BACCALAUREATE DEGREE

Occupation	Hospital ¹						Neighborhood Health Center ²			
	Minimum Salary			Maximum Salary			Min. Salary		Max. Salary	
	Range (Weekly)	Aver. Wkly.	Aver. Annual	Range Wkly.	Aver. Wkly.	Aver. Annual	Aver. Wkly.	Aver. Annual	Aver. Wkly.	Aver. Annual
SERVICE										
Dietary aide	91-97	93	4830	110-122	115	5980	-		-	
Housekeeping aide	91-98	93	4830	113-122	115	5980	92	4770	129	6710
Storeman	90-105	101	5250	114-141	130	6750	112	5830	147	7650
Maintenance worker	110-132	122	6350	166-188	171	8890	124	6450	162	8430
Electrician	154-168	161	8370	179-210	195	10,100	-		-	
CLERICAL										
Clerk-typist	90-112	101	5250	124-137	132	6860	97	5040	139	7230
Medical transcriber	100-124	111	5770	128-156	141	7340	-		-	
Secretary	103-124	112	5830	140-157	144	7500	109	5660	147	7650
Executive Secretary	122-160	134	6960	152-209	178	9260	120	6250	163	8480
ADMINISTRATIVE										
Assistant admitting officer	105-125	118	6140	141-160	151	7850	105	5460	129	6700
Medical records technician	108-152	123	6400	134-188	161	8370	116	6030	152	7900
Administrative assistant	-			-			122	6350	172	8940
Unit Manager	152-157	155	8050	194-209	201	10,400	-		-	
NURSING										
Nurse's aide	92-110	100	5200	112-134	127	6600	105	5460	129	6710
Orderly	91-110	101	5250	125-134	130	6760	-			
Medical assistant	-			-			100	5200	162	8430
LPN	122-132	127	6600	151-168	163	8470	125	6500	169	8790
RN staff nurse	155-162	158	8200	195-209	204	10,600	155	8050	217	11,300
TECHNICAL										
Lab assistant	90-124	112	5830	138-157	149	7750	94	4880	130	6760
EKG technician	114-132	120	6250	145-166	153	7910	-			
Surgical technician	122-124	123	6400	151-154	153	7910	-			
Radiologic technician	126-137	132	6860	155-168	164	8530	112	5830	147	7650
Inhalation therapist										
Unregistered	122-137	130	6760	158-167	163	8500	-			
Registered	147-160	154	8000	182-195	190	9890	-			
SOCIAL										
Neighborhood aide	-						105	5460	129	6700
Home health aide	-						110	5730	131	6810
Social work assistant	-						112	5820	147	7680
Community worker	-						114	5920	150	7800

¹Based upon a survey of six hospitals: Beth Israel, Peter Bent Brigham, Children's Hospital Medical Center, Faulkner, Jewish Memorial, and Boston University Medical Center.

²Based upon two centers: Columbia Point Health Center and Martha Eliot Health Center.

Hospitals offering somewhat higher than average salaries within one occupational grouping also tend toward the high side for other occupations; Children's Hospital often had the highest maximum salaries and had minimum salaries that were above average in the minimum range.

With the exception of Jewish Memorial, all hospitals have salary scales consisting of four to six steps. Employees receive annual performance reviews and are awarded one-step salary increases based upon good job performance. An employee performing well in his position could thus expect to reach the maximum salary for his position in approximately five years. At all hospitals but Jewish Memorial, once an employee has reached the top of the pay scale for his position, he can receive no further merit increases. His salary will increase when across-the-board "cost of living" adjustments are made; however, to receive additional merit raises, either his position must be upgraded (i.e. re-evaluated and assigned to a higher pay scale) or he must advance to a different position at a higher grade level and different salary scale. At Jewish Memorial, all employees except office and clerical workers, physical therapists, laboratory personnel and professionals are unionized and work under a contract that guarantees yearly increases regardless of length of tenure in the position. For 1970 and 1971, this increase is \$11/week for all unionized employees. Non-unionized employees also receive yearly increases currently on the order of \$10/week. Again this increase occurs regardless of tenure in the position.

Jewish Memorial has not been included in the maximum salary range because theoretically it has no maximum limit on most salaries.

One of the most interesting features of the salary data is the equivalencies revealed for seemingly quite disparate occupations. Nurse's aides, orderlies, and clerk-typists and storemen (stockmen) all earn approximately \$5200-\$6700 annually. The first three categories are all entry-level positions, the first two being the lowest level positions involving direct patient care and the third one of the entry-level positions in the clerical area. None of these positions requires previous training or experience. "Storeman" often is a step or two above entry level and frequently is a position into which lower-level personnel such as housekeeping aides are promoted. Medical transcribers, secretaries, and laboratory assistants all earn approximately \$5700 to \$7700 annually. Both medical transcribers and secretaries require typing ability; in addition, medical transcribers must have some knowledge of medical terminology. Laboratory assistants run the gamut from high school graduates (occasionally people with less than a high school education) with no previous experience to workers who have completed a year or more of post-high school training to become "clinical laboratory assistants." Admitting officers, EKG technicians, and surgical technicians have annual incomes in the \$6100-\$7900 range. Admitting officers and EKG technicians are essentially lower- to middle-level administrative and technical personnel, respectively, who have usually been trained on the job in their respective functions. Surgical technicians also are

usually trained on the job, often having advanced from orderly positions. Radiologic technicians, unregistered inhalation therapists, and LPN's all fall in the \$6600 to \$8500 annual income range, a grouping that does make sense in terms of their training and functions. All require one to two years of post-high school specialized training and function in "middle-level" capacities in the delivery of hospital-based medical care. Unregistered inhalation therapists usually are trained on the job in either formal or informal programs and are an example of a newly emerging group of technicians. LPN's and radiologic technicians are trained in established programs, LPN's for 12 months and radiologic technicians for two years. Registered inhalation therapists, registered nurses serving as staff nurses (the starting position for RN's), unit managers, and licensed electricians all command salaries at the \$8100 to \$10,400 level. Registration as an inhalation therapist now requires two years of training in a recognized program, an associate degree and a year of supervised clinical experience; registered therapists function as professionals in the same manner as physical therapists, occupational therapists, and registered nurses. Registered nurses are trained either in a 2-year associate degree program, a 3-year hospital-based school of nursing, or a baccalaureate degree college program. Unit managers, on the other hand, require no specific formalized training and often have advanced from lower-level positions within the hospital. They are examples of a new group of administrative personnel performing much needed organizational

functions that previously were performed, if at all, by nurses. Hospital-employed licensed electricians have gone through the same apprenticeship required of other licensed electricians.

The process by which positions are "graded" and thereby assigned to a salary scale is designed to take into account such factors as complexity of duties, amount of supervision required, amount of supervisory responsibility, amount of physical exertion required, and extent of education and experience necessary for job performance.² The salary that a given occupation can command elsewhere in the health industry and in the community at large also influences considerably the wage scale for a particular position. Hence, equivalencies such as those mentioned above exist because of the influence of a number of different forces.

In order to see how much salaries for given positions varied among different kinds of health care institutions, the health centers, nursing home, and community health agency studied were also asked for salary data. With only a few exceptions, these salaries fall within the ranges set by the hospital data. Data from the Martha Eliot Health Center, the Columbia Point Health Center, and the Visiting Nurse Association also provided information on the current earning capacity of several of the new allied health occupations in the "social" category that have not yet gained acceptance by hospitals. Neighborhood aides and home health aides are now receiving incomes at approximately the level of nurse's aides and clerk typists. Social work assistants and community

workers receive annual salaries approximately equivalent to secretaries and laboratory assistants.

3.1.2 Current Job Mobility in the Hospital Setting

From the standpoint of potential earning ability, the salary data indicate that a person could enter a number of different occupations in the allied health field in a number of different institutional settings and receive equivalent pay. The progressions in salary among the occupations listed in the six functional groupings would seem to indicate also that a number of different categories of occupations could offer pathways from lower-level or entry positions to middle- and upper-level positions of some responsibility and income-generating capacity. In order to discover to what extent these pathways were real, rather than just an illusion created by ordering job titles in a table, an attempt was made to discover current mobility patterns that exist among employees in these and similar occupations. The main data sources for this examination were the lists of upgradings and promotions over a one-year period between 1969 and 1970 prepared by the Beth Israel and Peter Bent Brigham Hospitals for 1970 audits of their compliance with equal employment opportunity regulations. Other hospitals studied had not been required to prepare such information and did not have it available. Information on mobility within these hospitals is therefore based upon verbal descriptions by Personnel Department staff of specific instances of promotion and of pathways which they feel do exist within their respective institutions. Similar information was

obtained from Martha Eliot, Columbia Point, Elm Hill, and the VNA.

Tables 2 and 3 summarize the promotion and upgrading data from the Beth Israel and the Brigham, respectively. Appendix III contains a complete listing of all promotions and upgradings by occupational category and job title. In order to provide a basis for data analysis that would allow movement among occupations within a given functional category and in different categories to be compared, occupations were designated "lower level," "middle level," and "upper level" using weekly salary at the Beth Israel and grade level at the Brigham as the basis for assignment. At the Beth Israel positions with weekly salaries in the \$88-\$113 range (in early 1970) were designated "lower level"; those in the \$114-\$140 bracket were designated "middle level"; and those with weekly salaries of \$141 or more were considered upper level. At the Brigham, occupations up to grade level 6 (corresponding to a weekly salary of approximately \$112) were considered lower level; those assigned grade levels 6 through 11 (corresponding to a weekly salary of approximately \$140) were designated middle level; and those with grade levels of 12 and above were considered upper level. When one considers that the salaries in the period under consideration (mid-1969 to mid-1970) were approximately 7 per cent lower than those quoted in Table 1, the designations used for this analysis correspond quite closely to those used in discussing salary equivalencies above.

Of the 85 people who were promoted at the Beth Israel between June 1, 1969 and May 31, 1970, 42 moved from one lower-level position

TABLE 2

MOBILITY DATA FOR THE BETH ISRAEL HOSPITAL - JUNE 1, 1969 - MAY 31, 1970

Category	Promotions		Promotions in Category				Promotion Into Other Category			
	Total #	Total Minority	Total #	Minority	Range Weekly Increase	Average Weekly Increase	Total #	Minority	Range Weekly Increase	Average Weekly Increase
SERVICE	40	18	32	14	0-\$36	\$5.76	8	4	0-\$13	\$6.75
Lower → lower	32	15	25	12	0 - 8	3.84	7 ¹ ₆ Cler. Tech.	3 ¹ ₂	0 3-13	7.50
Lower → middle	6	1	6	1	5 -36	13.66	0			
Middle → middle	2	2	1	1	6		1	1	9	
CLERICAL	14	1	11	0	4 -10	6.09	3	1	5 -13	8.33
Lower → lower	9	0	7	0	4 -10	6.00	2-Adm.	0	7 -13	10.00
Lower → middle	4	1	3	0	5 - 6	5.67	1-Adm.	1	5	
Middle → middle	1	0	1	0	8		0			
ADMINISTRATIVE	3	0	3	0	0 -16	8.00	0			
Upper → upper	3	0	3	0	0 -16	8.00	0			
NURSING	26	2	20	1	4 -31	11.60	6	1	8 -28	14.00
Lower → lower	1	1	0				1-Tech.	1	8	
Upper → upper	25	1	20	1	4 -31	11.60	5-Adm.	0	8 -28	15.20
TECHNICAL	2	1	2	1	10 -13	11.50	0			
Lower → middle	1	1	1	1	13					
Upper → upper	1	0	1	0	10					
TOTAL	85	22	68	16			17	6		

TABLE 3

MOBILITY DATA FOR THE PETER BENT BRIGHAM HOSPITAL - AUGUST 1, 1969 - JULY 31, 1970

Category	Upgraded & Promoted		Upgraded				Promotion in Category				Promotion Into Other Category				
	Total #	Minority	Total #	Minority	Range Weekly Increase	Average Weekly Increase	Total #	Minority	Range Weekly Increase	Average Weekly Increase	Total #	Minority	Range Weekly Increase	Average Weekly Increase	
SERVICE	29	12	12	4	\$ 4-\$40	\$14.00	14	7	\$ 4-33	\$11.90	3	1	\$ 4- 9	\$7.30	5
Lower→lower	19	11	7	4	\$ 4- 14	8.90	10	6	4-22	9.90	2	1	4- 9	6.50	
Lower→middle	5	1	0	0	0		4	1	10-27	16.80	1		\$9		
Middle→middle	2	0	2	0	\$ 6- 13	9.50	0				0				
Upper→upper	3		3	0	\$16- 40	29.00	0				0				
CLERICAL	65	11	31	3	\$ 4- 21	11.80	27	6	4-48	16.30	7	2	\$ 4-13	6.70	5
Lower→lower	18	2	4	0	\$ 4- 20	10.30	11	1	4-13	8.30	3	1	4- 8	5.30	
Lower→middle	40	8	25	3	\$ 5- 21	12.00	13	5	10-48	23.90	2		6-13	9.50	
Middle→middle	7	1	2	0	\$10- 16	13.00	3	0	7-16	12.30	2	1	\$6	6.00	
ADMINISTRATIVE	14	2	11	2	\$ 6- 80	27.90	2	0	23-26	24.50	1	0			
Lower→lower	1		0				0				1		\$18		
Lower→middle	1	1	1	1	\$9		0								
Middle→middle	4	1	3	1	\$ 6- 28	16.30	1		\$26						
Middle→upper	7		6		\$16- 80	35.80	1		\$23						
Upper→upper	1		1		\$34		0								
NURSING	10	3	10	3	\$ 5-\$20	\$ 8.40									
Lower→lower	9	3	9	3	\$ 5- 14	7.10	0				0				
Middle→middle	1	0	1	0	\$20										
TECHNICAL	36	6	20	3	\$ 5-42	16.50	16	3	\$ 9-44	\$24.40	0				
Lower→lower	2	1	0				2	1	9-13	11.00					
Lower→middle	6	1	3	0	\$ 5-42	\$27	3	1	10-27	19.00					
Trainee→middle	7		0				7		16-44	30.90					
Middle→middle	16	3	14	3	\$ 6- 19	11.60	2		18-22	20.00					
Middle→upper	2	1	1		\$20		1	1	\$13						
Upper→upper	3		2		\$27- 36	31.50	1		\$43						
TOTAL	154	34	84	15			79	16			11	3			

to another (for example, from dietary porter to stockman; from file clerk to secretary; from housekeeping aide to lab helper); 25 were RN staff nurses advancing to assistant head nurse, head nurse, or assistant nursing supervisor positions; 3 were upper-level administrative personnel moving to even higher positions; one was a professional moving to a higher level position in her field; and only 14 were employees moving from lower to middle-level positions (a total of 11 advancing, for example, from night watchman to night mechanic, secretary I to secretary II, and station secretary to unit manager trainee) and from one middle-level position to another (a total of 3, a secretary II becoming a senior secretary, a maintenance mechanic moving to refrigerator mechanic, and a project crew leader assuming the position of assistant laundry manager). Looking at the promotions according to functional category, 40 occurred among people initially employed in service occupations, of which 32 were from one lower-level position to another; 6 were from a lower-level to a middle-level position; and 2 were from one middle-level position to another. Of these 40 promotions, 32 were to other service positions (25 from lower to lower-level; 6 from lower to middle-level; and 1 from middle to middle-level) and 8 were into other functional categories, 6 from lower-level service to lower-level technical positions (e.g. service aide to orthopedic orderly, housekeeping aide to lab helper), one from a lower-level service to a lower-level clerical position (tray assistant to office and tally clerk), and one from a middle level service position to a middle-level administra-

tive position (project crew leader to assistant laundry manager). Fourteen promotions occurred in the clerical category, eleven to other clerical occupations (7 from one lower-level position such as clerk to another lower-level position such as secretary or medical transcriber; 3 from a lower-level position such as billing clerk to a middle-level position such as senior billing clerk; and one from the middle-level position of secretary II to the similar level position of senior secretary) and 3 to administrative positions, two from lower-level clerical positions to lower-level administrative positions and one from a lower-level clerical to a middle-level administrative position. All three promotions in the administrative category were from one upper-level administrative position to another; 2 of the three people promoted were nurses advancing from assistant supervisor to supervisor. Of the 26 promotions that occurred in the nursing category, only one involved a lower-level employee, an orderly advancing to a surgical technician position. Of the remaining 25 nursing personnel, 20 were RN's advancing to higher level nursing positions and 5 were higher-level RN's advancing to supervisory roles. Only 2 promotions occurred in the technical category: an orthopedic orderly moved to the middle-level position of chief orthopedic technician and a clinic nutritionist became senior clinic nutritionist. As indicated by Table 2, average weekly salary increases were higher for those people moving from lower to middle-level positions and moving among upper-level positions than for employees moving from one lower-level position to another (the

clerical category is an exception to this statement). Employees who advanced by moving from one occupational category to another received higher increases than those who advanced within the same category.

The picture presented by the data from the Peter Bent Brigham Hospital in Table 3 is somewhat different from that at the Beth Israel. In addition to compiling a list of all employees who were promoted from one position to another during a 12-month period, the Brigham also included those employees who had been upgraded (i.e., reclassified in a higher grade level and hence salary scale) while remaining in the same position. Between August 1, 1969 and July 31, 1970, 154 employees were either upgraded or promoted; 84 of these were upgraded; 59 received promotions within the same occupational category; and 11 received promotions into a different occupational category. Unlike the Beth Israel, the Brigham did not include promotions among registered nurses in its compilation. While it did include 5 physical therapists who were either upgraded or promoted, these employees were excluded from consideration here because their position requires at least a baccalaureate degree. While a significant number of the upgradings and promotions at the Brigham still occurred within the lower-level occupational groupings (49 out of the 154), the percentage of total advancement that this represents is quite a bit smaller than at the Beth Israel (31.8 per cent at the Brigham compared with 49.4 percent at the Beth Israel). The upgrading process moved 29 people in previously lower-level occupations into

middle-level grade and salary status; an additional 23 employees were promoted from lower- to middle-level positions. Thirty people were either upgraded or promoted within the middle-level occupations; 9 employees moved from middle- to upper-level grades or positions; and 7 advanced within upper-level occupations. Seven trainees, three of them promoted from lower-level positions within the hospital, completed training and assumed middle-level positions. Thus, in contrast to the fourteen people (other than RN's and high-level administrators) at the Beth Israel who were promoted to other than lower-level positions, 105 people at the Brigham made such advances, 64 through upgrading, 36 by promotion within their initial occupational category, and 5 by promotion into another occupational category. As at the Beth Israel, many of the promotions and upgradings occurred in the service category, 18.8 percent at the Brigham and 47.1 per cent at the BI. More than forty per cent (42.2%) of the advancement at the Brigham occurred in clerical occupations, compared with 16.5 per cent at the BI. The technical occupations also were a source of many promotions and upgradings at the Brigham, comprising 23.4 percent of the total in contrast to the 2.4 per cent at the Beth Israel. As at the Beth Israel, average weekly salary increases were higher for employees moving beyond lower-level occupations than for those employees being upgraded or promoted within lower-level occupations. At the Brigham, employees advancing within the technical and administrative categories received, by and large, greater average increases than employees in other occupational categories.

At both the Beth Israel and the Brigham, most advancement occurred within the same occupational category. At the Beth Israel, the only category from which a substantial number of people moved was service, where 8 out of 40 employees (20 per cent) advanced by promotion into other categories, 6 into the technical category and one each into clerical and administrative. Only 3 out of the 29 service employees (10.3%) at the Brigham advanced by promotion out of the category, one each into clerical, nursing and technical. Three clerical employees at the Beth Israel and 5 at the Brigham advanced by moving into the administrative category; 2 clerical employees at the Brigham advanced into technical positions. Five RN's at the BI were promoted into administrative positions and one orderly moved into the technical field. With the exception of one lower-level laboratory co-ordinator at the Brigham who moved into a clerical position, no administrative personnel were promoted into other categories. All technical personnel at both hospitals advanced within their own category.

The first five functional categories in Table 1, then, are meaningful from the standpoint of job mobility. Examination of the list in Appendix III of all employees who advanced within the two hospitals indicates that within the clerical area, the four job titles in Table 1 represent the range available for advancement and clerical personnel move throughout it. Mobility in the service area often involved titles other than those in Table 1 but occurred in lower- and middle-level occupations similar to dietary and house-

keeping aides, storeman, and maintenance worker; there was no mobility from lower- or middle-level positions into highly paid positions such as licensed electrician. Mobility in the technical area often involved the titles in Table 1 although usually in the form of upgrading within a given title or advancement from student or trainee status rather than movement from one title to another. In the nursing category, promotion occurred only among RN's; while several nursing assistants were upgraded at the Brigham, there was no movement at all from nurse's aide or orderly to LPN to RN. This condition will be discussed at greater length in Chapter 4. Orderlies do achieve mobility by moving into technical positions such as orthopedic orderly (technician) and surgical technician. Within the administrative category, most advancement occurred by upgrading. Promotion to supervisory positions in a variety of fields and to unit co-ordinator and unit manager provided access to this category for employees in other categories, primarily those in clerical positions.

Discussions with Personnel Department staff in the four other hospitals studied indicated that mobility among occupations, at least qualitatively, was similar to that found at the Beth Israel and the Brigham. Much of the movement among jobs occurred among lower-level positions: from housekeeping aide to housekeeper; from porter to dietary truckman; occasionally from housekeeping aide to nurse's aide. Some also occurred from lower-level to middle-level supervisory and managerial positions: escort messenger to head of escort, laundry worker to laundry manager. The progression among

clerical positions seems to exist everywhere. Children's Hospital has a defined progression among laboratory workers leading from "blood drawer", a position for a person with a high school diploma (or the equivalent) but no previous experience, through laboratory assistant up to (but not including) technologist, a position requiring a baccalaureate degree. Other hospitals with smaller laboratories (e.g. the Faulkner) hire only certified medical technologists. Children's also has a progression to unit manager similar to that at the Brigham and the Beth Israel but lacking at University, Faulkner, and Jewish Memorial Hospitals because they are not yet using this category of administrative personnel. Jewish Memorial is unique among the hospitals studied in that in certain instances it has sent some of its employees to educational institutions for specialized training: eight practical nurses, for example, who were not certified were sent to school at hospital expense to receive certification; a very capable black man who started out as a porter was sent by the hospital to a technical institute to receive the training necessary to assume the position of chief engineer. Other hospitals have tuition aid policies (to be discussed at greater length in Section 3.4.5) to assist employees in furthering their educations, but such assistance is not used to prepare specific employees for particular job slots that require specialized education not possessed by the given employee. Because quantitative mobility data were not available for the four other hospitals studied, it is not possible to determine whether their overall mobility patterns resemble that

at the Beth Israel or that at the Brigham, or whether they take some other form.

The 85 promotions at the Beth Israel represent only 5 per cent of the total labor force in the hospital; the 59 promotions of non-professional employees represent 5.3% of the hospital's non-professional employees. The 154 upgradings and promotions at the Brigham represent 7 per cent of the total hospital labor force; however, since promotions among RN's and other professionals were not included in the hospital's compilation, it is more accurate to consider that the 154 upgradings and promotions pertain only to the non-professional labor force and include 13 per cent of this group of employees. In order to increase the amount of promotion within the non-professional sectors of their work forces, both the Beth Israel and the Brigham, as well as Children's and University, have within the past year instituted job posting systems (to make employees aware of vacancies within the hospital) and transfer policies that attempt to encourage more promotion of present employees. Jewish Memorial has no formal posting system, but apparently has an active "grapevine" that informs all employees of present or potential vacancies; whenever possible, the hospital promotes from within.

3.1.3 Mobility in the Martha Eliot Health Center, the Elm Hill Nursing Home, and the Visiting Nurse Association

Martha Eliot, Elm Hill, and the VNA served as examples of smaller, less bureaucratized health care settings to contrast with the six hospitals studied regarding potential mobility of employees

in different occupations. While it was hoped that Columbia Point would also be able to provide information on employee mobility, both the administrator and personnel manager have been at the center for less than six months and were unable to specify the career paths that various health center employees had taken. Martha Eliot and the VNA also served as sources of information of the job satisfaction and mobility of neighborhood aides and home health aides, two relatively new categories of community-based allied health personnel.

Four of the seven persons with major supervisory and managerial responsibility at Martha Eliot are community residents who began working in lower-level positions: the Assistant Director of Clinic Management started out as a registration clerk; the Supervisor of General Services was initially employed as a clerk; the Director of Purchasing started as a security guard who was promoted to storeroom manager and finally to his present position; the Supervisor of Billing and Budget began working at the center as a statistical clerk. These advances are similar in kind to a number that occurred in the hospital setting where clerical personnel were promoted to administrative positions and where a lower-level service employee advanced to assume significant managerial responsibility. They do, however, represent a difference in degree; it is unlikely in a hospital, for example, that the supervisor or director of one of the major organizational units of the institution would have advanced from one of the lowest level positions in the institution, perhaps in

part because such units are so large and complex in an institution the size of a hospital. The closest analogy one can find in a hospital is the promotion of an escort messenger to a unit manager, a middle- to upper-level position with considerable organizational responsibility but without the degree of control over institution-wide activities possessed by the directors and supervisors at the health center.

The other employees at Martha Eliot that have experienced considerable mobility are the ten neighborhood aides. In this instance, however, the changes in occupation were less a promotion than a shift to other functions because of dissatisfaction with the initial position. When the Martha Eliot Center first open four years ago, ten community people were trained to serve as outreach workers, informing the target community of the center and its services and helping to enroll members in the center. Once this initial task was completed, however, it was never clear exactly what other functions should be served by the neighborhood aides. As a result, only three of the original ten remain in this position. Three have since become clinic aides; one is now serving as an interpreter; and one has become a billing clerk. Two others have left the center entirely. It is the administrator's feeling that the same problem of role definition has occurred in other health centers attempting to use neighborhood workers and that this occupation just has not crystalized to become a viable position.³

The Martha Eliot Health Center and the Columbia Point Health

Center as well are committed to providing jobs and advancement opportunities to community residents and other disadvantaged workers; both have policies of promoting from within whenever possible. Both, however, are constrained in their ability to offer such opportunities by federal guidelines that specify credentials necessary for certain positions, by the basically limited sizes of their staffs, and by the uncertainty of their financial support. As in the hospital setting, administrative positions have been one of the major avenues of access to middle- and upper-level positions. The staff organization at Columbia Point and a conversation with its administrator indicate that new technical positions such as 'medical assistant I', 'medical assistant II', 'x-ray assistant I' and 'x-ray assistant II' provide mobility from lower- into middle-level positions for a limited number of people.⁴ At Martha Eliot, 'social' occupations have not proved very successful; they have met with somewhat greater success at Columbia Point.

Mobility at Elm Hill Nursing Home, Inc. has been limited to the movement of a few employees from housekeeping positions into dietary positions and from housekeeping and dietary positions into nurse's aide jobs. Other than in nursing where mobility is limited by credential requirements, the staff structure provides no middle-level positions into which lower-level employees could advance.

Mobility within the Visiting Nurse Association of Boston is also extremely limited. The majority of the staff consists of LPN's, baccalaureate-level RN's and masters-level public health nurses, all

positions that can be entered only by graduation from appropriate training and academic programs. Except for assuming the clerical positions in the agency, therefore, the 30 home health aides employed by the VNA have no opportunity for advancement. This fact, combined with a low salary (\$95/week starting salary increasing to a maximum of \$120 in annual increases of \$5/week) and disenchantment with the functions served by home health aides, has contributed to a high turnover rate among the agency's home health aides. Unlike home health workers in some other programs,⁵ VNA home health aides perform only non-medical functions: they bathe and ambulate patients, cook meals, do light housework, and occasionally assist patients with marketing. Persons entering this occupation with the expectation of serving a medical role are, therefore, often disappointed.

3.2 Employment, Recruitment, and Mobility of Minority Workers

In order to determine where minority workers are employed within the personnel structures of the health institutions studied and how this has changed over the past few years, each of the hospitals and other health care organizations was asked for a breakdown of employment by job category and race. For hospitals, this information was obtained from the EEO-1 forms that each hospital has to submit annually in compliance with equal employment opportunity regulations. Data on Columbia Point were obtained from a staff listing provided by the administrator. Administrators of other organizations studied provided the information verbally. For purposes of comparison, non-hospital data were organized according to the same format used by hospitals.

Tables 4, 5, and 6 present minority employment data for the six hospitals, the two health centers, and Elm Hill and the VNA, respectively. The job categories used in reporting employment data to the federal government do not correspond exactly with the functional categories used for salary and mobility analysis; therefore, a description of the kinds of occupations included in each category has been included as Appendix IV. Essentially "officials and managers" corresponds with the middle- and upper-level "administrative" positions; lower-level administrative positions would be included in "office and clerical" in Tables 4, 5 and 6. "Professionals" includes such employees as registered nurses, physical therapists and social workers; approximately half of the category consists of registered nurses (for example, of the 589 professionals at the Beth Israel in 1970, 252 were RN's). "Technicians" corresponds with the "technical" category except that it includes LPN's; of the 215 "technicians" at the Beth Israel in 1970, 58 were LPN's. "Office and clerical" and the functional category "clerical" are essentially the same. "Craftsmen," "operatives," "laborers," and "service workers" are combined to form the functional category "service"; craftsmen hold the upper-level service positions; operatives, middle-level; and laborers and service workers, the lower-level positions. The category "service workers" in Tables 4, 5 and 6, however, also includes nurse's aides and orderlies; these two occupations make up perhaps one-sixth of the "service workers." The functional category "nursing," then, consists of approximately half of the "professional" group, one fourth of the

TABLE 4

MINORITY EMPLOYMENT IN SIX BOSTON HOSPITALSBeth Israel Hospital

<u>Job Category</u>	<u>Total Employees</u>		<u>Total Black</u>		<u>Total Spanish Surname</u>		<u>% Black and Spanish</u>	
	<u>1970</u>	<u>1965</u>	<u>1970</u>	<u>1965</u>	<u>1970</u>	<u>1965</u>	<u>1970</u>	<u>1965</u>
Officials & Managers	104	31	5	1	0	0	4.8	3.2
Professionals	589	224	7	5	3	3	1.7	3.6
Technicians	215	466	19	19	4	3	10.7	4.8
Office & Clerical	291	273	31	7	4	2	12.0	3.3
Craftsmen (skilled)	47	2	17	0	4	0	44.7	0
Operatives (semi-skilled)	53	54	14	5	5	6	35.8	20.4
Laborers (unskilled)	36	0	14	0	9	0	63.9	-
Service workers	363	368	97	139	91	31	51.8	47.5
TOTAL	1698	1418	205	176	119	47	18.5	15.8

TABLE 4

MINORITY EMPLOYMENT IN SIX BOSTON HOSPITALS (continued)Peter Bent Brigham Hospital

<u>Job Category</u>	<u>Total Employees</u>		<u>Total Black</u>		<u>Total Spanish Surname</u>		<u>% Black and Spanish</u>	
	1970	1967	1970	1967	1970	1967	1970	1967
Officials & Managers	112	62	11	3	0	1	9.8	6.5
Professionals	963	973	10	3	11	12	2.2	1.5
Technicians	263	172	22	24	0	4	8.4	16.3
Office & Clerical	279	322	15	33	1	0	5.7	10.2
Craftsmen	23	4	4	1	1	0	21.8	25.0
Operatives	41	24	7	3	1	0	19.5	12.5
Laborers	29	3	3	0	3	0	20.7	0
Service Workers	445	412	214	124	19	5	52.4	31.3
TOTAL	2150	1972	286	191	36	22	15.0	10.8

TABLE 4

MINORITY EMPLOYMENT IN SIX BOSTON HOSPITALS (continued)Children's Hospital Medical Center

<u>Job Category</u>	<u>Total Employees</u>		<u>Total Black</u>		<u>Total Spanish Surname</u>		<u>% Black and Spanish</u>	
	<u>1970</u>	<u>1967</u>	<u>1970</u>	<u>1967</u>	<u>1970</u>	<u>1967</u>	<u>1970</u>	<u>1967</u>
Officials & Managers	162	102	5	0	1	0	3.7	0
Professionals	907	810	7	14	7	10	1.5	3.0
Technicians	326	240	23	9	3	6	8.0	6.3
Office & Clerical	634	427	54	20	5	2	9.3	5.2
Craftsmen	84	40	16	2	2	0	21.4	5.0
Operatives	25	69	3	6	0	2	12.0	11.6
Laborers	22	8	2	3	1	1	13.6	50.0
Service Workers	559	571	200	145	33	21	41.8	29.1
TOTAL	2719	2267	310	199	52	42	13.3	10.6

TABLE 4

MINORITY EMPLOYMENT IN SIX BOSTON HOSPITALS (continued)Faulkner Hospital

<u>Job Category</u>	<u>Total Employees</u>		<u>Total Black</u>		<u>Total Spanish Surname</u>		<u>% Black and Spanish</u>	
	1970	1967	1970	1967	1970	1967	1970	1967
Officials & Managers	47	22	3	0	0	0	6.4	0
Professionals	141	159	1	0	0	0	0.71	0
Technicians	50	46	4	1	0	0	8.0	2.2
Office & Clerical	75	72	0	0	0	0	0	0
Craftsmen	1	0	0	-	0	-	0	-
Operatives	21	19	8	3	0	0	38.1	15.8
Laborers	6	2	0	0	0	0	0	0
Service Workers	161	158	19	5	0	0	11.8	3.2
TOTAL	502	478	35	9	0	0	7.0	1.9

TABLE 4

MINORITY EMPLOYMENT IN SIX BOSTON HOSPITALS (continued)Jewish Memorial Hospital

Job Category	Total Employees		Total Black		Total Spanish Surname		% Black and Spanish	
	1970	1968	1970	1968	1970	1968	1970	1968
Officials & Managers	19	17	7	6	0	0	36.8	35.3
Professionals	76	40	23	3	0	5	30.3	20.0
Technicians	77	79	59	48	0	0	76.7	60.7
Office & Clerical	36	25	15	9	0	0	41.7	36.0
Craftsmen	2	0	2	-	0	-	100	-
Operatives	6	8	4	0	0	0	66.7	0
Laborers	0	0	-	-	-	-	-	-
Service Workers	178	198	157	180	1	2	88.8	92.0
TOTAL	394	367	267	246	1	7	67.8	67.0

TABLE 4

MINORITY EMPLOYMENT IN SIX BOSTON HOSPITALS (continued)University Hospital

Job Category	Total Employees		Total Black		Total Spanish Surname		% Black and Spanish	
	1970	1966	1970	1966	1970	1966	1970	1966
Officials & Managers	36	30	3	3	0	0	8.4	10.0
Professionals	467	412	20	14	20	4	8.6	4.4
Technicians	174	111	31	10	9	0	23.0	9.0
Office & Clerical	249	212	58	20	1	0	23.7	9.4
Craftsmen	35	31	3	2	0	0	8.6	6.5
Operatives	11	8	4	3	1	1	45.5	50.0
Laborers	1	1	0	0	0	0	0	0
Service Workers	319	335	211	126	16	7	71.3	39.8
TOTAL	1292	1140	330	178	47	12	29.2	16.7

"technical" group, and one-sixth of the "service workers."⁶ While the EEO categories do not permit one to determine precisely where minorities are employed within the functional breakdown of Tables 2 and 3, they do give a sense of the distribution of minority employees among upper-level (corresponding to "officials and managers," "professionals" and "craftsmen,") middle-level (corresponding to "technicians," "operatives," and perhaps half of "office and clerical") and lower-level (the other half of "office and clerical," "laborers," and "service workers") positions.

Examination of the tabulation for each hospital in Table 4 indicates that there is considerable variation among the six hospitals in their employment of black and Spanish workers, both in terms of the actual numbers of these minority workers employed in each occupational category and in terms of the percentage of the total employment in a category that minority workers comprise.⁷ The distribution of minority workers among the job categories is quite similar, however. The percentage of the total work force comprised of black and Spanish workers varies from 7 per cent at the Faulkner Hospital to almost 68 per cent at Jewish Memorial; the three Harvard teaching hospitals fall within a few percentage points of each other, Children's having 13 per cent of its total labor force made up of minority workers, the Brigham, 15 per cent; and the Beth Israel, 18.5 per cent; almost thirty per cent of University Hospital's employees are either black or Spanish. In all hospitals the largest number of black and Spanish workers are found within the service category; between 54

per cent (19 out of 35 at the Faulkner) and 72 per cent (233 out of 322 at the Brigham) of all minority workers employed in these hospital settings fall into this category. The smallest numbers of minority workers are found in the "officials and managers" and "professional" categories; the Brigham leads the group of hospitals studied with 11 minority "officials and managers"; other hospitals employ between 3 and 7. University Hospital employs 40 minority professionals, almost twice the number found at the hospitals with the next largest numbers (23 at Jewish Memorial and 21 at the Brigham; Children's employs 14; the Beth Israel, 10; and the Faulkner, only 1.) Of the 3623 people employed in managerial and professional positions in these six hospitals, 144 (4%) are minority group members. In the "technical" and "office and clerical" categories, minority group representation is somewhat better: 15.9 per cent of all technical personnel (174 out of 1095) in the six hospitals are either black or Spanish; 11.8 per cent of all clerical personnel (184 out of 1564) belong to these minority groups. Again, as Table 4 points out, there is considerable variation among hospitals regarding numbers of minority employees in these categories.

Comparison of the mid- late 1960's data and 1970 data for each hospital indicates that, by and large, there was an increase in minority employment between the two periods. Personnel department staff at the Brigham and University Hospitals feel that the increases in minority employment in their hospitals are not attributable to any particular efforts on their parts beyond the placement of "help

wanted" ads in black and Spanish community newspapers, advertisement on radio stations catering to these communities, and placement of job listings with community action groups and employment centers. Children's Hospital employs two people in its Public Relations department specifically to provide liaison with the black and Spanish communities. The Beth Israel has made special efforts to assist Spanish-speaking employees and has for a number of years now provided free English tutoring for such workers; the large number of Spanish employees at the BI is no doubt a reflection of such efforts. By contrast, the Faulkner will not hire anyone who cannot speak, read and write English; hence, there are no Spanish-Americans in its employ. The Beth Israel this Spring has also begun to send representatives from its Personnel Department to recruit at Southern nursing schools and colleges in an attempt to increase the number of minority professionals on its staff. Jewish Memorial has also made considerable efforts to increase the number of black professionals it employs, primarily by contact with local civil rights and community organizations.

Examination of the mobility data in Tables 2 and 3 indicates that at both the Beth Israel and the Brigham minority workers represent a larger proportion of promotions than their percentage in the total work force of these hospitals. At the Beth Israel, 22 out of the 85 promotions (25.9 per cent) were among minority workers, compared with a total minority employment of 18.5 per cent; 16 of the promotions were among lower-level positions; 3 were from

lower- to middle-level positions; 2 were among middle-level jobs; and 1 was from a staff nurse to an upper-level nursing position. At the Brigham 22 per cent of the employees upgraded and promoted were minority workers, compared with 15 per cent minority representation in the total labor force. Half of these advances (17 out of 34) were among lower-level positions; almost one-third (11 of 34) were from lower- to middle-level positions; 5 represented movement among middle-level positions; and one was a promotion from a middle- to an upper-level position.

Comparison of hospital data in Table 4 with that from Columbia Point and Martha Eliot in Table 5 indicates that the two health centers, at least on a percentage basis, have been able to fill more positions with low income and minority employees, particularly in the "technical" and "office and clerical" categories and, at Martha Eliot, among "officials and managers." The only hospital with comparable percentages of minority workers in these categories is Jewish Memorial. Like the hospitals, however, these centers have very low percentages of minority professionals. Minority employment at Elm Hill (Table 6) is found only in the technical (LPN) and service categories; while the administrator is willing to hire black RN's, none has applied for a position in several years. The opportunities now available to minority RN's are such that nursing home positions hold little appeal.⁸ A similar condition prevails with the Visiting Nurse Association; most of the home health aides ("service paraprofessionals") are black, as are a few of the

TABLE 5

EMPLOYMENT OF NEIGHBORHOOD RESIDENTS AND MINORITIES
BY TWO BOSTON NEIGHBORHOOD HEALTH CENTERS IN 1970

Job Category	Columbia Point Health Center			Martha Eliot Health Center				
	Total Employ- ees	Total Neighbor- hood Residents	% Neigh- borhood Residents	Total Employ- ees	Total Black	Total Spanish Surname	Total White Commun- ity	% Black and Spanish and Community
Officials & Managers	8	2	25.0	7	4	0	1	71.4
Professionals	46	0	0	40	0	1	1	5.0
Service para-prof.	24	19	79.2	9	4	2	2	88.9
Para-prof. trainees	20	5	25.0	-	-	-	-	-
Technicians	20	7	35.0	4	2	0	0	50.0
Office & Clerical	47	27	57.4	17	8	2	4	82.3
Operatives	9	5	55.7	2	1	1	0	100.0
Service workers	2	2	100.0	7	5	0	0	71.4
TOTAL	176	67	39.8	86	24	6	8	44.2

TABLE 6

EMPLOYMENT OF MINORITIES AT THE ELM HILL NURSING
HOME, INC. AND THE VISITING NURSE ASSOCIATION
IN 1971

<u>Job</u> <u>Category</u>	<u>Elm Hill Nursing Home, Inc.</u>			<u>Visiting Nurse Associa-</u> <u>tion of Boston</u>		
	<u>Total</u> <u>Employ-</u> <u>ees</u>	<u>Total</u> <u>Black</u>	<u>%</u> <u>Black</u>	<u>Total</u> <u>Employ-</u> <u>ees</u>	<u>Total</u> <u>Black</u>	<u>%</u> <u>Black</u>
Officials & Managers	1	0	0	3	0	0
Professionals	8	0	0	78	4	5.1
Service para-prof.	-	-	-	30	17	56.6
Technicians	8	3	37.5	21	0	0
Office & Clerical	2	0	0	34	3	8.8
Service	20	15	75.0	-	-	-
TOTAL	39	18	46.2	166	24	14.5

clerical workers; the agency, however, has found it difficult to attract many minority professional nurses, anxious as it is to do so.

3.3 Turnover Rates, Vacancies, and Current Demand for Allied Health Workers

Traditionally, turnover rates have been very high in hospitals. Among the four hospitals studied that calculate their turnover rates, the range for 1970 was from 40 to 88 per cent. Turnover is highest in lower-level positions, particularly in service and clerical categories, and among registered nurses. In "normal" times, therefore, lower- and often middle-level positions are usually available.

At the moment, however, the economic slowdown that prevails in the Boston area and throughout the country has had a considerable effect upon the hospital job market. All hospitals studied report lower vacancy and turnover rates now than at any time in the past few years. At the Beth Israel, for example, the cumulative turnover rate between October 1, 1969, and April 30, 1970, was 17.5 per cent; between October 1, 1970, and April 30, 1971, the rate had decreased to 12.2 per cent, the lowest in at least ten years. Because turnover is low, there are few vacancies; hence, the total hospital payroll is higher than usual because a number of positions that often are vacant for at least a few months during the year are now occupied full-time. New hires are therefore being kept to a minimum. At Children's Hospital, as of the middle of March there were only 26 vacancies in non-nursing occupations, many of them in professional positions. At Jewish Memorial where in previous years there have always been a few vacancies at all levels, there is now a waiting

list for lower-level positions; the only currently available positions are for a social worker, a physical therapist, and registered nurses.

In the two health centers considered here, turnover is very low and there are rarely lower- and middle-level positions available. Columbia Point now has several vacancies in professional positions. The Elm Hill Nursing Home has perhaps three vacancies in the course of a year; many of the personnel have been at the home for years. The Visiting Nurse Association, on the other hand, has turnover rates approaching 50 per cent among professional nurses, LPN's, and home health aides. Particularly in the latter category, positions are frequently available and the VNA offers five or six training programs a year in order to fill home health aide vacancies.

In the hopes that the present economic downturn and its attendant decrease in job availability will be a relatively short-lived phenomenon, hospital personnel department staff and the administrators of other health care institutions were asked to specify those positions for which they have the most difficulty finding qualified employees. All hospitals have problems finding sufficient clerical staff, particularly medical transcribers, secretaries, and executive secretaries. Registered nurses and LPN's are usually in demand at three of the hospitals and sometimes at Elm Hill. Radiologic (x-ray) technicians and inhalation therapists are also often in demand. Among baccalaureate and graduate-level professional personnel, physical therapists, occupational therapists, and social workers prove hard to come by for the non-teaching hospitals and for nursing

homes; the teaching hospitals have much less difficulty attracting these categories of employees. With particular reference to minority workers, minority professionals, technicians, and middle-level managers are very much in demand; because of the relatively limited number of such potential employees currently available and because of competition from other sectors of the economy also anxious to hire more minority workers, the hospitals and other health care institutions studied are having considerable difficulty finding such personnel.

3.4 Training and Education Opportunities for Allied Health Occupations

Two basic types of training and education are important to consider: that designed to prepare persons who have never worked in the health field (and frequently who have never worked at all in any field) for entry into particular occupations and that intended for persons currently (or previously) employed in an allied health occupation who wish to move into another allied health occupation at the same level or at a higher level. The first type of training has traditionally received most emphasis. However, the awakening concern about creating opportunities for mobility among allied health occupations is now directing considerable interest to the second category.

Table 7 presents a summary of the allied health occupations for which formal training programs of the first type are currently available in Boston and indicates the number of programs that provide training for each occupation and the kinds of institutions in which such training is offered. In addition, the table indicates how many programs charge tuition versus providing salaries or stipends, how

TABLE 7

FORMAL ALLIED HEALTH TRAINING PROGRAMS AT LESS THAN THE BACCALAUREATE LEVEL

LOCATED IN BOSTON¹: 1970²

Occupation	Number of Programs	Location							High School Diploma Required	Program Length	Tuition Charged	Stipend Provided	Salary Provided	Certificate or Diploma	Associate Degree	Combined Enrollment Capacity
		Hospital	Nursing Home	Community Agency	Vocational School	College	HVTP; ³ TCCC ³	Proprietary Institute								
SERVICE																
Dietary aide	4	1		2		1			2	1 mo.-2 yr.	1		1	1		245
Food service supervisor	2							2	2	4 mo.-1 yr.	2			2		60
CLERICAL & ADMINISTRATIVE																
Medical records technician	1				1				1	10 mo.				1		26
Medical secretary and receptionist	5					3		2	5	4 mo.-2yr.				4	1	109
Medical transcriber	2	1					1			1 yr.		1	1	1		30
Unit clerk - unit manager	3	3							3	2 - 12 wks.			3			35
NURSING																
Hospital aide	1	1							1	3 wk.			1			8
Nurse's aide	18	8	8				1	1	3	2 wk.-3 mo.	1	2	15	13		253
NURSING (continued)																
Nursing assistant	9	8					1		3	5 wk.-6 mo.		1	8	7		218
Licensed practical nurse	7	4	1	1	1				6	12-15 mo.	3	2		6		282
Registered nurse	12	11				1			12	2-3 yr.	12			11	1	
SOCIAL																
Community health worker (includes social work aides, outreach workers and similar titles)	9	1		5			1	2	3	30hr.- 3 yr.	2	3	4	4	2	293
Homemaker - home health aide	4			4						1-8 wk.			2	2		57
TECHNICAL																
Ambulance emergency technician	1									25 hrs.						24
Biomedical engineering technician	1					1			1	4 yr. (even)	1				1	14
Cytotechnologist	1							1	+ 2 yr. college	1 yr.	1			1		
Dental assistant	10	1			1	2		6	10	4 mo.-1 yr.	9			10		385
Dental hygienist	1					1			1	2 yr.	1			1		110
Dental lab technician	2							2	2	1 yr. (2 yr. even)	2			2		55
EEG technician	2	2							2	7 mo.-1 yr.		2		2		8
Genetic assistant	1	1							+ 2 yr. college	6 mo. (even)				1		5
Histology technician	1									6 mo.		1		1		4
Inhalation therapist	4	3				1			4	6 mo.-2 yr.	1	2	1	3	1	55
Medical lab assistant	5					2	1	2	4	5mo-2 yr (4 yr.even)	4	1		4	1	155
Medical office assistant	5					1	1	3	4	3 mo.-2 yr.	4	1		4	1	120
Orthopedic technical assistant	1						1			8 mos.		1		1		15
Radiologic technologist	2	1*				1			2	1-2 yr.	1	1		1	1	145
Speech & hearing therapist aide	1	1							1	2 mo.			1			5
Surgical technician	6	5					1		5	3 mo.-1 yr.		2	4	5		50

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¹"Boston" includes Boston, Brighton, Charlestown, Dorchester, East Boston, Hyde Park, Jamaica Plain, Mattapan, Roslindate, Roxbury, South Boston, West Roxbury, Brookline, Cambridge, and Somerville.

²Compiled from "Massachusetts Health Occupations Training 1970: Preliminary Listing," Training Center for Comprehensive Care, 170 Morton Street, Jamaica Plain, Mass., February, 1971

³HVTP = Health Vocational Training Program located at the Dimock Community Health Center.
TCCC = Training Center for Comprehensive Care located at the Lemuel Shattuck Hospital.

Both organizations offer training programs specifically geared to minority, low-income, and other disadvantaged populations.

many require high school diplomas (or the equivalent) for entrance, what the range in program length for each occupation is, how many programs provide certificates, diplomas, or associate degrees, and approximately how many places are available each year for training in each occupation. This information was compiled from a survey of allied health training programs conducted in 1970 throughout the state of Massachusetts.⁹ Essentially these programs fall within four different categories:

1. Trade-school, community college, and university-based programs that train for well established occupations often having specified licensing and certification requirements. These programs all charge tuition and have no formal commitments that guarantee job placement upon the completion of training.
2. Hospital-based nursing and occasional other programs that also charge tuition and that make no guarantee of job placement.
3. Hospital- and other health care institution-based programs that provide either a salary or at least a training stipend during training and that almost always guarantee employment upon the completion of training; often such programs are for newer allied health occupations and for those occupations that do not yet have certification and licensing requirements.
4. Programs specifically geared to train minority and disadvantaged workers for allied health occupations.

A fifth category that will not be considered further in this discussion (for reasons of personal prejudice) consists of proprietary institutions such as Carnegie Institute and ITT that train, for the most part, for lower-level occupations, often charge high tuition, offer poor preparation for the occupation, and provide no guarantee of job placement.

Programs designed to "upgrade" present allied health workers and assist their movement into other allied health occupations are often

similar to those in Category 3, although a number of other approaches are also being explored. Current examples of the above four categories and of upgrading efforts will be discussed to provide an indication of the variety of training possibilities now available and to consider the present status of minority and other disadvantaged workers within these training environments.

3.4.1 Trade School, Community College, and University-Based Programs

At the moment in Boston and its immediately surrounding towns, training for only three "industry-specific" allied health occupations can be obtained at the trade school level: licensed practical nurse and dental assistant at Boston Trade School for Girls and medical records technician at Rindge Technical in Cambridge. A number of schools offer electrician apprenticeship programs that are affiliated with hospitals such as the Brigham and University on a cooperative basis. The LPN, dental assistant, and medical records technician programs all require that their students be high school graduates, take between 10 and 12 months of full-time study to complete, and charge minimal tuition (for example, \$125 for the LPN program). Ninety students a year enter the LPN program and approximately two-thirds of these complete it; the dental assistant and medical records technician programs each train approximately 15 students a year. While none of these programs provides placement assistance, there is a high demand for these categories of workers and they have little difficulty finding a position.

Junior and community colleges in Boston at present train only

medical secretaries. Elsewhere in the state and in the country, however, there has been a rapid growth of allied health training at this level. Associate-degree programs in nursing, radiologic technology, and dental hygiene have experienced rapid growth since 1966 when the Allied Health Professions Personnel Training Act first provided funds to assist in the development of physical facilities, faculty, and curricula for such programs.¹⁰

The range of training opportunities offered by Northeastern University's Division of Allied Health Sciences and School of Nursing perhaps accounts for the lack of programs in the community and junior colleges in Boston. Northeastern's programs run the gamut from a one-year dental assistant program requiring only a high school diploma or equivalent for admission through associate-degree nursing and inhalation therapy programs to baccalaureate-degree nursing and medical technology programs. Five of these programs, those for dental assistants, clinical laboratory assistants, radiologic technologists, inhalation therapists, and nurses, will be described here in some detail because they exemplify the variety of allied health programs that can be offered within the setting of an educational institution willing to try innovative approaches to training and because they are providing some unique opportunities for minority and low-income students.

a. The dental assistant program. Offered in cooperation with Tufts Dental School, this program began in 1963 under funding from the Manpower Development and Training Act (MDTA) of the Department

of Labor. For the first three years the program enrolled only students who could meet MDTA eligibility standards, essentially only minority and low-income students. In 1966 when enrollment was to consist of 100 MDTA students and 50 students paying their own tuition, MDTA funding suddenly fell through; since that time, the program has been primarily directed toward tuition-paying students. Positions in each class are reserved for MDTA students upon request from the Division of Employment Security. At present of the 100 students enrolled, 8 are under MDTA sponsorship and 10 have entered the program under WIN (Work Incentive Program, the effort designed to assist welfare mothers off the welfare rolls by providing jobs and/or training) support; these eighteen students, approximately half of whom are black, receive a weekly training stipend of \$45-\$60/week (depending on family size) and have all of their tuition costs covered by the federal government. Another 12 students in the program, 9 of them black, are supported by a JOBS-70 contract obtained by Tufts Dental School from the Department of Labor; these students also receive both tuition and a stipend; in addition, during their clinical rotations, they receive a salary from the dentists with whom they work. The remaining 70 students (1 of whom is black) pay tuition of \$1350 for the one-year program; federally guaranteed loans are available if needed. Upon the completion of training, students have no difficulty finding positions (although only the 12 students under JOBS-70 sponsorship are guaranteed jobs). Starting salary usually ranges between \$90 and \$125/week; after four

or five years of experience a dental assistant can sometimes command a salary of \$150/week. Because the salary is relatively low, only women have been attracted to the program (and to the occupation, in general). Approximately 80-85 percent of the students enter the program upon graduation from high school; the remaining students range in age from their early twenties to late fifties. Most of the students under WIN, MDTA, and JOBS sponsorship are in the latter group. Upon completing the course students are eligible to sit for the certification exam given under American Dental Association sponsorship; certification, at least at present, however, has little effect upon employment or salary. Therefore, many students never take the examination.¹¹

b. The clinical laboratory assistant program. Like the dental assistant program, the clinical laboratory assistant program began under MDTA sponsorship and initially served only MDTA-eligible students. At present, approximately 25 of the 100 students who enroll in the program each year are under MDTA sponsorship. About 10-12 per cent of each class consists of black students. In order to enter the program, students must have a high school diploma or the equivalent and in addition must have completed college-preparatory courses in chemistry and algebra. Applicants who do not meet these requirements are referred either to their local school departments or to preparatory schools designed to provide such courses. The program itself does not offer such remedial work. The cost of the 15-month program is \$1400 and loans are available. Upon completing

the course, students have no difficulty finding positions; most have two or three job offers and earn between \$122 and \$150 a week as starting salaries.¹²

c. The radiologic technology program. Northeastern, in cooperation with a large number of hospitals throughout the Greater Boston area (including the six hospitals studied here), offers a 24-month program in radiologic technology. Approximately 450 students are enrolled in the program, 200-250 per class. Each class usually has 6 - 8 students under MDTA sponsorship and a few other students supported by WIN. Other students must cover the \$800 cost of the program themselves. However, with the exception of 16 weeks of didactic instruction provided at Northeastern, the rest of the 24-month training period is spent in clinical work at a hospital of each student's choosing (whenever possible) and most hospitals provide a training stipend, usually amounting to approximately \$2600 for the complete training period. Students are thus able to defray program costs without too much difficulty.

Entrance requirements for the radiologic technology program are considerably more stringent than for the two previous programs discussed. Students must be high school graduates from a college-preparatory curriculum that included at least algebra and either biology, chemistry, or physics. In addition, they must demonstrate reasonably good math ability as measured by the Northeastern University Math Test required of all applicants. Applicants lacking these skills must develop them before they will be considered for admission; the

program itself offers no remedial course work. Because the program has two to three applicants for every place, it is selective and chooses the applicants considered to be best prepared.

According to the program director, opportunities in the field of radiologic technology are virtually limitless. Demand for technologists is high; therefore graduates of the program have no difficulty finding positions. In addition, there are opportunities to specialize in fields such as nuclear medicine and ultrasonics, either through further training or on-the-job experience. With specialization and experience, a radiologic technologist can earn approximately \$200 per week. Chief technologists now earn \$10,000 to \$12,000 per year.

Upon completing the 24-month program, students are eligible to sit for the certification exam in radiologic technology. They may also receive an associate degree by continuing at Northeastern for one more academic year. Two years of additional full-time study are required for a baccalaureate degree. Approximately 80-85 students from each class continue for either an associate or baccalaureate degree, often working during the day and attending classes in the evening division.¹³

d. Programs in inhalation therapy. In 1967 each Harvard teaching hospital contributed \$2500 to initiate the inhalation therapy program at Northeastern. This support was continued in 1968 and then replaced by a grant under the Allied Health Professions Personnel Training Act.¹⁴ The program is basically a three-year program leading to an associate degree. At present a total of 49 full-time students

are enrolled, four of whom are black. Tuition for the complete three-year program is almost \$4000. During two cooperative quarters in the third year, students earn between \$2600 and \$3100 while working in supervised clinical settings; many students continue to work part-time during the remainder of the third year. Scholarships and loans are also available, based upon financial need.

Entrance requirements into the program are essentially the same as those met by associate-degree nursing students: good high school performance and reasonable scores on the Scholastic Aptitude Test. However, in addition to the full-time program, the University also offers an evening program that has no entrance prerequisites, not even a high school diploma. Through the evening program a student can complete all of the first-year course requirements, taking as long as three years to do so. Upon completion of these requirements, evening students must then apply to the full-time day program for the second and third years. In order to be accepted, a student must have completed high school equivalency work and have a cumulative average of C or better for the first year's work. At present 32 students are enrolled in the evening program, 5 of whom are black and 3 of whom are under WIN sponsorship. The dropout rate from the evening program is high (about 64 people started at the beginning of the year), but every effort is made to assist students who are really motivated and interested. The cost of completing the first year of the program through evening courses is between \$1100 and \$1200.

According to the director of the program, inhalation therapists

upon graduating from a program like Northeastern's now earn between \$6000 and \$10,000 in the Boston area (in hospitals interviewed for this study the salary range is closer to \$6500 - \$8500). After a graduate inhalation therapist with an associate degree has completed one year of full-time work in a clinical setting under qualified supervision, he or she is then eligible to become a registered inhalation therapist. Registered inhalation therapists now command salaries in the \$11,000 - \$12,000 range. Demand for both unregistered and registered therapists, at the moment, considerably exceeds supply, and the field of inhalation therapy, both on the technician and therapist level, is considered by many people (including most of those interviewed for this study) to be one of the most promising of the allied health occupations.¹⁵ Section 3.4.3. will discuss a new training program for inhalation therapy technicians being offered by Massachusetts General Hospital in cooperation with Northeastern.

e. Programs in nursing. Northeastern now offers both a three-year associate degree program and a five-year baccalaureate degree program in nursing. Each program is a year longer than most such programs in other colleges and universities because it is run on a cooperative basis. The associate-degree program has a total of 255 students enrolled, 34 of whom are black and 1 of whom is Spanish; 480 students are enrolled in the baccalaureate degree program, 20 of whom are black. Total tuition for the associate degree program is almost \$4500; for the baccalaureate program, almost \$7300. During the three cooperative quarters of the associate-degree program

and the seven cooperative quarters of the B.A. program, students earn salaries ranging from that of a nurse's aide to that of a beginning staff nurse as their nursing knowledge and skill increase. Federal traineeships under the Nurse Training Act of 1964 are also available to many students. All students entering these programs must have high school diplomas or the equivalent and must have taken courses in chemistry, biology, mathematics, English, and a foreign language. Associate degree applicants must take the Scholastic Aptitude Test (SAT); applicants to the B.A. program must take College Entrance Examinations.

Northeastern has recently begun a two-year program designed to train LPN's to become registered nurses. The 20 students now enrolled take the same non-nursing courses as other nursing students. The nursing courses offered to this group are, however, different, both because LPN's have already had considerable experience in nursing and because they require re-orientation from the roles of the LPN to those of the RN. It is possible to complete the program in less than two years by taking exams that give advanced placement in certain courses. Upon completion of the program, students receive an associate degree as registered nurses. This program is one of the first in the country to recognize LPN experience as a valuable asset for RN training and to decrease the training time necessary for becoming an RN accordingly. Usually an LPN wishing to become an RN must enter a nursing program in the same status as a person with no previous nursing experience and receives no credit at all for the many years already spent as a nurse.

3.4.2. Hospital-based Nursing and Other Programs

Eleven hospitals in the immediate Boston area maintain their own three-year nursing schools. While at one time such schools provided inexpensive training and often a small stipend in exchange for student labor, all schools now charge tuition often amounting to several thousand dollars; the cost of the three years at Massachusetts General's School of Nursing, for example, is almost \$4500.¹⁶ Three-year hospital schools of nursing have traditionally been and continue to be the main source of training for registered nurses. Traditionally, however, they have had few minority students; in the past few years efforts have been made to attract minority students but a recent study conducted by the Brigham reveals that at present less than one per cent of all students in Massachusetts hospital-based nursing schools (39 out of 4100) are non-white.¹⁷ The associate degree program at Northeastern alone has almost as many minority students.

In addition to schools of nursing, some hospitals also provide a limited number of other programs for which they charge tuition. The Beth Israel, for example, has a school of biophotography and a program for dental assistants. Such programs constitute only a small part of the training offered by hospitals, the major part of which is on-the-job training for specific positions within the hospital itself (discussed below).

3.4.3. "On-the-job" Training in Hospitals and Other Health Care Institutions

Much of the training that exists for allied health occupations

is provided on an "on-the-job" basis by the institution needing manpower to fill certain positions. Many of the lower-level service, nursing, and technical positions are filled almost exclusively in this way. Most hospitals, for example, and many nursing homes train their own nurse's aides, nursing assistants, and orderlies. Dietary and housekeeping personnel are all "trained" on-the-job. Histology technicians, EKG (electrocardiograph) technicians, EEG (electroencephalograph) technicians, and surgical technicians also are usually trained by the institution in which they will work. Hospitals that are using new categories of clerical and administrative personnel such as unit secretaries, unit coordinators, and unit managers provide training for these positions. Training can occur either in a more-or-less formalized program with designated instructors, a defined schedule for completion, and a "class" of trainees usually ranging from approximately 5 to 20 or on an informal basis with one or two trainees "learning by doing" under the supervision of one or more people. Trainees are considered employees of the institution even during training, receive salaries of at least \$90/week while in trainee status, and are virtually guaranteed a position in the occupation for which they are being trained upon completion of training.

The variety and extent of on-the-job training offered by an institution is very much dependent upon its size and complexity. Nursing homes and community agencies like the VNA usually train only one or two categories of allied health workers, always for

lower-level positions. The same is true for hospitals like the Faulkner. Jewish Memorial offers few formal courses but trains informally for most of its nonprofessional positions. Large teaching hospitals, on the other hand, offer formal training for as many as ten to fifteen occupations, both in the traditional lower-level service and nursing categories and in the lower- and middle-level technical, clerical, and administrative categories; informal training is provided for numerous positions in all categories.

It is very difficult to determine exactly how many people are trained through the on-the-job mechanism in the course of a year. For positions that require relatively large numbers of workers and that have high turnover rates (e.g., nurse's aides and diet aides), institutions of necessity train several hundred people a year. For example, the six hospitals studied here train a total of more than 200 people for nurse's aide and orderly positions. University Hospital alone trains almost 70 diet aides a year; the Visiting Nurse Association trains about the same number of home health aides. On the other hand, for positions such as EKG and surgical technician, a large teaching hospital may train less than 10 people a year; hospitals like the Faulkner and Jewish Memorial do not train any.

Trainees for lower-level service and nursing positions are recruited primarily from outside of the institution's current work force. Formal and informal training for clerical, administrative, and technical positions, however, is also used as a means of upgrading and promoting present employees. Some programs, such as that for unit coordinators at the Brigham, have been used exclusively for this

purpose. On-the-job training and upgrading efforts will be discussed in Section 3.4.5.

3.4.4 Programs for Minority and Disadvantaged Workers

At present in Boston there are three main programs that are either themselves training or else coordinating and developing training in health occupations for minority and disadvantaged people: the Training Center for Comprehensive Care, the Health Vocational Training Program at the Dimock Community Health Center, and the Manpower and New Careers divisions of Action for Boston Community Development (ABCD).

The Training Center for Comprehensive Care was initiated five years ago under joint OEO - Commission on Aging funding to train home health aides for the provision of new services under Medicare. The Center then trained health aides to work in community health centers and expanded to train other categories of allied health workers as the demand for them arose. In the past five years the Center has trained several hundred people to be community health workers, social work assistants, home health aides, occupational therapy aides, physical therapy aides, medical lab assistants, medical office assistants, dental assistants, nurse's aides, and surgical technicians. All people trained have been "disadvantaged," although the Center includes rehabilitated alcoholics and mentally disturbed individuals as well as minorities and low-income people in this designation.

The Health Vocational Training Program (HVTP) is the "brain child" of Dr. Leonard Cronkhite of Children's Hospital and was developed

both to provide a training institution sensitive to the specific needs of disadvantaged people and to relieve Children's and other hospitals of the burden and expense of some of the on-the-job training programs discussed in the previous section. The program has been operational since May, 1970 and has thus far trained 39 people as nursing assistants, histology technicians, medical transcribers, and orthopedic technical assistants. Approximately 80 people are currently enrolled in these 4 programs and in programs for dental assistants and operating room technicians that have recently begun. The program has no specific entrance requirements and is committed to providing opportunities in the health field to people who have often been excluded for lack of credentials such as a high school diploma. For persons with educational deficiencies, HVTP offers a 14-week Pre-vocational-Basic Education Program to prepare them for entrance into one of the health occupation training programs. Staff guidance counselors assist students in selecting a training program if they are uncertain about where their interests and abilities lie and follow closely each student's progress throughout training and for the first year of job placement. A training allowance of \$48/week plus \$5 for each dependent is provided each trainee meeting income eligibility guidelines. Approximately three-quarters of all students receive such assistance. The program, while designed primarily to assist disadvantaged people, also tries to maintain an economically, racially, and socially integrated student body; therefore, not all students qualify for training allowances. Approximately 85-90 per

cent of students thus far have been either black or Spanish.

HVTP in choosing occupations for which to train has attempted to select those for which there is high demand. Informal market surveys as well as the representatives from a number of Boston hospitals on the Advisory Committee help to keep the program informed of current need. While the program cannot guarantee job placement to a student upon the completion of his training, it makes considerable efforts to assist graduates to find suitable jobs. The only group of trainees that has had major difficulty finding positions is the orthopedic technical assistants. A training program for this very new occupation was developed because a number of different institutions showed great enthusiasm for using this category of worker; however, when it came time to provide actual positions, many of these same institutions reneged.

The Manpower and New Careers divisions at ABCD do not at present offer their own training programs in the allied health field. Rather they serve as initiators, administrators, and occasionally monitors of programs run by other groups. The Manpower division is the monitoring unit for all NAB-JOBS (National Alliance of Businessmen - Job Opportunities in the Business Sector, a joint National Alliance of Businessmen - Department of Labor program) proposals and contracts in Boston. Prior to this past year such contracts (designed to assist organizations to hire and train minority and low-income workers) were available only to profit-making institutions; now, however, they are also available to non-profit organizations. Massachusetts

General Hospital has taken advantage of this opportunity and has recently begun a training program for inhalation therapy technicians under JOBS funding. Fourteen people, 4 from within the hospital being upgraded, 6 from the WIN program, and 4 referred from ABCD's Neighborhood Employment Centers, are being trained in an intensive one-year program that includes coursework in anatomy, physiology, and medical terminology at the hospital, coursework in English and mathematics at Northeastern, and clinical work at the hospital. The eight non-WIN students receive \$104 weekly training stipends and are guaranteed of positions upon the completion of training; the six WIN students are supported through that program and hopefully will be hired by the hospital. Upon completing the program and working for one year, students will be eligible for certification by the American Association for Inhalation Therapy as inhalation therapy technicians. They will also be given advanced standing at Northeastern should they wish to pursue an associate degree.¹⁸ This program is unique among those examined for this study in that it was the only instance encountered in which a hospital used government funding to finance one of its training programs.

The New Careers division of ABCD is the local administrative unit of the federal "New Careers" program initiated by the Nelson-Scheuer Amendment to the Economic Opportunity Act of 1966. This program is designed to provide low-income and other disadvantaged people access to human service careers in the areas of health, mental health, public health, education, public safety, social welfare,

and public service. The intent of the program is to create new paraprofessional occupations that can be filled by people trained through a combination of on-the-job experience and formal education, that can alleviate some of the shortages of human service professionals, and that can serve as sources of career opportunity in fields previously inaccessible to people without college and graduate-level training. Thus far, most New Careers efforts in Boston have been directed towards areas other than health care; the only persons trained in allied health occupations have been 16 family life workers (essentially home health aides) for the Model Cities health centers, 5 social service assistants for New England Medical Center, and one opthalmic technician, also for New England Medical Center. In the area of mental health 9 people have been trained as community psychiatric workers for the Columbia Point Health Center. Training lasts at least one and usually two years and includes both formal course work either at local community colleges such as Massachusetts Bay Community College or at Northeastern's University College (Northeastern's night division) and on-the-job field placements. During the first year, trainees are paid approximately \$95 per week, \$70 contributed by New Careers and \$20 by the institution or agency for which the trainee will eventually work. New Careers funding covers all educational expenses. In the second year, the employing agency pays all of the trainee's salary and provides 10-15 hours a week of released time (regular paid working hours "released" for other purposes) for formal course work; New Careers continues to cover educational expenses. The intent of the

program is to provide its trainees both a new occupation and a recognized credential, hopefully an associate degree. Thus far because of the time demands upon trainees and because of the unwillingness of educational institutions to give more than token recognition for field placement experience, no one has succeeded in completing the requirements for an associate degree. Preliminary efforts are now in progress to develop programs for social work assistants and inhalation therapy technicians under New Careers auspices.¹⁹

3.4.5. Current Efforts to Upgrade Employees and Provide Opportunities for Job Mobility

A growing awareness on the part of hospitals that high turnover among employees is very costly, combined with increasing emphasis on the concept of mobility as a major component of "equal employment opportunity," has prompted a number of hospitals to begin to take steps to assist the growth and advancement of their personnel. The four teaching hospitals, for example, provide tuition reimbursement for all employees interested in taking courses relevant to their current jobs or to other positions to which they aspire. Such assistance ranges from a 75 per cent reimbursement up to \$300/year payable upon satisfactory completion of the courses offered by the Beth Israel to 100 per cent coverage of tuition payable upon enrollment offered by Children's Hospital. While such assistance is available to employees at all levels, thus far it has been used primarily by professional personnel. Attempts are now being made to encourage other employees as well to take advantage of this assistance.

Some hospitals are now beginning to offer educational and advancement opportunities in-house. University Hospital has just opened a Training Center that initially provides programmed instruction in typing and medical terminology. A number of clerks from the accounting department are using these materials as a means of being upgraded to secretaries; the hospital is providing several hours a week of released time for such upgrading activities. The Beth Israel, as mentioned earlier, provides its Spanish employees tutoring in English. Children's and the BI together offer a course in medical terminology for employees interested in becoming medical transcribers or who would like to become familiar with such terminology for other reasons. Children's is also in the process of developing a program to assist those employees without high school diplomas to complete high school or to get high school equivalency; it is hoped that this program will begin in September and that it will be given in cooperation either with a nearby school system or with a large company currently offering such courses for its own employees.

As mentioned in Section 3.4.3 some hospitals are also using formal and informal on-the-job training programs and certain newly created positions as a source of advancement opportunity. At the Brigham a training course for unit secretaries was used as a means of promoting approximately 30 people working in lower-level positions throughout the hospital; the position of "equipment technician" serves as a source of promotion from lower-level service and nursing positions and often leads to training in inhalation therapy. At

Children's and University various positions within the laboratory field provide advancement opportunity to laboratory assistants. MGH is using its inhalation therapy technician program to upgrade four people who previously were elevator operators, housemen, and diet aides.

In order to inform employees of opportunities available within the hospital, the four teaching hospitals have also instituted job posting systems in the past year. In addition, they are attempting to develop better orientation programs for new employees that will inform them of the possibilities for promotion that exist in the hospital. Efforts are being made to use the evaluation that occurs at the end of the first three months of employment and at yearly performance reviews thereafter as a means of determining employees' interests and goals and of counseling them as to how such goals can be achieved. As part of these efforts University Hospital has developed and provided on a released-time basis special programs on interpersonal relations and supervision for all personnel who serve as supervisors, recognizing that much of the job satisfaction and growth potential of an employee is dependent upon the quality of supervision he receives. Children's Hospital is in the process of developing a similar program.

Both of the health centers studied are committed to providing advancement opportunities to their employees. The discussion of mobility in Section 3.1.3 indicated the extent of promotion experienced by some of the personnel at Martha Eliot who started in lower-level positions. Columbia Point has placed considerable emphasis upon assisting its employees to obtain training and education;

18 employees are now studying for their GED (high school equivalency) on released time; 12 members of the clerical staff are being trained in clerical and accounting procedures by the First National Bank, again on released time. The health center has a policy of promotion from within, and whenever possible, hires untrained people who can be trained for a position on an on-the-job basis, rather than hiring the "best qualified" person already possessing the skills required by a job.²⁰

3.5 "Eligibility" Requirements for Allied Health Occupations and the Current Manpower Structure of Hospitals

As was indicated in Chapter 1, access to many of the allied health occupations is limited by certification and licensing requirements. Nursing is one of the prime examples of a field with limited mobility because the positions of "licensed practical nurse" and "registered nurse" are legally available only to persons meeting certain requirements of formal education and examination. The mobility patterns discussed in Section 3.1 in large part take the form that they do because only certain occupations are open to persons without recognized credentials and academic training. The clerical category has few such barriers; therefore mobility within it is possible and frequently occurs. The administrative category offers some of the same mobility. Freedom of movement exists within the lower- and middle-level technical occupations; however, access to upper-level technician and technologist positions is usually blocked by degree and registration requirements. Only in relatively new fields (e.g. inhalation therapy) where professional societies have not yet gained influence can mobility occur

based upon personal ability rather than academic credentials.

Licensing among the building trades presents some of the same problems of access within the service occupations. Professionalism and "degree-consciousness" has limited the possibilities that some of the para-professional occupations in the "social" category can provide.

Health care institutions, and hospitals in particular, have often imposed even more limited access to allied health occupations than is required by legal and accreditation restrictions by using overly stringent hiring standards. The requirement of a high school diploma or equivalent often used as a minimum hiring criterion for many occupations and as an entrance requirement for many training programs has been the source of much criticism and one of the main targets for reform. While quantitative data were not accessible on the educational backgrounds of different categories of allied health workers in the various hospitals studied, the impression gained from talking with personnel department staff is that at least the teaching hospitals are very much aware of the problem of needlessly stringent prerequisites for various jobs and are in the process of correcting this. Both the Beth Israel and Children's, for example, are currently reviewing all job descriptions throughout the hospital to eliminate hiring standards not in keeping with the actual tasks to be performed. Jewish Memorial seems always to have used formal education requirements only when pertinent to actual functioning in a position. The Faulkner, on the other hand, tends to have high educational standards; whereas the Beth Israel considers the ability to read and write at sixth

grade level sufficient preparation for the position of nursing assistant, the Faulkner prefers high school graduates. While all other hospitals interviewed have at least some lower- and middle-level laboratory personnel, the Faulkner hires only ASCP medical technologists.

Beyond the problem of unnecessary education requirements, job mobility has also been hampered by a failure on the part of hospital administrations to conceive of or to organize their manpower structures as networks of interconnected positions linked by certain requirements of experience, skill, and knowledge. Some pathways do exist as evidenced by the mobility data. With the exception of the clerical category and some progressions in the laboratory field, however, these have developed more by chance as a few new occupations were created than by design. There are few defined "ladders" or "lattices" along which a person entering hospital employment in a lower-level position can proceed as his knowledge of the hospital and occupational skill develop. The one hospital at the present that is trying to correct this situation is Children's. A careful analysis of each department in the hospital and each position within each department, from the lowest to the highest level, is currently in progress. For each department all job titles have been arrayed by grade level so that it is clear by examining a single chart where various occupations stand in the hierarchy of a department and which positions offer possibilities of advancement to persons at given grade levels. Plans call for providing all employees copies of these charts to assist them

in visualizing potential advancement opportunities. Efforts are now being directed toward defining the knowledge and skills required to move from one position to another and toward specifying the kinds of training and on-the-job experience that could provide the requisite capability for such advancement. It is the hope of the Training Coordinator that the hospital will either itself provide or by arrangement with other community resources assist employees in obtaining the training necessary for lateral and vertical job mobility.²¹

3.6 Forces Influencing the Hiring and Promotion of Minority Workers

Title VII of the Civil Rights Act of 1964 and the resulting Federal Executive Order 11246 specified in considerable detail actions to be taken to eliminate discrimination by race, religion, sex, or national origin in the employment and hiring practices of all institutions receiving federal contracts or funding of \$50,000 or more and employing 50 or more people. Hospitals, as recipients of considerable federal funding through such mechanisms as Medicare support of care for the elderly, Maternal and Infant Care and Children and Youth program support of services to impoverished individuals in these categories, and National Institutes of Health and National Science Foundation grants for medical research, are among those institutions that must comply with the provisions of the order. As a result, for example, hospitals have submitted annual reports of minority employment by job category (the EEO-1 reports that provided the data for Table 4), included the phrase "An Equal Opportunity Employer" in all recruitment advertisements, taken action to eliminate discriminatory hiring

practices, and been subjected to equal employment opportunity compliance reviews such as those conducted by the Department of Health, Education, and Welfare at the Beth Israel and the Brigham in 1970.

An additional set of regulations issued in 1970 moved compliance beyond the mere elimination of discrimination to the initiation of "affirmative action" to insure adequate utilization of minority workers in all job categories. Institutions coming under the jurisdiction of Executive Order 11246 are now required to develop Affirmative Action Programs stating specific goals, objectives, and time-tables related to defined aspects of minority recruitment, employment, and promotion. The regulations governing the development of Affirmative Action Programs require that institutions analyze minority employment in all job categories and develop plans of action to correct situations in which minority employees are underrepresented. Five pages of minute print outline methods by which this requirement can be met.²² Among the areas specifically identified for careful analysis are transfer and promotion policies, formal and informal training programs, lateral and/or vertical mobility of minority employees, and academic, experience, and skill requirements presented in job descriptions. Specifications for Affirmative Action Programs include the identification of target goals for increasing minority employment in job categories where minorities are currently underutilized and the development of action-oriented programs such as summer jobs for underprivileged youth, training programs for the hard-core unemployed, and remedial, job training, work-study, and

formal career counseling programs for present employees as means of accomplishing these goals. Institutions are to set timetables for the accomplishment of their plans. Compliance will "be determined by reviewing the contents of the program, the extent of adherence to the program, and the good faith efforts to make the program work toward the realization of the program's goals within the timetables set for completion."²³ Each institution is also required to develop internal auditing and reporting systems that will allow it to measure its progress toward its objectives and to assist compliance reviews; among the items to be monitored are referrals, placements, transfers, promotions, and terminations at all levels.

Because noncompliance could result in the cutoff of all federal funding to the institution involved, there is considerable incentive to develop Affirmative Action Programs in accordance with federal specifications. Institutions are given an "escape clause" in that their goals need only include what could be "reasonably expected" given such factors as "the availability of minorities having the requisite skills in an area in which the institution can reasonably recruit," "the availability of promotable minority employees within the organization," and "the degree of training which the organization is reasonably able to undertake as a means of making all job classes available to minorities."²⁴ "Reasonable" is clearly open to considerable interpretation. At least the teaching hospitals interviewed, however, are taking the specifications for Affirmative Action Programs seriously and developing programs that commit them to meaningful action.

Economic pressures and growing public concern about the constantly rising costs of hospitalization are also contributing to new interest in manpower utilization, wage and salary structure, turnover rates and the like. Hospital management practices have in the past been notoriously poor; concerted efforts are now being directed to correct this situation. Turnover rates and general employment practices are coming under particular scrutiny because there is a strong, although not very well documented feeling, that the extensive recruitment and new employee orientation efforts resulting from high employee turnover are costing hospitals a great deal of money. The attempts being directed toward improving the conditions of hospital employment are very much in keeping with those specified for Affirmative Action Programs. Where considerations of efficiency and equity coincide, there seems to be some hope of actually accomplishing the plans now being made for increasing employee opportunities and mobility. What is not yet clear, however, is how the expense of necessary training and upgrading programs will be met, particularly at a time when health care institutions are coming under fire for including training costs in the costs of patient care. This issue will be given further consideration in Chapter 4.

CHAPTER 3FOOTNOTES

1. Training Center for Comprehensive Care, Massachusetts Health Occupations Training: 1970, Preliminary Listing (Jamaica Plain), February, 1971.
2. Interviews with Miss Andrea Hansen, Assistant Director of Personnel, Beth Israel Hospital, February 9, 1971, and Mr. Nicholas Locsin, Training Director, University Hospital, February 22, 1971.
3. Interview with Mr. Robert Lurie, Administrator, Martha Eliot Health Center, March 4, 1971.
4. "Schedule II: Proposed Assignments of Positions to Recommended Center Pay Grades," Columbia Point Health Center, provided by Mr. Joseph Miranda, Employment Manager; interview with Mr. Leon Bennett-Alder, Administrator, Columbia Point Health Center, March 10, 1971.
5. E.g., Harold B. Wise, "The Family Health Worker," American Journal of Public Health, Vol. 58, No. 10, October 1968, pp. 1828-1838.
6. Had it been possible, the confusion arising from the use of two different sets of job categories would have been avoided by using one or the other set. However, it was not possible to get complete lists of employees for all hospitals coded by job title and race; hence EEO data which had already been compiled had to be used. On the other hand, EEO categories group together certain occupations that this study required be considered separately and do not always include the full range of occupations from lower-to upper-level. Therefore, a different set of functional categories had to be constructed for the analysis of mobility.
7. It should be noted that federal regulations also require the reporting of employment of American Indians and Oriental-Filipinos. The first group was excluded from this study because they comprise such a small percentage of the population in Boston. Persons of Oriental descent were excluded because, for the most part, they have achieved high educational status and have obtained upper-level professional and technical positions. The inclusion of Oriental-Filipinos in calculations of minority employment would have considerably distorted the picture regarding employment of blacks and Spanish-Americans.
8. Interview with Miss Louise Brine, Director, Elm Hill Nursing Home, Inc., March 12, 1971.

CHAPTER 3
FOOTNOTES (continued)

9. Training Center for Comprehensive Care, op. cit.
10. Division of Allied Health Manpower, Bureau of Health Profession Education and Manpower Training, U.S. Department of Health, Education and Welfare, The Allied Health Professions Personnel Training Act, as Amended (Washington: Government Printing Office), 1969, p. 5.
11. Interview with Mr. Paul Cowan, Director, Dental Assistant Program, Northeastern University, March 2, 1971
12. Telephone conversation with Professor William Hendry, Director, Clinical Laboratory Assistant Program, Northeastern University, February 25, 1971.
13. Telephone conversation with Professor Matthew Stevens, Director, Radiologic Technology Program, Northeastern University, February 25, 1971.
14. Interview with Mr. Jimmy Young, Director, Respiratory Therapy Technician Program, Massachusetts General Hospital, March 16, 1971.
15. Interview with Miss Evelyn Cassara, Director, Inhalation Therapy Program, Northeastern University, March 3, 1971.
16. Massachusetts Nursing Association and Massachusetts League for Nursing, Schools of Nursing in Massachusetts, 1970.
17. Herbert Black and Carl M. Cobb, "89 Area Hospitals Offer Blacks Top Job Hopes," Boston Globe, November 15, 1970, p. A-4.
18. Interview with Mr. Jimmy Young, March 16, 1971.
19. Interview with Mrs. Sharon Rivera, Director, New Careers Division, Action for Boston Community Development, March 18, 1971.
20. Interview with Mr. Joseph Miranda, Employment Manager, Columbia Point Health Center, March 10, 1971.
21. Interview with Mr. Oliver Scott, Training Coordinator, Children's Hospital Medical Center, March 17, 1971.
22. _____, "Discrimination on Government Contracts," Employment Practices Service (New York: Commerce Clearing House, Inc.), 1970, paragraphs 17, 586.10-17, 586.27.
23. Ibid., paragraph 17, 586.13.
24. Ibid., paragraph 17, 586.11 and 17, 586.24.

CHAPTER 4

ANALYSIS: OPPORTUNITIES IN THE ALLIED HEALTH OCCUPATIONS

The results of the field investigation presented in Chapter 3 indicate some features of employment within the health sector in Boston that are important to the general question being asked by this thesis. First, with the exception of the two lowest level hospital-based service positions (dietary aide and housekeeping aide), all occupations now offer minimum annual salaries of at least \$5000 and maximum salaries of at least \$6000. While salaries at this level are not going to move all health workers into the middle class, neither are they at the subsistence level once characteristic of employment within the health industry. Second, a comparison of the mid- late 1960's hospital employment data with those from 1970 indicates that in all instances total employment has increased; the percentage of black and Spanish employees within the total labor force and within most job categories has also increased. Finally, quantitative mobility data from two hospitals indicate that between 5 and 13 per cent of the non-professional labor force was able to achieve some upgrading or promotion during a one-year period and that minority workers comprised a greater percentage of the "mobile" population than of the labor force as a whole. Given these data alone, one can conclude that allied health occupations have been offering at least some employment opportunity (whether or not it is "career opportunity" will be discussed later in this chapter) to minority workers and to other workers as well. It

is therefore appropriate to consider more specifically:

1. What occupations have already served or promise to serve as the main sources of opportunity for persons with less than a baccalaureate degree?
2. What health care setting or settings hold the most promise for such workers?
3. What training strategies are most likely to assist minority and disadvantaged workers in gaining access to desirable occupations?
4. How many present and potential workers are likely to share in the benefits created by the growth of promising allied health occupations?

Results from the field investigation as well as experience reported in the literature on allied health occupations and workers will be used as a basis for answering these questions.

4.1 Relative Opportunities Among Existing and Emerging Allied Health Occupations

It has been an implicit definition throughout this study that "career opportunity" exists if an employee can advance from a lower- to a middle- or upper-level occupation, either by movement within the job category in which he starts or by moving into another category, or if he or she can gain sufficient income (considered here to be a maximum annual salary of at least \$8000), responsibility, and growth potential by remaining in and developing a single occupation. Thus, the clerk at Martha Eliot who could (and did) rise to become Assistant Director of Clinic Management and the radiologic technician who can specialize within his field or with experience assume supervisory responsibility both have "career opportunity". On the other hand,

the nurse's aide, who can assume very few new functions, no matter what her experience unless she becomes an LPN and who cannot become an LPN unless she leaves her job to undertake full-time study, does not have "career opportunity." "Career" here is not used in the strict sociological sense that refers only to the life-long commitment to a professional occupation.¹ Rather it connotes mobility at least up to and often beyond a certain status, starting from low status, or the achievement of at least a certain minimum initial status ("middle" level) that has potential for expansion.

The quantitative and qualitative mobility data in Chapter 3 indicate that only the clerical category and the lower- to middle-level laboratory positions within the technical category offer defined pathways along which many employees starting in lower-level positions may progress. Data from both the Brigham and the Beth Israel indicate that a person starting as a clerk, a secretary, or a medical transcriber can indeed become a "secretary II," an "administrative secretary," and even an "executive secretary." Furthermore, given the shortage of clerical workers reported by all hospitals interviewed, the clerical category is one that offers considerable opportunity to present or potential workers. The diversity of occupations within the category provides opportunity even for persons lacking the usual "clerical" skills of typing, shorthand, etc. Positions such as "clinic secretary" and "unit secretary," for example, require primarily record-keeping and organizational ability and can lead into administrative channels as sources of advancement.

Since there are no formal credentials required to assume any of these positions and no "professional" associations to attempt to restrict entry only to "qualified" persons, the clerical category offers few, if any, barriers to advancement.

Quantitative data from the Brigham and discussions at University and Children's Hospitals indicate that within the clinical laboratory people do advance from "laboratory assistant" to "lab technician," from "technician" to "senior technician." The credential barrier then descends, however, limiting the "technologist" and most of the supervisory positions to persons with at least baccalaureate training and often with ASCP registration as well.

Newer, less rigidified positions such as "EKG technician," "EEG technician," "surgical technician," "orthopedic technician" and "inhalation therapy technician" are all at present providing access to middle level occupations for a variety of persons, particularly from lower-level service and orderly positions. Studies by Horowitz and Goldstein at hospitals in the Greater Boston area other than those considered here produced similar findings.² To a greater or lesser extent, these positions themselves also provide opportunities for the assumption of more sophisticated functions and responsibility as an employee's experience and skill develop.

Administrative positions are offering two different channels of opportunity. On the one hand, traditional positions such as "head of escort," "laundry manager," and "head of purchasing" are providing middle- to upper-level managerial positions primarily to service

workers who have advanced to supervisory positions within their various occupations. On the other hand, newly emerging positions such as "unit coordinator" and "unit manager" are both serving as routes of rapid advancement for employees from a variety of lower-level occupations and forming the basis for the development of an established career pathway within the administrative category.

At least in the Martha Eliot Health Center, the positions that have led to and provided career opportunity also fall into the clerical and administrative categories. New "socially oriented" positions such as "neighborhood aide" have neither in themselves provided possibilities for job enlargement and development nor have they led to middle- or upper level positions in other categories. At Columbia Point new technical positions such as dental assistant and medical assistant, positions also found in other settings not specifically designed to serve low-income populations, are serving as sources of opportunity.

It is significant to note, then, that none of the occupations that are providing sources of career opportunity within either the hospital or the health center setting has been created specifically for minority or other disadvantaged workers. The positions that are being used by hospitals and health centers as a means of advancement and development for minority and disadvantaged workers are either traditional ones in the clerical and managerial areas or new ones that have arisen out of changing technology, changing methods of ambulatory care delivery, and changing concepts of organization and

administration. The value of and need for these occupations has been widely accepted; because of the demand for workers to fill positions within these occupations, opportunities arise for disadvantaged and other workers alike.

By contrast, most of the "new careers" occupations in the health field that have been created specifically for members of low-income and minority populations are not now providing career opportunities to these workers. This situation probably exists in large part because the "socially" oriented job category of which these occupations are a part is itself very undifferentiated at the present time. Currently, the category has essentially only two levels, the professional and the aide; the social workers and, to a lesser extent, the public health nurses who inhabit the professional level have not yet accepted the possibility and value of developing occupations of increasing sophistication and responsibility in between these two extremes. Until such time as these middle-level occupations gain acceptance, the "social" area will provide little opportunity for disadvantaged or other workers. What advancement workers starting in the "social" area have made to middle-level positions has been achieved by taking traditional positions in other categories. Thus, two family life workers trained by the New Careers program for Model Cities are now enrolled in the medical records technician program at Rindge Technical School; seven family health workers from Montefiore Hospital's Neighborhood Medical Care Demonstration in New York City are enrolled in an associate-degree nursing program at City University

of New York that will enable them to become registered nurses in 2 1/2 years.³

While professionals in the "socially oriented" field have been particularly reluctant to admit new categories of less highly educated workers, the brief description of the allied health hierarchy and the forces of "professionalization" within it in Chapter 1 should indicate that advancement even in the technical fields is not always easy or even possible for workers without established credentials. At present, movement into positions such as "inhalation therapy technician" is possible because this field is relatively new; few trained people are available; and few formal training programs exist. Hospitals therefore must themselves train people to fill their vacant positions. Current developments within the field of inhalation therapy indicate, however, that access in this field may not long remain so free and exemplify the process by which new fields gradually attempt to restrict entry. For the past two years the American Association for Inhalation Therapy has been offering certification for inhalation therapy technicians. To qualify a candidate must pass an examination, have two years of experience in the field, and have a high school diploma or a GED certificate.⁴ By 1975, it is planned in addition to include some formal academic training in the field as a prerequisite for certification.⁵ While hospitals by no means are constrained to hire only certified personnel or to train according to the standards established by a certifying body, they often try to offer training that will allow people completing the program to get certification if

they wish. The addition of formal academic work to present on-the-job training could be very beneficial for all trainees; however, if it is also accompanied by more stringent requirements for selecting potential trainees (as would be required if all trainees were to qualify for certification), then this attempt to upgrade instruction in the field would eliminate workers without high school diplomas or the equivalent (i.e. many disadvantaged workers). This, of course, need not be the case if hospitals also offer employees the opportunity to complete high school or to obtain high school equivalency as Children's Hospital is trying to do.

Despite the tendency to increase formalized training for various existing occupations, the economist Eli Ginzberg has noted that less-skilled workers still will not be excluded, for as each occupation requires more training, new occupations emerge at a lower level.⁶ In addition, new technical occupations at a variety of levels are continually being developed. The "physician's assistant" concept, for example, is one that is gaining some favor nationally and that will make its first appearance in Boston in June when Northeastern begins an 18-month program for 14 former corpsmen. It is anticipated that the second group of people who would enter the program a year from now probably will not be required to have had previous medical experience. Massachusetts General Hospital is now developing tentative plans for a baccalaureate-degree program (again probably involving Northeastern University) that would train a "physician's associate" in five years but that would enable students to discontinue training

after one year and function as a "physician's aide" or after two years and be employed as a "physician's assistant." It is envisioned that specialization would be offered in the areas of medicine, cardiology, surgery, and anesthesiology.⁷ Elsewhere in the country efforts are being directed toward developing a 2-year associate degree program to train "orthopedic assistants" who could function somewhere between the levels of an orthopedic orderly and the orthopedist himself.⁸ All of these physician-assistant-type efforts are being purposely geared to the associate- or at most the baccalaureate-degree level because they want to attract the type of person who will enjoy functioning in a middle- to upper-level allied health position but who does not aspire to becoming a physician (the reasoning behind this being that a person with the ability to become a physician would only be frustrated by the tasks to be performed by a physician's assistant). Hence, while they will require high school education, "physician's assistant" positions could provide a new source of opportunity at less than the baccalaureate degree level. It is anticipated that these positions will pay in the \$8000 - \$12,000 range.⁹

No discussion of promising career opportunities would be complete without considering the field of nursing. As indicated in Chapter 3, registered nurses are continually in demand. Furthermore, within any hospital and to a lesser extent in other health care settings as well, nursing has its own hierarchy that provides a range of advancement possibilities extending from the beginning staff nurse position on up through the Director of Nursing, a position that commands status and

power equal to that of a physician chief of service. At the moment, any registered nurse can advance through this hierarchy although as nursing continues to "professionalize" itself, upper level positions will probably be restricted to nurses with baccalaureate and graduate training. Mobility data from the Beth Israel Hospital (Table 2 and Appendix III) indicate the extent of movement that does occur among registered nurses. One of the main problems in the field has been, however, that until a person reaches the registered nurse level almost no mobility exists, and reaching this level is virtually impossible for the LPN's and nurse's aides below it. No matter what her experience, a nurse's aide must enter a standard one-year training program to become an LPN. Since there are no part-time or evening programs in the Boston area, a nurse's aide must stop working for a year if she wishes to advance in her field. Similarly, if an LPN wishes to become an RN, she must enter a full-time standard nursing program; even the Northeastern associate-degree program specifically designed for LPN's requires full-time attendance.

Two recent programs in New York City indicate that it is possible to develop training that enables nurse's aides wishing to be upgraded to LPN's and LPN's wishing to become RN's to do so on a released-time basis, allowing them both to continue working in their initial positions and to study for new ones. Under the joint auspices of District Council 37 of the American Federation of State, County, and Municipal Employees and the New York City Department of Hospitals with funding through Department of Labor Manpower Development and Training Act

monies, 422 nurse's aides from New York City's municipal hospitals completed a 14-month LPN training course, working 20 hours a week as nurse's aides and studying 15 hours a week. Upon completing the course, 91 per cent (385) passed the New York State licensing examination and were subsequently employed as LPN's within the municipal hospitals in accordance with an employment guarantee that the hospital system had made prior to the beginning of the course. In conjunction with Hunter College, the Department of Hospitals is now providing a similar course to upgrade LPN's to RN's. A few of the graduates from the LPN course are among the trainees.¹⁰

As pointed out in Chapter 3, nursing has been a field that traditionally has attracted few minority members other than at the nurse's aide and LPN level. In an attempt to correct this situation in Boston, a group known as ODWIN (Open the Doors Wider in Nursing) has for the past five-six years been actively attempting to interest minority and low-income high school students and adults in nursing as a career. ODWIN offers counseling, tutoring, English instruction for foreign language students, high school preparation for adults, and a post-graduate high school year at Brookline High School for persons with weak educational backgrounds. It assists interested persons in applying and gaining admittance to nursing schools and in securing necessary financial assistance. The program then follows each student throughout her training, providing whatever psychological and academic support is necessary to enable her to graduate and to be successfully employed. Since 1966 when the program

first began full-time operation, it has assisted 227 people to gain admission to nursing programs; as of 1970, 29 people had graduated.¹¹

4.2. Relative Opportunities Among Health Care Institutions

On the basis of sheer numbers of employees alone, hospitals clearly offer potential as sources of both employment and career opportunities. In addition, their total labor forces keep increasing. Between 1967 and 1970, for example, the Brigham Hospital added 180 employees to its total labor force; the labor force at Children's Hospital grew by 450. University Hospital, between 1966 and 1970, added 150 workers and will within the next few months add several hundred more when it opens a new wing. Many of the largest gains in these hospitals have been in the "officials and managers," "professionals," "technicians," and "office and clerical" categories, all categories with substantial percentages of at least middle-level occupations. The combination of constantly increasing size and high turnover found in hospitals assures that at least some positions at various levels are usually available. This situation, at least theoretically, provides both new employment possibilities for workers not currently in the health sector and advancement opportunities for present employees. It offers fertile ground for accomplishing the goals set forth by Affirmative Action Programs and should provide at least minority workers and perhaps other disadvantaged workers as well considerable opportunity to move into middle and even upper-level occupations.

The larger size and greater organizational complexity of teaching

hospitals combined with their greater commitment to assisting employee growth and development make them much more likely sources of opportunity than community hospitals such as the Faulkner. Medical schools and their affiliated hospitals have in the past few years come under intense fire for neglecting the needs of low-income populations that usually surround them and that have for so long provided them "teaching material." Hence these hospitals are now particularly anxious to improve their community images; training programs, active recruitment efforts, and attempts to develop advancement opportunities for low-income and minority workers are some very conspicuous ways of showing concern for community well-being and development. The highly differentiated occupational structure of a teaching hospital with the large numbers of positions at all levels offers a suitable framework in which to make these efforts. Whether or not community hospitals will have to make similar commitments on a somewhat smaller scale remains to be seen; judging by their present efforts, they are not being pressured to do so.

The philosophical commitments of neighborhood health centers certainly make them very desirable places of employment for low-income and minority people (as well as for anyone else interested in bringing about change in the health care delivery system). As the mobility data from the Martha Eliot Center indicated, a number of people have been able to rise to positions of responsibility that other health care settings probably would not have offered. The main problem with health centers is that their staffs are relatively

small and turnover is usually very low, at least in non-professional positions. Thus, while a few people have been provided excellent opportunities, there are too few positions to benefit a significant number of disadvantaged workers. The concept of neighborhood health centers has, however, been received with considerable enthusiasm by professionals and community people alike. Even though funding is often a problem, the number of centers in the Boston area has been increasing. As of October, 1970, 24 centers were operational and several more were in the planning stages.¹² As new centers open, new opportunities will be provided for members of the centers' target populations, even if only in small numbers.

Nursing homes like Elm Hill do not at the present time offer much opportunity for non-professional workers. The small sizes of their staffs, limited numbers of occupational categories, and lack of middle-level positions provide little opportunity for advancement to employees in lower-level service and nursing positions. These homes, however, are in desperate need of physical therapists, occupational therapists, social workers, and recreation directors, and professionals in these fields are in too short supply to meet the demand for their services. It would seem that "para-professionals" trained to work with the chronically ill and with geriatric patients could serve a very useful function and could be in great demand if their capabilities were well demonstrated. Such workers would have to be trained at a high enough level to be able to function independently with only occasional supervision by professionals, for

while nursing homes often need these categories of professionals full-time, they usually employ them only on a very part-time basis. Thus, "occupation therapy aides" and "physical therapy aides," categories of workers that already exist, probably could not meet the need. Perhaps persons trained through an associate-degree program in "geriatric care" or something similar would be able to function effectively. ABCD through the New Careers program has developed an associate-degree program in "early childhood development" to meet the expanding need for day-care workers; perhaps a program could be designed for the other end of the life cycle to meet growing needs in nursing homes and other chronic care facilities.

4.3 Alternative Training Strategies

The question of where training for the various health industry-specific allied health occupations can best be provided has been one of the more hotly debated ones in the field in the past few years. Central to the debate are such issues as the quality of instruction that can be offered in different settings, the extent that practical versus theoretical information should be emphasized, relative cost and who should bear it, and the importance of the ability to confer recognized credentials. The basic contenders, as indicated in Chapter 3, are hospitals and their formal and informal training programs, on the one hand, and established educational and academic institutions on the other. Hospital programs usually have few specified entrance requirements, emphasize practical clinical instruction, and are provided at no cost to the student. They have

been criticized, however, for offering only the minimal information necessary for the performance of the specific job trainees are to fill, for providing poor instruction because the demands of patient care must receive top priority, and for increasing the cost of hospitalization because training costs are borne by the hospital's operating budget. Hospital programs also rarely provide degrees or other recognized credentials, thereby supposedly making it difficult for trainees to achieve mobility by assuming a similar position in an institution other than the one in which they are trained.¹³

Programs in academic institutions almost always require at least a high school diploma for admission, place considerable emphasis on didactic as well as clinical instruction, and confer recognized degrees. However, they are also longer than programs for similar occupations provided in the hospital setting, and they charge tuition. Because location determines program entrance requirements, program length, the extent of academic skills required for completion, and program cost, it is clearly a very important issue from the standpoint of the disadvantaged person.

Nationally a number of trends are emerging. Hospitals and other health care institutions are continuing to train lower-level service, nursing, and technical personnel themselves. Increasingly, however, the training of middle-level personnel is being handed over to vocational schools and particularly to community colleges and universities. The combination of rising hospital costs, pressures toward "professionalization" among newly developing technical occupations,

and the availability of federal funding to educational institutions is hastening this process.¹⁴ All professional personnel, with the exception of the many registered nurses who are still being trained in 3-year hospital schools of nursing, are now being trained by academic institutions. The rising costs of operating hospital nursing schools, the growing number of associate- and baccalaureate-degree nursing programs, and the position of the American Nursing Association that the 3-year diploma nurse should be eliminated and replaced by the baccalaureate nurse are all contributing to the decline of hospital nursing schools. Eventually, therefore, hospitals will train no professional personnel in their own programs. Teaching hospitals of course contribute to the training of professionals by providing the clinical phases of programs in the medical and nursing schools with which they are affiliated.

There seems to be a developing consensus among health manpower experts that hospitals should in fact get out of the business of providing much of the middle-level training that they are now offering. Both from the standpoint of establishing more standardized and hopefully higher quality training and from the view of efficiency, for example, Gilpatrick and Corliss point out that hospitals by cooperating and acting collectively as "consumers of education" could get more trained personnel per dollar by contracting with educational institutions for certain programs than by each offering their own individual programs for limited numbers of workers.¹⁵ Ginzberg basically concurs but points out that hospitals must continue to train

on-the-job for new categories of manpower arising from new forms of treatment and technology. "Only when the skills needed have been researched, when the need for the skills has become widespread and stable, and when the job tasks have become standardized and routinized, can the hospitals afford to turn the training over to the schools and the schools afford to accept it."¹⁶

As educational institutions assume more of the responsibility for training allied health workers, there is also a growing recognition that minimum educational requirements and credentials are a fact of life, in the health sector as elsewhere in American society. Thus whereas three years ago Edith Lynton in writing about the development of new careers in the human services could question whether the best strategy was to attempt to break down systems dependent upon credentials or to find ways to confer upon all persons some relevant accreditation, that choice is less and less available.¹⁷ The educational requirements called for in most employment above lower-level have been recognized to make uncredentialed training wasteful in terms of mobility needs.¹⁸ As a result most efforts are now being devoted to developing sequential programs that provide certification at various levels and allow allied health workers to progress from one stage to another over a period of years, building upon past education as well as experience.¹⁹

While the hospitals included in this study do not seem to be in any way decreasing the number of on-the-job programs they offer, they definitely reflect a growing awareness of the need to provide

a basis for further education and to offer some type of recognized credential. As a result, some very interesting cooperative arrangements are developing. For example, in designing its new inhalation therapy technician program, Massachusetts General Hospital arranged to have Northeastern University provide coursework in English and mathematics and to give degree credit for these subjects as well as for the scientific subjects taught at the hospital. A similar approach is being used in developing the physician's associate program that MGH hopes to initiate within a year or two. Children's Hospital anticipates making similar arrangements as it plans and implements programs to facilitate mobility among its employees. Thus, trainees will be able both to learn the clinical skills necessary for new occupations and to gain the academic background and credit necessary for further advancement. The Health Vocational Training Program at the Dimock Center is also trying to arrange degree credit for some of its courses so that its graduates will have a foundation upon which to build should they wish to pursue more advanced training. In light of the requirement of a high school diploma or the equivalent made by most college- and university-based programs, the Dimock Center, Columbia Point Health Center, and Children's Hospital are all making efforts to assist their trainees and employees to get high school equivalency.

Most of these efforts are still very much in the fledgling stage. If they indicate the beginning of a trend, however, and some hospital Affirmative Action Programs indicate that they might, then disadvantaged

workers may be offered a number of new opportunities to gain entry into 'mainstream' academic programs and the possibilities of advancement they provide. Thus, disadvantaged workers would not be restricted to mobility only within newly created or non-health-industry specific occupations as they now are.

If the acquiescence to the need for credentials and the growing role of academic institutions in allied health training are not to create an even more restrictive environment than disadvantaged workers already face, it will be very important that disadvantaged workers have a number of different entry points into the academic programs, that these programs be flexible enough to allow study on a part-time basis, and that truly sequential programs allowing persons to build on past education (e.g. enabling persons with associate degrees to apply their former credits toward baccalaureate degrees) be created. As long as disadvantaged workers have access to sheltered environments like the Health Vocational Training Program to provide them with the initial academic skills and personal confidence necessary for success in college- and university-based or oriented programs and as long as a person can begin employment in a lower-level position and be promoted through a combination of on-the-job experience and part-time study, then the developing alliance between hospitals and universities could be very beneficial for disadvantaged workers. However, as Piore has pointed out, part of the reason for some people's presence in the disadvantaged category is the social and class biases, program contents, and methods

of instruction found in educational institutions.²⁰ Therefore employing institutions like hospitals and health centers will have to insure that the content of courses offered in the college or university setting is relevant to employees' job performance and personal development and that counseling and tutoring are provided if needed. As the experience of ABCD's New Careers program has shown, institutions will also have to insure that adequate credit is given for experience and knowledge gained on-the-job; otherwise it is very difficult for disadvantaged workers to accumulate sufficient credit to actually obtain a degree.

One of the major obstacles to developing the kinds of programs that really would guarantee significant training and advancement opportunities to disadvantaged workers is finding sufficient finances to support these efforts. As indicated in the descriptions of some of Northeastern's allied health training programs, a few disadvantaged people a year who previously have not been employed in the health sector are being trained under the sponsorship of MDTA and WIN. The assistance offered by these two programs includes both the payment of all tuition costs and the provision of a weekly stipend to cover living expenses for the duration of training. Similar kinds of assistance will have to be provided to current health sector employees if they are to be trained and/or upgraded by other than exclusively on-the-job mechanisms. Financing is necessary both to cover the costs of tuition and to allow at least a certain amount of released time so that employees can both work and

study effectively. Programs that upgrade lower-level employees to middle-level positions are usually very expensive. The New York City program that upgraded nurse's aides to LPN's, for example, cost \$2,610,213, or \$6185 for each trainee; almost half of this amount (\$1,416,300) was used to provide stipends to supplement the salaries the aides earned for 20 hours of work per week. Without such stipends and without the time released for study, none of the aides could have afforded to participate in the program. The inhalation therapy technician program at MGH is costing \$3140 per trainee; again, much of the cost is for stipends during the training period. Hospitals, however, already have a tradition of providing salaries to on-the-job trainees and of offering tuition reimbursement; if the funds that are at present committed to these purposes can be continued and supplemented from other sources then the financing of more extensive training and upgrading programs involving more people should be possible. As indicated by the MGH program, NAB-JOBS funding is one potential source of additional funds. The New Careers program is another; if ABCD is successful in forming a consortium of hospitals to participate in training programs for inhalation therapy technicians and for social work assistants, then a precedent may be established that can be followed for training other categories of workers as well. In New York City the League for Voluntary Hospitals is paying 1 per cent of total payrolls into a special fund for training and upgrading established as part of the League's 1968 agreement with Local 1199 of the Retail Workers Distributive and Sales Union

(one of the major hospital unions in New York and a union that is now becoming active in Boston). The fund employs its own full-time training staff and uses the training facilities of various New York City colleges and universities for its programs.²¹ Perhaps a similar cooperative effort on the part of a number of different voluntary hospitals in Boston would eliminate the need of their each establishing training departments as now seems to be happening.

4.4 Potential Impact of Allied Health Employment on the Career Opportunities Available to Minority and Other Disadvantaged Workers

Between the mid - late 1960's and 1970, the six hospitals studied here added 1050 positions in job categories other than "laborer" and "service worker"; of these, 268 (25.5%) were filled by either black or Spanish workers. In this same period the two health centers considered here came into existence, providing 242 new positions in categories other than "laborer" and "service worker"; of these 91 (37.6%) were filled either by black, Spanish, or low-income white employees. Thus, in less than five years in only 6 of the more than 30 hospitals and 2 of the 24 health centers in the city of Boston at least 359 minority and other disadvantaged workers gained new employment either in middle- or upper-level positions or in lower-level clerical and technical positions that provide advancement opportunities to middle- and upper-level jobs. Twenty-three of the 148 (15.5%) employees at the Brigham and Beth Israel hospitals who were either upgraded or promoted beyond lower-level positions in 1970 were either black or Spanish. The five programs at Northeastern University described in Chapter 3 alone are training

approximately 100 low-income and minority students each year for at least middle-level allied health occupations. Thus a significant number of disadvantaged workers are finding career opportunities in allied health occupations.

Balanced against these figures, however, one must also consider that in 1970 of the 1688 black and Spanish workers employed in the six hospitals studied here, 1101 (65.2%) were working in the "laborer" and "service" categories. By contrast, 1029 of the 7074 (14.5%) non-minority workers were employed in these two categories. Thus a very large percentage of the minority workers and a significant number of white workers as well are employed in the lower-level positions that at present provide relatively limited access to middle- and upper-level occupations (only 18 of the 148 workers, 12.2%, who moved beyond lower-level positions at the Beth Israel and the Brigham did so from service occupations). There is, therefore, an extremely large pool of current workers, not to mention new disadvantaged employees likely to fill whatever vacancies arise in these positions, who could serve as prime candidates for the upgrading and training efforts that hospitals like Children's are planning to initiate. How much of an impact these efforts will have on the possibilities available to this group of disadvantaged workers remains to be seen. Because hospitals are required to monitor turnover, transfers, upgradings, promotions, and the like by job category as part of their Affirmative Action activities, it will be possible within two to three years to assess the effects that these programs are having on the mobility patterns of disadvantaged workers.

In summary, then, one can conclude that in the past few years at least for some minority and other disadvantaged workers allied health occupations have indeed provided new career opportunities. In addition, both among the major employing institutions and the training programs as well, considerable attention is now being directed toward increasing the numbers of (particularly) minority group members in the middle- and upper-level managerial, professional, and technical allied health occupations. New equal employment opportunity directives from the federal government seem to insure that this attention will continue and even expand. The number of minority and otherwise disadvantaged workers presently employed in positions that offer little possibility for advancement, however, is still very large. The developing trend toward more emphasis on formal education and training as prerequisites for employment in occupations that offer career opportunities could make it even more difficult for these workers to benefit from the possibilities that such allied health occupations provide. A strong commitment on the part of hospitals, health centers, and educational institutions will be required if this group of workers is to receive the counseling, remedial assistance, and training that can provide them meaningful employment and advancement opportunities. Programs such as the one in New York City that upgraded nurse's aides to LPN's have demonstrated that even in a field as barrier-ridden as nursing such commitment can make opportunities available on a scale large enough to have a significant impact.

CHAPTER 4FOOTNOTES

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3. Harold B. Wise, "The Family Health Worker," American Journal of Public Health, Vol. 58, No. 10, October 1968, p. 1834.
4. American Association for Inhalation Therapy, "Application Instructions: Certification of Inhalation Therapy Technicians," 1970.
5. Interview with Miss Evelyn Cassara, Director, Inhalation Therapy Program, Northeastern University, March 3, 1971.
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8. Jules Fraden and Richard F. Schneider, A Program for the Orthopedic Assistant (San Francisco: City College of San Francisco), 1970.
9. Lecture by Mrs. Suzanne Greenberg, Director, Physician Assistant Program, Northeastern University, at Harvard School of Public Health Course Interdepartmental 17d, "Teaching Allied Health Professionals," April 27, 1971.
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CHAPTER 4
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18. Gilpatrick and Corliss, op. cit., p. 71
19. Ibid., p. 79.
20. Michael J. Piore, "Jobs and Training," in Samuel H. Beer and Richard E. Barringer (ed.), The State and the Poor (Cambridge: Winthrop Publishers), 1970, p. 78.
21. Sumner M. Rosen, "Upgrading and New Careers in Health," Social Policy, Vol. 1, No. 5, January/February, 1971, p. 17.

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APPENDIX I

PERSONS INTERVIEWED FOR THIS STUDY

Action for Boston Community Development, Inc.

Miss Dorothy Garrison, Director, Division of Family Services
Mr. Jim Martyn, Assistant Director of Industrial Relations,
Manpower Division
Mrs. Sharon Rivera, Director, New Careers Program
Miss Clare Gregory, New Careers

Beth Israel Hospital

Miss Andrea Hansen, Assistant Director of Personnel
Mr. Al Kerkian, Job Analyst (telephone conversation)

Peter Bent Brigham Hospital

Mr. John Howe, Director of Personnel
Mrs. Karen Nirenberg, Employment Manager
Mr. William Swett, Training Coordinator

Children's Hospital Medical Center

Mr. George Lunn, Director of Personnel
Mr. Oliver Scott, Training Coordinator
Miss Nancy Cross, Job Analyst

Columbia Point Health Center

Mr. Leon Bennett-Alder, Administrator
Mr. Joseph Miranda, Employment Manager

Elm Hill Nursing Home, Inc.

Miss Louise Brine, Director

Faulkner Hospital

Mrs. Cochis, Employment Manager

Health Vocational Training Program

Mr. John O'Bryant, Director

APPENDIX I
(continued)

Jewish Memorial Hospital

Mrs. Shirley Thorner, Personnel Director

Martha Eliot Health Center

Mr. Robert Lurie, Administrator

Massachusetts General Hospital

Mr. Jimmy Young, Director, Respiratory Therapy Technician Program

Northeastern University

Prof. John Schermerhorn, Dean, College of Pharmacy and Allied
Health Professions

Mrs. Juanita Long, Dean, School of Nursing

Miss Evelyn Cassara, Director, Inhalation Therapy Program

Mr. Paul Cowan, Director, Dental Assistant Program

Prof. William Hendry, Director, Clinical Laboratory Assistant
Program (telephone conversation)

Prof. Matthew Stevens, Director, Radiologic Technology Program
(telephone conversation)

Trade School for Girls

Miss Eileen Keene, Director, Licensed Practical Nurse Program
(telephone conversation)

Training Center for Comprehensive Care

Mrs. Suzanne Greenberg, Director

University Hospital

Mr. Nicholas Locsin, Training Director

Visiting Nurse Association of Boston

Miss Mimmie Cohen, Director of Education

APPENDIX II

HOSPITAL QUESTIONNAIRE

HEALTH CENTER QUESTIONNAIRE

Hospital Questionnaire

Employment Profile

1. How many people are employed by the hospital? _____ full-time
 _____ part-time
 How many of these are black? _____
 How many are Spanish-speaking? _____
2. Could you please provide EEO-1 data from 1970 and for some other year between 1965 and 1967.
3. Within each designated category for the following occupations, what is the range of grade level and salary:

<u>Occupation</u>	<u>Grade</u>		<u>Salary</u>	
	<u>Min.</u>	<u>Max.</u>	<u>Min.</u>	<u>Max.</u>
<u>SERVICE</u>				
Dietary porter				
Housekeeping aide				
Storekeeper				
Mechanic				
<u>CLERICAL</u>				
Clerk typist				
Medical transcriber				
Secretary				
Executive secretary				
<u>ADMINISTRATIVE</u>				
Medical records technician				
Asst. OPD admitting officer				
Unit manager				
<u>NURSING</u>				
Orderly				
Nurses' aide				
LPN				
RN staff nurse				
<u>TECHNICAL</u>				
Medical lab assistant				
Orthopedic technician				
EEG technician				
Radiologic technician				
Cytotechnologist				
<u>"SOCIAL"</u>				
Neighborhood aide				
Community organizer				
Case aide				

If the occupations within each category do not represent the range

3. continued

of possible positions for persons with less than a baccalaureate degree, please indicate more appropriate occupations and their corresponding grade and salary levels.

4. Within each of these categories, how many promotions occurred last year; what was the employee turnover?

<u>Category</u>	<u># Promotions</u>	<u># Leaving Job</u>	<u># New Employees</u>
Service			
Clerical			
Administrative			
Nursing			
Technical			
"Social"			

5. How many promotions were to positions within the same category (e.g. from clerk-typist to medical transcriber)?

To positions in a different category (e.g. from dietary aide to nurse's aide)? _____

If possible, please specify what some of these changes were: _____

6. What assistance such as released-time and tuition reimbursement is provided employees to facilitate their advancement?

How many employees in each of the above occupational categories received such assistance in 1970; how many received salary increases and/or promotions as a result of such assistance:

<u>Category</u>	<u># Assisted</u>	<u># Receiving</u> <u>Sal. Increase</u>	<u># Promoted</u>
Service			
Clerical			
Administrative			
Nursing			
Technical			
"Social"			

7. Are special efforts made to recruit minority or low-income workers? If so, what are they?

8. For what job categories do you have the most difficulty finding qualified employees?

9. From the standpoint of demand for employees and potential mobility, what occupations requiring less than a baccalaureate degree appear to be most promising?

Training

1. What training programs of the following kinds are offered; what are the entrance requirements for each program; when did each program begin?

<u>Formal on-the-job training with salary</u>	<u>Entrance Requirements</u>	<u>Program Start</u>
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Informal on-the-job training

Hospital-based programs charging tuition

Affiliated programs

2. Approximately how many people are trained each year in each of these programs; how many are black; how many Spanish-speaking; approximately what per cent of trainees completing the program are then employed full-time by the hospital:

<u>Program</u>	<u>Total # Trained/yr.</u>	<u># Black</u>	<u># Spanish</u>	<u>% Employed by Hospital</u>
----------------	--------------------------------	----------------	------------------	-----------------------------------

3. Are special efforts made to recruit minority or low-income trainees for any of these programs? If so, please specify programs and recruitment methods used.
4. What are the sources of funding that support each program?
5. Are special services such as counseling, remedial courses, and job placement offered? If so, what are they? Approximately what per cent of trainees receive these services?
6. Upon what basis was it decided to offer training for these particular occupations:
- | | |
|--|-------|
| Need of hospital for employees in these job categories | _____ |
| Availability of funding | _____ |
| Other (specify) | _____ |

Are programs for other occupations being considered or in the planning stages?

Health Center Questionnaire

Employment Profile

1. How many people are employed by the health center? _____ full-time
 _____ part-time
- How many of these are black? _____
- How many are Spanish-speaking? _____
- How many are low-income whites? _____

2. How many people are employed in each of the following categories; how many were so employed during the center's first year of operation; how many of these are minority group members; how many low-income whites from the community?

Category	# employees		# low-income		# blacks		# Spanish speaking	
	1970	1st yr.	1970	1st yr	1970	1st yr	1970	1st yr
Service								
(e.g. maintenance, security)								
Clerical								
(e.g. clerks, secretaries)								
Administrative								
(e.g. intake workers, billing officer, administrative asst.)								
Nursing								
(e.g. aides, LPN's, RN's)								
Technical								
(e.g. x-ray techs, laboratory techs)								
"Social"								
(e.g. home health aides, neighborhood workers, social workers)								

3. Within each of these categories for the following occupations, what is the range of salary:

Occupation	Salary	
	Minimum	Maximum
SERVICE		
Maintenance worker		
Security guard		
CLERICAL		
Clerk-typist		
Secretary		
Executive secretary		
ADMINISTRATIVE		
Intake worker		
Billing officer		
Administrative assistant		
NURSING		
Nurses' aide		
LPN		
RN		

3. (continued)

TECHNICAL

Medical lab assistant

Radiologic technician

"SOCIAL"

Neighborhood aide

Community organizer

Case aide

If the occupations within each category do not represent the range of possible positions for persons with less than a baccalaureate degree, please indicate more appropriate occupations and their corresponding salary levels.

4. Within each of these categories, how many promotions occurred last year; what was the employee turnover:

<u>Category</u>	<u># Promotions</u>	<u># Leaving Job</u>	<u># New Employees</u>
Service			
Clerical			
Administrative			
Nursing			
Technical			
"Social"			

5. How many promotions were to positions within the same category (e.g. from clerk-typist to secretary)?
If possible, please specify what some of these changes were:

How many promotions were to positions in a different category (e.g. from neighborhood worker to intake worker)? _____
If possible, please specify what some of these changes were:

6. What assistance such as released-time and tuition reimbursement is provided employees to facilitate their advancement?

How many employees in each of the above occupational categories received such assistance in 1970; how many received salary increases and/or promotions as a result of such assistance:

<u>Category</u>	<u># Assisted</u>	<u># Sal. Increase</u>	<u># Promoted</u>
Service			
Clerical			
Administrative			
Nursing			
Technical			
"Social"			

7. What special efforts are made to recruit minority or low-income employees?
8. For what job categories do you have the most difficulty finding qualified employees?
9. From the standpoint of demand for employees and potential mobility, what occupations in this health center requiring less than a baccalaureate degree appear to be most promising?

Training

1. What training programs of the following kinds are offered; what are the entrance requirements for each program; when did each program begin?

<u>Formal on-the-job training with salary</u>	<u>Entrance Requirements</u>	<u>Program Start</u>
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Informal on-the-job training

2. Approximately how many people are trained each year in each of these training programs; how many are black; how many Spanish-speaking; how many low-income; approximately how many people have been trained in each of these programs since the center opened:

<u>Program</u>	<u>Total # Trained/yr.</u>	<u># Low- Income</u>	<u># Black</u>	<u># Spanish</u>	<u>Total # Trained</u>
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3. What special efforts are made to recruit minority or low-income trainees for any of these programs? Please specify program and recruitment methods used.
4. What are the sources of funding that support each program?
5. Are special services such as counseling and remedial courses offered? If so, what are they? Approximately what per cent of trainees receive these services?
6. Upon what basis was it decided to offer training for these particular occupations:

Need for employees in these job categories	_____
Availability of funding	_____
Other (specify)	

Are programs for other occupations being considered or in the planning stages?

APPENDIX III

DETAILED MOBILITY DATA FOR TWO HOSPITALS

Beth Israel Hospital

CATEGORY: SERVICE

<u>Initial Position</u>	<u>New Position</u>
<u>Promotions from one lower-level service position to another</u>	
dietary porter	counterwoman
**4 dietary porters	stockman
* unit aide	pediatric aide
* housekeeping aide	aide L & D
*2 housekeeping aide	unit aide
2 supply aide	orderly-porter
**2 service aide	orderly-porter
2 dietary porter	cook's helper
utility aide	unit aide
* diet porter	tray A & S
counterwoman	evening cook
*2 laundry woman	press operator
unit aide	orderly-porter
* baker's helper	tray A & S
* diet porter	baker's helper
nightwatchman	storekeeper
storekeeper	shop helper
<u>Promotions from a lower- to a middle-level service position</u>	
nightwatchman	night mechanic
unit aide	supervisor
* custodian	project crew leader
asst. printer	food steward
shop helper	mechanic
shop helper	plumber
<u>Promotions from one middle-level service position to another</u>	
* maintenance mechanic	refrigeration mechanic

*Denotes black or Spanish employee

Beth Israel Hospital

<u>Initial Position</u>	<u>New Position</u>
<u>Promotions from lower-level service to a lower-level technical</u>	
* houseman	lab aide
service aide	orthopedic orderly
3 unit aide	orthopedic orderly
* housekeeping aide	lab helper
<u>Promotions from lower-level service to lower-level clerical</u>	
* tray A & S	office and tally clerk
<u>Promotions from middle level service to middle-level administrative</u>	
* project crew leader	asst. laundry manager
<u>CATEGORY: CLERICAL</u>	
<u>Promotions from one lower-level clerical position to another</u>	
file clerk	secretary I
file clerk	medical transcriber
2 secretary	payroll & statistical secretary
admitting clerk	secretary
residence clerk	secretary
secretary	night admitting clerk
<u>Promotions from a lower- to a middle-level clerical position</u>	
secretary I	secretary II
2 billing clerk	senior biller
<u>Promotions from one middle-level clerical position to another</u>	
secretary II	senior secretary
<u>Promotions from lower-level clerical to lower-level administrative</u>	
billing clerk II	asst. OPD admitting officer
secretary I	department assistant
<u>Promotions from lower-level clerical to middle-level administrative</u>	
* station secretary	unit manager trainee

BETH ISRAEL HOSPITAL

Initial PositionNew PositionCATEGORY: ADMINISTRATIVEPromotions from one upper-level position to another

2 asst. supervisor (nursing)	supervisor
asst. administrative	director, equipment R & D
engineer	

CATEGORY: NURSINGPromotions from lower-level nursing to lower-level technical

* orderly	surgical technician
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Promotions among positions for registered nurses

10 staff nurse	asst. head nurse
* 7 staff nurse	head nurse
asst. head nurse	head nurse
staff nurse	asst. instructor
staff nurse	junior instructor

Promotions from nursing into upper-level administrative positions

staff nurse	nurse coordinator, M & I, C & Y
asst. head nurse	asst. supervisor
staff nurse	asst. supervisor
2 head nurse	asst. supervisor

CATEGORY: TECHNICALPromotions from a lower- to a middle-level technical position

* orthopedic orderly	chief orthopedic technician
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Promotions from one upper-level position to another

clinic nutritionist	senior clinic nutritionist
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Peter Bent Brigham HospitalInitial PositionNew PositionCATEGORY: SERVICEUpgrading within lower-level

- *2 electrician's helper
- * food service worker
minor repairman
- * food service aide
- x-ray expeditor
- * unit aide

Upgrading within middle-level

unlicensed plumber
steamfitter

Upgrading within upper-level

2 licensed electrician
licensed plumber

Promotion from one lower-level service position to another

*2 food service worker	diet technician
* food service worker	diet aide
* food production worker	diet aide
* food production man	cook in training
* food service aide	diet aide
* menu charter	menu supervisor
* counterwoman	cafeteria supervisor
dishman	dish machine operator
general man	supervisor

Promotion from a lower- to a middle-level service position

general man	food service supervisor
general man	breakfast cook
second cook	vegetable cook
* diet technician	senior diet technician

Promotions from lower-level service to lower-level nursing

* unit aide	nursing assistant
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Peter Bent Brigham Hospital

<u>Initial Position</u>	<u>New Position</u>
<u>Promotions from lower-level service to lower-level technical</u>	
housekeeper	diener
<u>Promotions from lower-level service to middle-level clerical</u>	
dietary technician	unit secretary

CATEGORY: CLERICALUpgrading within lower-level

statistical clerk
 receptionist
 2 escort messenger

Upgrading from lower- to middle-level

6 secretary
 3 ward secretary
 *** 14 unit secretary
 medical transcriber

Upgrading within middle-level

secretary
 administrative secretary
 office supervisor

Promotion from one lower-level clerical position to another

medical record clerk	clerk typist
file clerk	correspondence clerk
clinic clerk	receptionist
escort messenger	escort-in-charge
escort messenger	assistant escort
escort messenger	assistant supervisor
escort messenger	messenger
escort messenger	senior patient escort
* escort messenger	patient escort
escort messenger	clinic secretary
patient escort	unit secretary trainee

Peter Bent Brigham HospitalInitial PositionNew PositionPromotion from a lower- to a middle-level clerical position

office secretary	administrative secretary
* clinic secretary	administrative secretary
2 secretary	administrative secretary
* medical record clerk	insurance secretary
* file clerk	record control clerk
file clerk	assistant billing supervisor
* receptionist	administrative secretary
clerk	administrative secretary
coder	coding clerk
secretary	medical scheduling secretary
operator	assistant chief operator
* escort messenger	supervisor

Promotion from one middle-level clerical position to another

secretary	bookkeeper-secretary
2 administrative secretary	executive secretary

Promotion from lower-level clerical to lower-level administrative

patient escort	unit coordinator trainee
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Promotion from lower-level clerical to lower-level technical

escort	dial orderly
* escort messenger	equipment technician

Promotion from lower-level clerical to middle-level administrative

secretary	administrative assistant
escort	unit manager trainee
escort messenger	unit manager trainee

Promotion from middle-level clerical to middle-level administrative

unit secretary instructor	admitting officer
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CATEGORY: ADMINISTRATIVEUpgrading from lower- to middle-level

* unit coordinator

Peter Bent Brigham HospitalInitial PositionNew PositionUpgrading within Middle-level

head of volunteers
 * file room supervisor
 personnel assistant

Upgrading from middle- to upper-level

head of purchasing
 4 unit manager
 head of escort

Upgrading within upper-level

head of communications

Promotion from one middle-level administrative position to another

medical record technician record control supervisor

Promotion from middle- to an upper-level administrative position

supply manager asst. manager of food
 service personnel

Promotion from lower-level administrative to lower-level clerical

laboratory coordinator medical sec/bookkeeper

CATEGORY: TECHNICALUpgrading from lower- to middle-level

laboratory technician
 diener
 cytotechnician

Upgrading within middle-level

*6 inhalation therapist
 **3 surgical technician
 2 hematology technician
 2 radiologic technician
 technician

Peter Bent Brigham HospitalInitial PositionNew PositionUpgrading from middle- to upper-level

chief technician

Upgrading within upper-levelchief inhalation therapist
inhalation therapistPromotion from one lower-level technical position to another

laboratory assistant	laboratory technician
* x-ray orderly	cine technician

Promotion from a lower- to a middle-level technical position

* EKG technician	home technician
projectionist	assistant photographer
photo lab assistant	chief photographer

Promotion from trainee to a middle-level technical position

3 inhalation therapy trainee	inhalation therapist
4 radiologic technology student	radiologic technician

Promotion from one middle-level technical position to another

junior research technician	research technician
technician	senior technician

Promotion from a middle-level to an upper-level technical position

* technician	assistant supervisor
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Promotion from one upper-level technical position to another

inhalation therapist	assistant chief therapist
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APPENDIX IVEEO JOB CATEGORIESDESCRIPTION OF JOB CATEGORIES FOR USE IN REPORTING EMPLOYMENT DATA
TO FEDERAL GOVERNMENTCATEGORYOfficials and managers

Occupations requiring administrative personnel who set broad policies, exercise over-all responsibility for execution of these policies, and direct individual departments or special phases of operations. Includes: directors, department heads, managers, chief technicians, and other supervisors functioning in a management role; purchasing agents and buyers, and kindred.

Professional

Occupations requiring either college graduation or experience of such kind and amount as to provide a comparable background. Includes: accountants, dietitians, librarians, registered nurses, personnel workers, physical therapists, pharmacists, physicians, scientists, social service workers, and kindred workers.

Technicians

Occupations requiring a combination of basic scientific knowledge and manual skill which can be obtained through about 2 years of post high school education, such as is offered in many technical institutes and junior colleges, or through equivalent on-the-job training. Includes: computer programmers and operators, draftsmen, engineering aides, junior engineers, licensed practical nurses, photographers, scientific assistants, technical illustrators, technicians (medical, electronic, physical sciences), and kindred workers.

Office and clerical

Includes all clerical-type work regardless of level of difficulty, where the activities are predominantly nonmanual. Includes: billers, bookkeeper, cashiers, coders, escort messengers, office machine operators, shipping and receiving clerks, stenographers, typists and secretaries, telegraph and telephone operators, and kindred workers.

Craftsmen (skilled)

Manual workers of relatively high skill level having a thorough and comprehensive knowledge of the process involved in their work. Exercise considerable independent judgment and usually receive an extensive period of training. Includes: the building trades, hourly paid foremen and leadmen, skilled machining occupations, electricians, stationary engineers, and kindred workers.

APPENDIX IV

(continued)

CATEGORYOperatives (semiskilled)

Employees who operate medical, mechanical, or processing equipment or perform duties of intermediate skill level which can be mastered in a few weeks and require only limited training. Includes: apprentices, helpers, painters, photographic process workers, and kindred workers.

Laborers (unskilled)

Employees in manual occupations which generally require no special training. Perform elementary duties that may be learned in a few days and require the application of little or no independent judgment. Includes: groundsmen, laborers performing lifting, digging, mixing, loading and pulling operations, and kindred workers.

Service Workers

Employees in service positions. Includes: attendants, nursing assistants, orderlies, cleaners, cooks, food service workers, guards, watchmen, houseman, maids, and kindred workers.