

APPROVED A STUDY FOR THE STATE OF NEW MEXICO
TO DEVELOP AN EXPERIMENTAL PROGRAM CREATING INTEREST
IN HEALTH CAREERS AMONG SENIOR HIGH-SCHOOL STUDENTS

[Signature]
Director of the Program

APPROVED BY THE THESIS COMMITTEE:

A Problem Solving Thesis

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Hospital Administration

By

Major James E. Cantrell, MSC

APPROVED BY THE GRADUATE COUNCIL:

[Signature]
Dean of the Graduate School

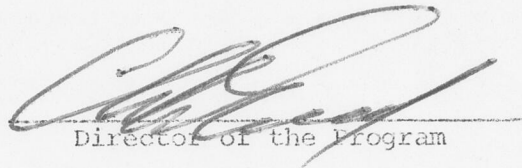
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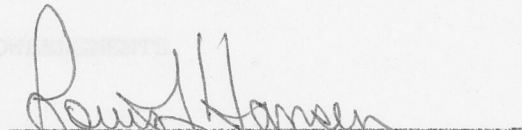
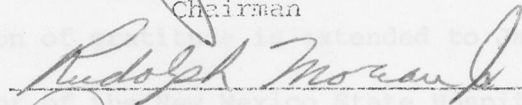
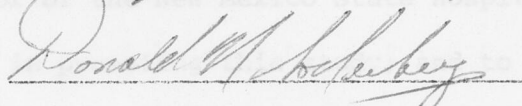
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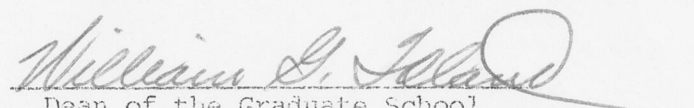
APPROVED BY THE U. S. ARMY MEDICAL FIELD SERVICE SCHOOL:


Director of the Program

APPROVED BY THE THESIS COMMITTEE:


Chairman



APPROVED BY THE GRADUATE COUNCIL:


Dean of the Graduate School

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ABSTRACT

A STUDY FOR THE STATE OF NEW MEXICO TO DEVELOP AN
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CAREERS AMONG SENIOR HIGH-SCHOOL STUDENTS

A Problem Solving Thesis Submitted to the Faculty of Baylor University
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versity of Michigan, Ann Arbor, Michigan 48108.

The problem was to develop a program which would encourage senior high-school students to enter a health career. Data was gathered through personal interviews, review of the literature, and a study of eight existing state health careers programs. The Methods selected for conducting a health careers program in New Mexico were based upon that data.

The conclusion of the study was that a combination of a central-ized and decentralized health careers program was best for New Mexico.

A plan was developed for a proposed eighteen-month experimental health careers program in New Mexico. The plan included the following four phases: (1) Preparation and Introduction; (2) Student Awareness Activities; (3) Operational Program; and (4) Evaluation.

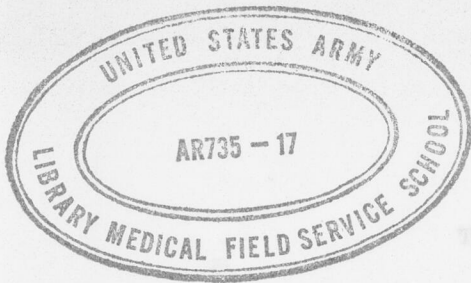


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 A sincere expression of gratitude is extended to James L. LaCombe, Executive Director of the New Mexico State Hospital Association, for his impetus in promoting this study; and to Mrs. Norma Flake and Miss H. Ann Perry, members of the staff, who were of invaluable assistance in conducting the study.

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CHAPTER I

INTRODUCTION

General Information

There is a war on which your life and mine may depend. It is the hunt for men and women to fill jobs that are going begging in our hospitals and doctor's offices, in nursing homes and in public health departments. So, if you want to

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... and journals today. The shortage of in New Mexico subject of growing concern. The shortage has been acknowledged by the President's National Advisory Commission on Health Manpower, and various other government and professional medical organizations.²

The shortages not only exist among doctors, dentists, and nurses, but includes those personnel in the allied health professions and occupations. In the last few years more and more of these allied health workers have been needed. In 1965 eighty four per cent of the health workers employed by the health care industry were other than doctors and dentists and 64 per cent were in the group that excluded doctors, dentists, and registered nurses. Between 1955 and 1967, the number of doctors, dentists, and nurses increased 8 per cent while allied health workers increased almost one-half million, or 26 per cent. The increase

CHAPTER I

INTRODUCTION

General Information

There is a manhunt in the country on which your life and mine may depend. It is the hunt for men and women to fill jobs that are going begging in our hospitals and doctor's offices, in nursing homes and in public-health departments. . . . So, if you want to be welcome at a hospital--don't come as a patient, come as a health worker.¹

The above quote is typical of periodicals and journals today. The shortage of medical personnel in the United States is a subject of growing concern. The shortage has been acknowledged by the President's National Advisory Commission on Health Manpower, and various other government and professional medical organizations.²

The shortages not only exist among doctors, dentists, and nurses, but includes those personnel in the allied health professions and occupations. In the last few years more and more of these allied health workers have been needed. In 1966 eighty four per cent of the health workers employed by the health care industry were other than doctors and dentists and 64 per cent were in the group that excluded doctors, dentists, and registered nurses. Between 1965 and 1967, the number of doctors, dentists, and nurses increased 6 per cent while allied health workers increased almost one-half million, or 26 per cent. The increase in allied health workers included 300,000 nurses' aides and orderlies,

50,000 new secretarial and office workers, 38,000 practical nurses, and smaller numbers of personnel in other allied health occupations.³

The training requirements for occupations in the health industry range from that of a doctor, which requires eight to ten years of training after high school, to a ward attendant, which only requires on-the-job training for several months. Most of the occupations require only a moderate period of training ranging from high school or less, to four years of college. The occupations are all open to both men and women.⁴

The increase in the number of allied health personnel has been caused by changes in medical practice. New jobs have been created which are made up of new tasks created by medical technology and tasks which have been split from existing jobs. Jobs such as physical therapy, occupational therapy, and technician's jobs in laboratories are a result of the introduction of new technology. The "splitting off" process has occurred in many areas. In the hospital, many routine patient care duties have been passed down one or more steps, from the physician to professional nurse, to practical nurse, to nurses' aide, thus creating new jobs.⁵

As the skill-spreading continues and new families of medical jobs are created, the variety of health professions and occupations increases. The United States Department of Labor has listed and described 200 occupations in its Health Careers Guidebook.⁶

Most of these occupations are allied health. According to

Eli Ginzberg, of the 2.8 million persons engaged in the provision of health services, 1.7 million of the workers are allied health workers. These workers all have less than a full college education. Most of them have graduated from high school and completed some college work. A sizable number, perhaps over half a million, have not finished high school. Although this estimate may be high, it does emphasize the great number of jobs open in the health service industry which do not require extensive education.⁷

In recent years, the demand for medical and other health services has been increasing rapidly, especially with family and individual coverage under prepaid insurance plans and legislation such as Medicare and Medicaid. The causes for the increased demand are many and varied. Lenor S. Goerke lists some major factors which are generally in accordance with other authors' views concerning the causes for increased demand. Goerke lists:

(1) population changes and the volume of illness, (2) changed social environment, (3) changed economic access to medical care, and (4) scientific and sociological changes in medical practice.⁸

Between 1950 and 1965, employees on nonagricultural payrolls increased by one-third from forty-five to sixty million. At the same time, total health manpower increased by 87 per cent. This increase from 1.5 to 2.8 million health workers was two and one half times the rate for the economy as a whole.⁹

About three-fourths of the total number of personnel in the health service industry are in hospitals.¹⁰ The tremendous increase

in hospital workers is illustrated by the following statistics. In 1947, there were 882,600 employees in hospitals registered by the American Hospital Association. This represents an average of 63 employees per 100 beds. In 1966, registered hospitals employed the equivalent of 2,039,300 persons (two part-time employees are equated with one full-time employee). The average number of employees rose to 121 per 100 beds. In the spring of 1966, registered hospitals reported a need for 257,200 professional and technical personnel to provide optimum care to patients. Table 1 illustrates the growth of the health services industry together with estimates for 1975 by the Bureau of Labor Statistics.¹¹

TABLE 1

PERSONNEL EMPLOYED IN THE HEALTH SERVICES INDUSTRY: 1940-75

Year	Workers in Health Services Industry		
	Total	Hospitals	Other
1975	5,350,000	3,375,000	1,975,000
1966	3,672,000	2,363,000	1,309,000
1960	2,642,300	1,726,000	915,700
1950	1,698,900	1,009,000	689,900
1940	1,059,000	--	--

Source: U.S., Department of Health, Education, and Welfare, Vital and Health Statistics, Health Manpower, United States, 1965-67 (Washington, D.C.: Government Printing Office, 1968).

The demand for health services and the growth of the health services industry has not stopped. The many factors which affect demand for health services continue to change. One of the more significant factors is population growth. By 1980, the Nation's population is expected to increase fifty million people. Of this number, there will be five million more people over the age of sixty-five.¹²

A review of the statistics discussed above reveals that the shortage of health care workers in the nation will become more critical by 1975 when approximately 5,350,000 will be needed. Of this number, about two-thirds will be allied health workers and about three-fourths of the total will be needed in hospitals. As the demand for health services increases the public is becoming more concerned about where the workers will come from.

The state of New Mexico shares the medical manpower shortage with the rest of the Nation. New Mexico ranks forty-second in the Nation in physicians per 100,000 population, forty-fourth in dentists, thirty-fourth in nurses, and twenty-ninth in pharmacists (see Table 2).¹³

The New Mexico Hospital Association completed a statewide medical manpower survey in February, 1970, which measured the shortage of all allied health personnel in member hospitals. Ninety-seven per cent of member beds were represented in the survey. However, the results of the survey were valid for only the members of the Hospital Association. Not represented were fifteen of the fifty-eight non-federal hospitals, twelve federal hospitals, twenty nursing homes,

TABLE 2

PHYSICIANS, DENTISTS, NURSES AND PHARMACISTS
PER 100,000 POPULATION IN NEW MEXICO

Title	Rank in Nation	Rate per 100,000 Population	National Average Rate Per 100,000 Population	Date
Non-Federal Active Physicians	42	91	131	31 Dec 67
Non-Federal Active Dentists	32	30	46	1 Jul 67
Non-Federal Active Registered Nurses	34	250	313	1 Jul 66
Non-Federal Active Pharmacists	29	56.5	61.6	1 Jan 67

Source: U.S., Department of Health, Education, and Welfare, Vital and Health Statistics, Health Manpower, United States, 1965-67 (Washington, D.C.: Government Printing Office, 1968).

physicians' offices, and other health facilities in the state. A more comprehensive survey was initiated by the Hospital Association in February, 1971; however, the results are not complete at this time. Although the 1970 survey only measured a portion of the medical manpower shortage, the results do indicate that a shortage in most occupations does exist. The survey included forty occupations in the hospital. At the time of the survey, participating hospitals employed 7,076 personnel in those occupations being surveyed. Positions for an additional 645 personnel were budgeted, but not filled.

Hospitals projected their needs for 1971 as 1,098 additional personnel and for 1975 an addition of 2,085 to their current staff.¹⁴

It is evident that a shortage of medical personnel does exist in New Mexico. The current survey which will include all facilities in the state will reflect a greater shortage, and this shortage will increase in the future as the factors discussed above continue at work to increase the demand for medical service. The increase in population in the state alone will be a strong factor. It is estimated by the University of New Mexico Bureau of Business Research that the population of that state will grow from the current population of 994,000 to 1,630,000 in 1980.¹⁵

Review of the Problem

Statement of the Problem

The problem is to develop for the state of New Mexico an experimental program creating interest in health careers among senior high-school students.

Conditions which Prompted the Study

A medical manpower survey conducted as of February 1, 1970, by the New Mexico Hospital Association reflected a shortage of personnel in several professional and allied health occupations in the state's hospitals. Recognizing the need for additional trained personnel in the health occupations, the director of the New Mexico Hospital Association requested that an experimental program be developed to create interest in the health careers and encourage high-school students to

enter a health career upon graduation. Programs do not have efficient

Criteria systems which provide sufficient feed-back to accurately

The experimental program should conform to the following criteria:

1. Senior high-school students should be informed about the various health careers that are available to them.

2. The program should provide a simple means for a student to obtain information about a health career in which he becomes interested.

3. Those students who become interested in a health career should be identified and further action taken to encourage them to enter a training facility.

4. Professional and allied health educational organizations in the state should be involved in the program.

5. The program should include a method to evaluate its success or failure.

Limitations

The following limitations were imposed by the executive director of the New Mexico Hospital Association:

1. The experimental program will be limited to a total expense of not more than \$22,000.

2. The experimental program will not be designed around the high-school counselor concept.

Obstacles to Optimum Research

Existing state Health Careers Programs do not have efficient evaluation systems which provide sufficient feed-back to accurately measure success of the programs. It is therefore difficult to determine which programs are most effective and particularly which methods used in the various programs produce the best results.

Definitions

Before proceeding, the writer wishes to define the three terms that appear most frequently in the paper. The definitions are provided so that the reader and writer will give the same meanings to the terms throughout the paper.

Health Careers Program.--Any activity whose primary purpose is to encourage people to enter a health career.

Health Services Industry.--Both public and private facilities that are primarily engaged in furnishing medical, surgical, and other health services.

Allied Health Personnel.--All personnel in a health career who have less than a college education.

Demographic Data

The state of New Mexico consists of 121,566 square miles and contains a population of 994,000 people.¹⁷ There are 111 senior high schools in the state. As of December, 1970, the public senior high schools had enrolled 22,027 students in the tenth grade, 20,089 in the eleventh grade, and 17,796 in the twelfth grade. The nonpublic schools

had enrolled 599 students in the tenth grade, 564 in the eleventh grade, and 508 in the twelfth grade.¹⁸ A map depicting the major senior high-school population centers is attached as Appendix A.

Footnotes

¹L. Velie, "Health Careers Unlimited," Reader's Digest, LXXXVII (August, 1965), 108, 112.

²Report of the National Advisory Commission on Health Manpower, Volumes I and II, J. Irwin Miller, Chairman (Washington, D.C.: Government Printing Office, 1967), p.594.

³A. Robbins, "Allied Health Manpower," Inquiry, VII (March, 1970), 55-56.

⁴Herman M. Strum, Technology and Manpower in the Health Service Industry 1965-75, Report of the U.S. Department of Labor, Manpower Research Bulletin Number 14 (Washington, D.C.: Government Printing Office, May, 1967), p. 19.

⁵Robbins, p. 56.

⁶U.S., Department of Labor, Health Careers Guidebook (Washington, D.C.: Government Printing Office, 1965).

⁷Harry I. Greenfield, Allied Health Manpower: Trends and Prospects (New York: Columbia University Press, 1969), pp. v-vi.

⁸Lenor S. Goerke, "Utilization, Recruitment, and Training of Health Manpower," American Journal of Public Health, LV (October, 1965), 1512.

⁹Greenfield, p. viii.

¹⁰Strum, p. 13.

¹¹U.S., Department of Health, Education, and Welfare, Health Manpower, United States, 1965-1967 (Washington, D.C.: Government Printing Office, 1968), pp. 49-50.

¹²Ibid., p. 49.

¹³Ibid., pp. 18, 32, 39, 44.

¹⁴New Mexico Hospital Association, Report of Medical Manpower Survey, February 1, 1970. (Mimeographed.)

¹⁵Ralph L. Edgel, "Projections of the Population of New Mexico and Its Counties to the Year 2000," University of New Mexico Bureau of Business Research (Albuquerque: University of New Mexico, August, 1965), p. 14.

¹⁶Bureau of the Census, U.S. Department of Commerce, The American Almanac (New York: Grosset and Dunlap, 1971), pp. 12, 166.

¹⁷Letter from Alyce Quintana, Administrative Officer, Division of Statistics, New Mexico State Department of Education, February 21, 1971.

known as health career councils or health career programs have been initiated. These organizations have evolved for the sole purpose of helping to alleviate the medical manpower shortage. However, a review of the hospital and health care literature pertinent to the subject reveals very little analysis concerning what things would best attract people into a health profession. Several studies have been conducted with high-school students concerning their motivation and career orientation, but few studies have dealt with those students who have actually enrolled in health training programs. In addition, the literature provides very little information concerning the success of established health career programs.

Much of the literature concerns itself with very broad approaches to the medical manpower shortage problem and the discussion of various sources of manpower. There is a great deal written suggesting removing wage and related inequities, expanding government and private programs for training, expanding the size of schools, and finding resources for scholarships.

CHAPTER II

REVIEW OF THE LITERATURE

In an effort to fill the gap between the supply of personnel in health careers and the demand for such personnel, many organizations known as health career councils or health career programs have been initiated. These organizations have evolved for the sole purpose of helping to alleviate the medical manpower shortage. However, a review of the hospital and health care literature pertinent to the subject reveals very little analysis concerning what things would best attract people into a health profession. Several studies have been conducted with high-school students concerning their motivation and career orientation, but few studies have dealt with those students who have actually enrolled in health training programs. In addition, the literature provides very little information concerning the success of established health career programs.

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More research in health manpower problems is needed to provide information concerning opportunities in health careers to insure fuller utilization of untapped human resources.¹ The National Conference on Public Health Training has recommended that "adequate direct operating funds be provided the Public Health Service to . . . introduce prospective candidates to career opportunities in public health."²

Many "principles" of recruiting are suggested in the literature but, once again, they are very general. Goerke's examples are:

1. Increase the educational level of all personnel which will increase the total number of personnel from which health workers can be drawn.
2. Recruitment for health careers should begin in high school and continue at junior college and graduate levels.
3. Barriers to educational achievement such as economic, racial, religious, and geographic must be removed.
4. Pay and working conditions must be attractive enough to allow the health service industry to compete with other employers.³

The National Congress on Health Manpower provides a definition of recruiting which more specifically explains the mechanics involved:

Recruiting into health careers is a continuous process embracing (1) communicating to the general public information on the educational and employment opportunities in the health field, (2) motivating individuals to choose health careers,

(3) identifying interested individuals to counsel and place them in educational programs and jobs, and (4) continuous efforts to retain, in educational programs and in health careers, those who have been recruited.⁴

The question of who should do the recruiting for health careers has been raised in the last few years. Most authors agree that the responsibility belongs to representatives of the health careers themselves. The members of the health care professions at all levels must participate for they have a great deal of influence in encouraging people to enter health careers.⁵ The associate director of the Western Interstate Commission of Higher Education, Kevin P. Bunnell, typified the views of many when he made the following statement:

For too long we have been satisfied with having our recruiting done by intermediaries. It's time for the doctors and the nurses and the medical technicians and the dentists to become involved directly in the recruiting process--to meet talented young people, to talk with them realistically about their professions, to take them into their offices, their laboratories and on to the wards so that they may have firsthand information concerning the professions they are considering.⁶

The current trend is for the recruiting to be accomplished by representatives of the health care industry. This was the case in all the health career programs studied.

There are few studies available which concern themselves with motivation toward health careers. However, two have been selected and will be discussed. A review of the various existing health careers programs, to be presented later, will provide information concerning the methods used.

Two recent studies were conducted in Kentucky and in Alabama to determine what factors motivated students to enter health careers. The studies also attempted to determine what investigative procedures were used in arriving at their career selections. The Kentucky study was conducted in February, 1969, and was based upon an eleven-question form. Questionnaires were sent to all health-related programs in the state. Directors of programs were asked to administer the survey to freshman or first-year students. A total of 1,404 students returned the questionnaire. The study does not state what proportion of the total population of students this sample represents. The Alabama study was conducted in May, 1970. Its questionnaire was patterned after the one utilized by Kentucky in order that a comparison could be made concerning the findings of the two reports. The Alabama questionnaire was sent to directors of health educational programs in the state requesting that they administer the survey to their students. Sixty schools, over 50 per cent of the total health educational programs, participated with a total of 2,018 student responses. The two studies resulted in the following findings:

Health Careers Considered

Kentucky--A "majority" of students were interested in and investigated more than one health career.

Alabama--Forty-seven per cent of the students considered and investigated more than one health occupation.

Age of Career Decision

Kentucky--Thirty-four per cent of the students selected a health career between "under" ten years of age and fifteen years of age while 58 per cent selected a health career between eighteen and "over" twenty years of age.

Alabama--Forty-three per cent selected a health career between sixteen and eighteen years of age, while 33 per cent selected their career between the ages of nineteen and "over" twenty.

Factors Influencing Health Career Selections

Kentucky--The most important factors listed in order of priority were "career itself," "love of people," and "type of work."

Alabama--The most important factors in order were "interest in providing service," "work experience in health environment," and "income potential."

People Who Influenced Career Choice

Kentucky--Parents, friends, and health professionals were listed in that order as being the most influential in their career choice. Twenty per cent listed "no one" and only 2 per cent listed high-school counselors.

Alabama--Students listed parents, health professionals, and friends in that order. Twenty-five per cent listed "no one," and 13 per cent listed high-school counselors.

Source of Health Careers Information

Kentucky--Students listed the "talk with health professional," which this writer is aware. They do have some value in determining

"talk with student," and "visit employment site" in order as their primary sources of information.

Alabama--Students listed "health professionals," "visiting a hospital or other health agency," and "talking with students" in order.

Helpfulness of School Counselors

Kentucky--Fifty-five per cent of the students indicated that school counselors did not help in any way.

Alabama--Sixty-one per cent of the students indicated that counselors were not helpful.

Members of Teenage Volunteers or Health Career Clubs

Kentucky--Twenty-two per cent were members of teenage volunteers.

Alabama--Forty-three per cent were members of teenage volunteers and/or health career clubs.

Suggested Ways to Attract More Students

Kentucky--Students listed speakers in schools, summer work programs, and films in order as recommended methods for attracting young people into health careers.

Alabama--Students listed, in order, speakers in schools, summer work programs, and tours of health facilities.⁷

Although the two studies discussed above are quite general in nature, they are the only recent studies of state programs of which this writer is aware. They do have some value in determining

those factors which motivate students to enter a health career.

As a result of the medical manpower shortage and the increased concern about it, hundreds of health career programs have been established across the country. These programs vary in operation and are sponsored by states, counties, cities, hospitals, schools, auxiliary organizations, and various professional and voluntary groups.⁸

The techniques utilized in health careers programs include guided tours of health facilities, health career days sponsored by health agencies, health career clubs, teenage volunteer programs, and summer work programs. Communications used include brochures explaining health careers, films, use of mass media (television, radio, and newspapers), books and magazines, and high-school assemblies. Guidance counselors in high schools usually have little, if any, general knowledge of the possibilities in the various health careers.⁹

The review of the literature provides some examples of health careers programs below state level. State health careers programs will be discussed in Chapter III.

In 1968, the Hospital Research and Educational Trust of the New Jersey Hospital Association established a pilot program to provide a better basis for future recruitment for hospitals. The project, which was called SHOP, involved twenty-eight students in five New Jersey general hospitals. The project was designed to encourage

interest in health careers and provide an opportunity for interested young people who were on summer vacations from high school, to spend eight weeks in a hospital working in various jobs. The students were paid \$50 per week, or \$1.40 per hour to meet minimum wage requirements. All twenty-eight students remained through the program, and a majority expressed interest in one or more hospital occupations later in life. Each student was trained at various hospital tasks and rotated from department to department to expose him to all areas and job groups in the hospital. The project pointed out some important considerations for future programs. A hospital must provide the time and resources to devote to the students. Cooperation and willing involvement by already busy department heads is difficult but essential. The cost of the program was \$15,000 for expenses and the time of members of the staff who assisted in the program.¹⁰

The Coney Island Hospital in Brooklyn, New York, and a large neighborhood high school have a program which is typical of others in the nation in which hospitals and schools cooperate. The program is conducted annually and designed to introduce high-school students to the hospital. Initially, job descriptions for twenty-one careers in the hospital were written and sent to high-school counselors for distribution to students. Attached to each copy was a questionnaire asking if the student desired to visit the hospital and which career he or she wanted to learn about. The specific format for a health career day was planned around responses from the questionnaire. Hos-

hospital department chiefs each planned a presentation concerning their own specialty. The career day began with a welcome in the hospital auditorium after which students were guided into small groups for discussions of specific careers. A free picnic lunch was provided. The final event brought the students together again to provide an opportunity for them to ask questions that had arisen during the day.¹¹

In another attempt to get across the message that hospitals hire more than doctors and nurses, and that many health careers exist, Little Company of Mary Hospital in Evergreen Park, Illinois, conducts summer sessions called "teen seminars." The purpose is to expose young people to a wide variety of health careers. In the summer of 1969, six two-hour sessions were held during the summer. Each session included a tour of the hospital, an orientation to several health careers, and an opportunity to meet with the hospital staff. The use of local radio and newspaper announcements were effective in assuring good attendance at the seminars.¹²

A recent innovation in some high schools across the nation will serve to bring attention to health careers. A health assistant course is being added to the curriculum and offered to high-school students. This exposure not only allows some students to learn basic skills as health assistants or nurses' aides, but informs other students that there are occupations in hospitals other than doctors and nurses. The state of New Mexico currently has courses in twelve

high schools called health assistant programs for eleventh- and twelfth-grade students. The programs have been instituted by the Department of Education and funded under the Federal Vocation Act of 1968. More programs are planned to be initiated next year and extended down to the ninth grade later.¹³

In summary, the review of the literature revealed that much of it contained broad approaches to solving the medical manpower shortage problem and listings of very general "principles of recruiting." Few studies have been conducted to determine what motivated students to enter a health career. Those studies available revealed that students chose their career before age 20, that health professionals were a primary source of information, and that speakers in schools were effective. The trend is toward recruiting by representatives of the health care industry. As a result of the medical manpower shortage, hundreds of health careers programs have been established. These programs are sponsored by counties, cities, hospitals, schools, and auxiliary organizations, each operating independently of the others. Within the last few years statewide health careers programs have been established in several states. These programs provide a more coordinated and effective approach to recruiting efforts.

Problem-solving Methodology

Various personal interviews were held with:

1. James L. LaCombe, Executive Director, New Mexico Health Careers Program;

Hospital Association, to procure information concerning a proposed health careers program and to establish any limitations;

2. Norman H. Meyer, Chairman, Manpower and Labor Relations Committee, New Mexico Hospital Association Board of Directors, to establish the board's view concerning health careers;

3. Dr. Reginald H. Fitz, Director, Regional Medical Program, University of New Mexico, to obtain information concerning financing of a health careers program;

4. Spencer Guimarin, Director, Texas Health Careers Program, to obtain information concerning the development and operation of the Texas Health Careers Program;

5. Gerald Spraggins, Field Director, Texas Health Careers Program, to determine the present operation of the Texas Health Careers Program;

6. Jack Hubby, Liaison Officer, Data Processing, St. Joseph Hospital, Albuquerque, New Mexico, to determine the feasibility and cost of using the hospital's data processing equipment in a health careers program;

7. Flo Wyrick, President, Auxiliary to the New Mexico Hospital Association to discuss the possible ways that the Auxiliary could assist in a health careers program.

Telephone interviews were held with the following individuals:

1. James Lloyd, Associate Director, Virginia Health Careers to determine the present operation of the Virginia Health Careers Program;

2. Bill Smith, Director, Arizona Health Careers Program to determine the operation of the Arizona Health Careers Program;

3. Marian Thomas, Supervisor, Vocational Education, New Mexico State Department of Education, to obtain information about the Health Assistant Programs in public schools.

Correspondence with twelve existing State Health Career Programs concerning the mechanics of their operation resulted in information from eight of these states.

An extensive review of the literature was conducted to determine the methods utilized by health careers programs across the nation.

A careful study of eight existing state Health Careers Programs reveals that most perform the same general processes in their careers programs. However, the specific methods used to accomplish each process differ. By using a combination of those methods which are best suited to them, individual states have developed workable programs. To arrive at a program for the state of New Mexico, the following methodology will be used. Two of the state programs, which are considered as prototypes, have been selected. Each program will be discussed pointing out the specific methods used to accomplish the processes identified. From these programs and review of other literature, those methods best suited for New Mexico will be selected. Methods selected will be based upon their effectiveness and cost. An eighteen-month experimental program to create interest

in health careers among senior high-school students will be developed for the state of New Mexico.

Footnotes

¹Herman M. Strum, Technology and Manpower in The Health Service Industry 1965-75, Report of the U.S. Department of Labor, Manpower Research Bulletin Number 14 (Washington, D.C.: Government Printing Office, May, 1967), p. 84.

²Report of the Third National Conference on Public Health Training, James George, Chairman (Washington, D.C.: Government Printing Office, 1967), p. 23.

³Lenor S. Goerke, "Utilization, Recruitment, and Training of Health Manpower," American Journal of Public Health, LV (October, 1965), 1515.

⁴John B. Dillon, Summation of Task Group Reports, National Congress on Health Manpower, report to the Council on Health Manpower (Chicago: American Medical Association, October, 1970), p. 7.

⁵Report of the National Commission on Community Health Services, Health is a Community Affair, Marion B. Folsom, Chairman (Cambridge, Mass.: Harvard University Press, 1967), p. 93.

⁶Kevin P. Bunnell, Address at the Third National Conference on Health Careers sponsored by the National Health Council. Reprinted in Health Careers Exchange, October, 1962.

⁷Alabama Health Careers Council Newsletter, IV (Special Edition), January, 1971, 1-2; and Tom Connelly, Jr., "Motivation of Health Career Students in Kentucky--1969," Health Careers in Kentucky, Louisville, March 1, 1970, pp. 1-15. (Mineographed.)

⁸C. Y. Hardy and M. A. C. Young, "Youth Toward Health Careers--An Evaluation Study," Public Health Reports, LXXXII (February, 1967), 99.

⁹Report of the Task Force on Health Manpower, National Commission on Community Health Service, Lenor S. Goerke, Chairman (Washington, D.C.: Public Affairs Press, 1967), p. 107.

¹⁰Phillip W. Morgan, "New Jersey Students Explore Hospital Career Opportunities," Hospitals, XLII (December, 1968), 42, 44-45.

¹¹E. Rodman and E. S. Vandow, "Hospital and High School Collaborate in Health Careers Program," Hospitals, XXXIX (May, 1965), 48-50.

¹²Teen Seminars Explore Health Careers: "Little Company of Mary Hospital, Evergreen Park, Illinois," Volunteer Leader, X (March, 1969), 13-14.

¹³Marian Thompson, Supervisor, Vocational Education, New Mexico State Department of Education, Albuquerque, telephone interview, March 22, 1971.

General Information

No coordinated health careers program presently exists in the state of New Mexico. The recruiting for health careers that does occur is performed by individual professional or allied health schools. These attempts yield little results and are not adequate to meet the demand for trained personnel in the health services industry. More writers are beginning to point out that recruitment activities can reach their full potential and reap the fullest return only if recruitment for the health careers is coordinated and conducted on a statewide basis.¹

During the late 1950's and 1960's a possible long-range solution to the medical manpower shortage appeared on the scene. State hospital associations began launching health career programs on a statewide basis. In several states today a new member of the health team is present. His job is to conduct a coordinated program which will interest young people in earning their livelihoods in health occupations. This director of Health Career Programs is

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CHAPTER III

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DISCUSSION

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filling the void in actual contact and communication between the health care industry and the student.²

In order that the operation and experience of these state-wide programs could be applied to New Mexico, eight existing state Health Careers Programs were studied. These include Alabama, Arizona, Kentucky, North Carolina, South Carolina, Tennessee, Texas, and Virginia. In analyzing these programs, five basic processes were identified through which the programs were administered. These processes are described below:

1. Introduce the program--Communications are established with professional and allied health groups, to include medical professional organizations, hospitals, medical and allied health schools, high schools, auxiliaries, and physicians in private practice. The cooperation of these organizations is essential for an effective program. They must be introduced to the program and understand how it will function, how it will be financed, and how the results of the program will benefit them.

2. Create student awareness--Students and their parents must be made aware of the many health careers available to them. They must be convinced that hospitals do employ personnel other than doctors and nurses. An interest must be created, a seed planted. Essentially they must be sold on the idea that a career in a health field is possible for them. They will then include a health career among

other careers considered when determining their future.

3. Inform and motivate the student--Information about health careers is made accessible to the students. This information must be designed to communicate with the young person and specifically inform him of the various health occupations available. In addition, he must be informed how to obtain further information about areas in which he is specifically interested. This is a very important process. It must be simple and inexpensive for a student to obtain information if he becomes the least bit interested.

4. Identify interested students--To obtain the maximum benefit from the processes described above, those students who become interested in specific health careers must be identified.

5. Maintain student interest--The interest created among students must be maintained. Once the student is identified, contact must continue until he or she enters a training facility.

The state Health Career Programs of Texas and Virginia, will be discussed below followed by a proposed program for the state of New Mexico. The discussion will explain how each of these programs perform the processes identified.

Texas Health Careers Program

The Texas Health Careers Program was established in June, 1964, in an attempt to overcome medical manpower shortages in the state. The program, which was a project of the Texas Educational and Research Foundation, is governed by a committee of the Board of

Trustees, Texas Hospital Association, and Texas Educational and Research Foundation. The present staff consists of fourteen members and the program operates on an annual budget of \$250,000.³

The Texas program was centralized with most of the activities planned and carried out by the staff at the state level. The program operated around a "manpower pool concept." The idea was to create interest in health careers among a great number of people in the state. This would enable allied health education programs in the state to have access to a large "pool" of interested prospective students. To create this interest, a promotional campaign was built around the theme "200 Great Futures for You." The campaign was conducted through a multimedia approach much like an advertising campaign. The program did not utilize the high-school counselor in its operation although copies of the Health Careers Guidebook (U.S. Department of Labor) were sent to public high-school counselors for use in guidance activities with students. Texas believed that counselors were already overburdened and could not have accepted the greater load of administering a health careers program.⁴

The organizers of the Texas program realized that without the support of professional organizations, government, civic clubs, schools, colleges, and universities, its program would not be effective. To introduce the program and gain support, several innovations were utilized. The program was initially proposed to a representative group of hospital administrators in June, 1964. In September, 1964, a

special meeting of the Texas Hospital Association House of Delegates was called to further explain and implement the program. In December, 1965, "project awareness" was initiated to obtain public support. A group of trained lay speakers was utilized to speak at public, civic, and educational functions to explain the program to the public. In addition, a body of professionals called the "Texas Health Careers Advisory Panel" was organized. Forty-five agencies and organizations formed the original group and their cooperation was assured through participation. A health careers newsletter was also initiated to keep interested personnel informed on a continuing basis.⁵

A great deal of emphasis was placed upon its "student awareness campaign" by Texas. Through a multimedia approach, students were awakened to the fact that many health careers were available in the state. Television and radio spot announcements were created and aired on public service time by broadcasting stations across the state. Statewide billboard campaigns were conducted periodically. Posters were designed by the health careers program staff, and public service space was furnished by advertising companies. Small wall posters were produced and displayed throughout the state in areas where the public gathered. Auto bumper stickers and decals were distributed as a constant reminder to prospective health careers students. Booklets such as class assignment books and health careers coloring books were distributed. Films, filmstrips, and slide shows were produced for use by health professionals in schools, banquets, and workshops.⁶

To inform and motivate students, Texas utilized several methods which took the program to the students. Texas believed that its program should concentrate on the public-school "market" in face-to-face orientations for high-school students. Early in the program, health career days were organized by the program staff and conducted in high schools. These events entailed bussing students from small schools to a large school for a day of entertainment and counseling sessions by health professionals. The events were considered to be effective and relatively inexpensive; however, they required much time to set up and a great many resources (displays, speakers, etc.). During the 1968-69 academic year, health careers caravan performances were held in seven large metropolitan high schools for 10,550 students. The caravan consisted of a musical review using paramedical students as actors to spread the health careers message. The caravan performances were considered to be very effective, but at a great cost in dollars. The high-school assembly programs proved to be the most effective and economical method in the Texas program and are used almost exclusively today. The assembly programs are presented by the director, field director, and regional directors of the Health Careers Program in high schools all over the state. The programs are presented only if the entire student body, not just health clubs, attend. The assembly is aimed at those students who are not already motivated to enter a health career. In addition to regular assemblies, special recruitment assemblies by ethnic presenters are

held in predominately Negro and Mexican-American schools. Two types of assembly programs are conducted. They are:

1. Assembly I--Makes extensive use of visual aids to provide students with a general orientation to health careers and is designed to motivate students.

2. Assembly II--Is presented to schools of more than 300 students and includes musical entertainment in addition to the orientation and motivational program.

Texas believes that the assembly program effectively accomplishes the task of informing and motivating the student in the most economical manner.⁷

In order to identify those students who are interested in a health career, Texas utilizes a leaflet which explains health careers. Included is a prepaid return card which lists more than twenty-five health occupations. The leaflets are distributed at assemblies and through display placards located in hospitals, doctors' offices, school counselors' offices, and other locations. The student checks one or more occupations in which he is interested, prints his name, address, phone number, school, age, and sex; he mails the card to the Texas Health Careers Program Office. The cards are computerized in the Texas Hospital Association computer which sorts the cards into health occupation groups and prints mailing labels for each student. The student is promptly sent brochures which provide concise, up-to-date information about the health career of his choice along with

instructions about how to obtain further information. Texas has experienced approximately a 10 per cent return of cards.⁸

To maintain the interest in health careers which has been created, Texas prepares a "manpower pool" prospect list which contains the name, address, phone number, and occupational interest of each student who requested information. This list is published monthly and sent to all interested professional and allied health educational programs in the state. The students receive more communications from the schools. This retains and increases the interest which has been created. This list provides an excellent tool for recruiting by the schools.⁹

The Texas Health Careers Program does not have an evaluation system which can accurately measure the number of students that have been motivated to enter a health career by their efforts. However, some statistics would indicate that the program is effective. The per cent increase in enrollment at professional and allied health schools is available. During the period November 1, 1968, to October 31, 1969, the enrollment in those schools increased as reflected below:

- 1.--Forty-seven per cent increase in all paramedical schools.
- 2.--One hundred twenty-nine per cent increase in male nursing.
3. Forty-seven per cent increase in all nursing schools.
4. Fifty per cent increase in vocational nursing schools.

Realizing that many variables are present when considering what motivates people to enter health careers, the increase in enrollment can

logically be accepted as an indication that the Texas program is partially, if not wholly, responsible for the increase.¹⁰

Virginia Health Careers Program

The Virginia Council on Health and Medical Care was organized in 1946 as a private, voluntary association of thirty-seven health and related organizations to meet Virginia's health needs. In 1958, the Council organized a Health Careers Program designed to interest young people in choosing a health field as their life's work. The Council depends upon voluntary contributions from individuals, industrial concerns, banks, professional societies, hospitals, foundations, and trust funds for its financial support. The present staff of the Health Careers Program consists of five persons. The current annual budget is approximately \$70,000. The financial support is about equally split between the State Hospital Association and the Virginia Council.¹¹

The Virginia Health Careers Program organizers believed that the essential ingredients for a successful program were involvement at the local level in continuous, active programs. Their program, called "Partners in Health Careers" was community based and locally directed. Regional and local health careers committees were made up of representatives from medical professional groups, other health-related organizations, and civic groups. Each committee had ten to fifteen members, usually met monthly, and developed its own program with guidance and assistance from the state Health Careers Program. Directing the activities of each committee was a hospital liaison officer

from one of the local hospitals. The state Health Careers staff provided suggested projects and guidelines, but encouraged local committees to be imaginative and to try new approaches.¹²

Several methods were employed to introduce the program and gain support. The key to insuring support in the Virginia program was the participation and actual operation of the program at the local level as described above. The Council enlisted active cooperation from twenty of the major health professions representing hospital-based careers and many other health-related groups. A health careers seminar was held in 1970 and was attended by more than seventy persons who work in the promotion of careers in health. Health careers conferences are conducted in cooperation with the State Hospital Association. These events provide an opportunity for members to learn from the successful experiences of others. One health career staff member has been given the specific responsibility of working with representatives of the health industry to promote a closer working relationship and maintain its cooperation which is considered to be essential for the success of the health careers program.¹³

To make students aware of health careers, Virginia, like most other states, used a multimedia approach. Brochures, posters, radio, and television were employed. A twenty-nine minute health career film for television was produced in cooperation with Central Virginia Educational Television and the Virginia Hospital Association. The program entitled "Seven Minutes Past Ten" was planned to reach

100,000 students during Hospital Week in May, 1971. The state Council provided high-school newspapers with a regular health careers column. Regional and local health careers committees utilized a variety of methods to make students aware of health careers. Examples were health careers exhibits at various youth meetings, guidance counselor's workshops, health careers fairs, hospital tours, and health careers essay and poster contests. To assist the regional and local committees conduct their awareness and motivation campaign, the Virginia State Health Careers Program has produced and distributed the following materials to each committee: (1) a health careers speech; (2) a career day conference guide; (3) a one-act health careers play; (4) a television program; (5) a model explorer scout program; (6) a health careers guidebook; (7) a health careers week kit; and (8) a guide on publicity and the news media.¹⁴

To inform students about health careers available and to answer their questions, Virginia also uses the high-school assembly program. Two motivational slide-sound programs entitled "A Time for Every Season," and "Life" have been developed by the state Council. The shows discuss over forty-five health careers and are designed to communicate with young people. The assemblies are presented across the state by members of the state Health Careers Program staff. The hospital liaison officer on each local committee maintains a health careers information file and answers questions concerning health careers in the community. A guidance counselor's reference manual is distributed. This manual describes fifty health careers and contains

an explanation of the occupation, training prerequisites, location of schools, cost of training, possible employment opportunities, estimated salaries, and address where additional information may be obtained for each health career.¹⁵

Virginia uses the same method as Texas to identify those students who are motivated to enter a health career. A leaflet which describes health careers is distributed to students at assembly programs. The leaflet is also available at the health careers exhibits, fairs, and other functions described above. The leaflet contains a tear-off card with prepaid postage. The student checks his areas of interest from forty-five health careers listed on the card and mails it to the state Council. A local hospital now computerizes the cards for the Council and provides a list of names, addresses, ages, and career preferences of the students. Each student receives specific information about those careers for which he expressed interest. The Council has found that the computerization has effected a great savings in cost as well as an increase in efficiency. Virginia has experienced a 20 per cent return of tear-off cards from the leaflets distributed.¹⁶

In order that the interest created may be maintained, Virginia utilizes some methods in addition to those in the Texas program. Lists of prospective students are provided health educational programs in the state. The schools make further contact with the student as explained in the Texas program. To maintain interest among those students

who are not yet near graduation and that time when they must make a career decision, Virginia employs three methods: Health career clubs are chartered by the Virginia Council; regional and local committees also sponsor teen-age voluntary activities in hospitals; and work experiences are organized for teenagers.¹⁷

Proposed Experimental Health
Careers Program Plan

A four-phase plan including all the processes identified in health careers programs is presented. Methods selected to accomplish each phase are based upon an analysis of the studies available, existing state health careers programs studied, and the review of literature. A budget for the cost of the proposed plan is outlined below. These costs are explained in more detail as each phase of the plan is developed.

Budget for Experimental Health Careers Plan

Materials	\$ 6,824
Rent	1,200
Postage	1,600
Director's Salary	9,000
Travel Expense	1,300
Computer	<u>2,000</u>
Total	\$21,924

Prior to the initiation of this plan, a director of the Health Careers Program should be selected. To insure an effective program, it

is essential that an individual whose primary responsibility is health careers, be added to the staff of the State Hospital Association.

This function was not performed as an additional duty in any of the state programs studied. This individual will be responsible for coordination and control of the statewide program. He will develop projects, materials, and guidelines for others in the state who are involved in recruiting for health careers. Additionally, he will take the health careers program to the young people in the state; \$9,000 has been budgeted for this position. According to the executive director of the State Hospital Association, secretarial and administrative support can be provided by the existing staff of the association.

Additional office space and an area to store materials will be required by the Hospital Association. The executive director of the State Hospital Association states that adjacent office space is available at a cost of \$1,200 for the eighteen-month period. This amount has been budgeted for that purpose.

Phase 1 Preparation and Introduction (month 1 through month 3)

Obtain required materials.--Materials to begin the program should be ordered, received, stored, and prepared for distribution. An estimate of materials required, and the cost for each, is listed below. The number of information brochures is based upon the population of students in all senior-high schools in the state, most economic order quantity, and an allowance for parents and other

Billboard Posters	50	\$500.00
Wall Posters	500	\$500.00

interested personnel who might pick up a brochure. The number of reply brochures is based upon the 10 to 15 per cent request for them which other state programs have experienced. The number of other promotional materials recommended is based upon obtaining the widest possible exposure within financial limitations. The Texas Health Careers Program has agreed to sell the materials listed to New Mexico at the cost charged by the printer.¹⁸ This arrangement will spare New Mexico the time and expense required to design and develop the materials themselves. The materials are all appropriate for New Mexico with a slight modification by the printer and have successfully been utilized by other states. The printed materials are available from Lacy, Skloss, and Plueckhahan, Inc., 605 San Antonio Street, Austin, Texas, through the Texas Health Careers Program. The prices for the printed material were obtained from the printer listed above.¹⁹ Television and radio tapes are available for purchase directly from the Texas Health Careers Program at the prices listed.²⁰

Required Materials

Item	Number	Cost
Placards (counter or wall)	200	\$ 257.00
Information Brochures	100,000	3,016.00
Reply Envelopes	10,000	376.00
Reply Brochures	10,000	750.00
Billboard Posters	50	500.00
Wall Posters	500	602.00

Item	Number	Cost
Auto Bumper Stickers	3,000	363.00
Television Tapes (with lead in)	5	810.00
Radio Tapes	50	<u>150.00</u>
Total		\$6,824.00

Program Computer.--Arrangements may be made with Jack Hubby, Liaison Officer, Data Processing, St. Joseph Hospital, Albuquerque, New Mexico, to write a program for computerization of the health careers program. Hubby has agreed to this arrangement. He estimates that the cost for programing will be \$500. He further estimates \$125 per month as the cost to operate the program with a seventy-two-hour response time. This includes the cost of cards, card punching, and computer time. The total cost of programing and the twelve-month operational phase of this plan will be \$2,000.²¹

Introduce the program.--To introduce the health careers program and gain essential support, several methods should be employed. The program should be presented to various professional medical groups personally by the program director. He should request time at annual state conventions of these organizations for this purpose and personal appearances before the governing body of each organization are essential. The organizations should be encouraged to explain the program to civic organizations in their communities. Letters should be dispatched to hospital administrators, heads of

professional organizations, professional and allied health educational faculties, auxiliaries, and senior high-school principles explaining the program and requesting an endorsement of their support. In addition, a monthly health careers newsletter should be forwarded to the organizations explaining the progress of the program to maintain their cooperation. A great deal of emphasis must be placed upon this campaign to gain their support. The personal presentations and letters should emphasize the current shortage of medical personnel in New Mexico and the financial savings which hospitals can gain from a successful health careers program. A survey by the Arizona Health Careers Program showed that their hospitals were spending approximately \$500 to educate each employee that they hired. A health careers program for the young people of the state, conducted by the medical profession, would do a great deal to improve the image of the health service industry in the eyes of the public.

After the program has been introduced, District Health Careers Committees should be organized in each of the state's six planning and development districts (Appendix B). Their purpose should be to organize and coordinate health careers recruiting activities in their district and they should be composed of representatives from the Hospital Association, professional medical organizations, auxiliaries, and civic organizations. Each of these organizations should be formally requested to appoint a member to these committees. Appointed members should be empowered by their organization.

to call upon its members in various parts of the district to assist with recruiting functions when required. The committees should meet monthly and the chairman should be a representative of the State Hospital Association. The specific organizations that should be a part of each committee will not be suggested here because they will vary in each district where some organizations will be present and more active than others. As the program progresses, health careers seminars should be conducted at district and state levels to allow members to share experiences and learn from successful projects conducted.

Phase 2 Student Awareness Activities (month 3 through month 6)

Committee A campaign should be initiated to make students, parents, and the public in general aware that health careers are available for young people. A multimedia approach should be undertaken utilizing television and radio spot-announcement tapes distributed to state broadcasting stations to be aired on public service time. The tapes should be accompanied by a letter explaining the health careers program and the shortage of medical personnel in the state. State broadcasting stations will provide public service time for this purpose.²² Approximately \$960 has been budgeted for purchase of tapes. In addition, billboard posters should be distributed to the major advertising companies in the state along with the cover letter described above. Advertising companies will provide public service billboard space for this purpose as it becomes available.²³ The use of

television and radio tapes and billboards can be increased by encouraging hospital administrators and other members of the medical profession to ask local broadcasters and advertisers to support the program and use the materials provided. At the same time, wall posters and auto bumper stickers should be distributed by District Committees and a weekly or monthly health careers column for high-school newspapers should be developed by the state Health Careers director and distributed to all schools. Health careers booths at youth meetings, hospital tours, and health career days at high schools should be organized in areas where large student populations exist. These events should be planned and initiated by the District Committees and carried out by representatives of the medical professions in each location. A health careers day plan should be developed by the state director and distributed to District Committees for their use. As the health careers program begins, an intensive public relations campaign should be carried out at all levels--state, district, and hospital--to take advantage of this "new program." This attempt by the medical profession to assist the young people of the state should have good appeal to the news media. Phase 2 activities should continue throughout the entire experimental program.

Phase 3 Operational Program (month 6 through month 18)

Inform and motivate students.--The program should be taken to senior high-school students through face-to-face meetings at high-school assembly programs presented by the state Health Careers director.

The Texas Health Careers Program has agreed to release a member of its staff to conduct a limited number of assemblies in New Mexico for the cost of expenses only.²⁴ The assemblies by Texas representatives should be conducted early in the program to acquaint the director of the New Mexico program with the techniques used. Local medical employees (nurses, laboratory technicians, and medical record librarians) in uniform should accompany the state director to high schools in their area when assemblies are presented. Coordinating and scheduling the use of local medical employees should be the responsibility of the District Committees. Appearance at assemblies by medical employees should be on a voluntary basis with hospital administrators providing employees time off for this function. Assemblies should be presented only if schools agree to allow all senior high-school students to attend. Approximately \$1,300 has been budgeted for travel of the state director and expenses of the Texas Health Careers program representative.

Finally, a health careers counselor should be established in each hospital. In most states, there is no one knowledgeable individual in a community to which young people may go and discuss health careers. This position should be established and made known across the state. This counselor should be knowledgeable about all health careers and receive all current information from the state director. A counselor's manual should be developed by the state director. The New Mexico Hospital Association Auxiliary is considering accepting the

responsibility for this position in the twenty-nine hospitals where they currently have active auxiliaries.²⁵

Identify interested students.--The information brochure should contain a postage paid, mail-back card which lists various health careers. The interested student will check the career in which he or she is interested, fill in name, age, address, telephone number, and school, then mail the card to the New Mexico Health Careers Program. Cards should be computerized by the Data Processing Department, St. Joseph Hospital, as explained earlier. The computer will print name and address labels, and a list of students' names, addresses, telephone numbers, and ages, along with that career in which they expressed interest. Reply brochures concerning that particular career should be mailed to the student by the existing staff of the State Hospital Association. A total of \$1,600 has been budgeted for postage expense which is based upon eight cents each for the return of an estimated 10,000 mail-back cards and 10,000 reply brochures mailed. The information brochures should be distributed at high-school assemblies, during hospital tours, at health career days; and with display placards placed in hospitals, doctors' offices, and high-school counselors' offices.

Maintain student interest.--The list of prospective health career students produced by the computer should be given widest dissemination to professional and allied health educational organizations in the state. A current list of those organizations is maintained by the

Health Occupations Division of Vocational Education, State Department of Education, Santa Fe, New Mexico. The schools should be encouraged to make further contact with the interested students and utilize the prospect list for recruiting. The following actions should be taken to maintain the interest of those students who are not near graduation from high school. First, Health Career Clubs should be encouraged in high schools and be chartered by the state Health Careers Program. A guide for organizing such a club should be prepared by the state director and distributed to high schools. Second, District Committees should organize teen-age volunteer activities and summer work programs in hospitals in their districts with auxiliary organizations sponsoring such activities.

Phase 4 Evaluation

Two methods should be employed to measure the success of the experimental careers program. All professional and allied health educational organizations in the state should be surveyed to determine the per cent increase in enrollment over the past year. This survey should be conducted after the next fall enrollment date following completion of the program and the enrollment should be compared to that of past years. This method will provide a relatively quick indication of the effectiveness of the program. However, when analyzing the data, two things must be considered. The data will include all personnel entering a health career regardless of their age or what may have motivated them. Additionally, the data will not include those students who may have entered an out-of-state school.

To measure the number of personnel who were motivated by the health careers program and include both in and out-of-state schools, the survey must be of the students themselves. All graduated seniors who requested information from the New Mexico Hospital Association should be surveyed six months after graduation from high schools. The purpose of the survey should simply be to determine if they have entered a health educational organization or are working in a health facility. Attempts to survey students by other health career programs were designed to measure several things such as what specifically motivated them. As a result, the response to most of these surveys was not good. A simple questionnaire which requires only a moment to check "yes" or "no" should receive a better response. This survey will measure the number of students who entered a health career after receiving information from the New Mexico Health Careers Program. The survey will be simple to administer through use of the computer. That group of students described above can be selected and name and address labels printed by the computer.²⁶ The results of this survey will not provide immediate feedback upon completion of the experimental program but should more accurately measure the direct results of the program.

The results of both evaluation methods described above should be viewed with caution and not be assumed to reflect the full effects of the health careers program. Some graduating students may have been effectively motivated to enter a health career but may not elect to do so until one, two, or more years later. Second, and most

important, most students who will be motivated to enter a health career will be below the twelfth grade because the majority of the students are in that group. Some of these students may enter a health career three or four years later. Therefore, the full effect of a health careers program cannot be accurately measured until it has been in existence for at least three years.

Summary

The three health careers programs discussed above vary in the methods used, however, each satisfies the basic requirements for a health careers program. The programs also vary in organization and cost.

The Texas program is highly centralized in planning and operation. The program staff relies very little upon voluntary assistance and operates on an annual budget of \$250,000.

The Virginia program is decentralized somewhat and uses regional and local health careers committees on a voluntary basis. This allows the program to operate on an annual budget of approximately \$70,000.

The New Mexico Health Careers Program must be limited to a total budget of not more than \$22,000. This limitation will not allow the use of either of the programs described above simply because they cost too much. This cost limitation will require a more decentralized program with greater reliance on voluntary assistance. Additionally

those methods best suited for New Mexico must be selected based upon their effectiveness and cost.

The Proposed Experimental Health Careers Program Plan which was presented above is a combination of those methods which are best suited to provide a workable program for New Mexico. The operation of the program is decentralized and will cost less than \$22,000. The program will effectively inform senior high school students about health careers and provide a simple means for them to obtain additional information. Those students who become interested in a health career will be identified and the educational organizations in the state will be involved in encouraging them to enter a training facility. The proposed plan will provide a method to measure the success or failure of the program.

Footnotes

¹Report of the Task Force on Health Manpower, National Commission on Community Health Service, Lenor S. Goerke, Chairman (Washington, D.C.: Public Affairs Press, 1967), p. 109.

²F. Magoffin, "Health Careers Program Opens New Vistas in Employment Fields," Southern Hospital, XXXIII (July, 1965), 12.

³Spencer Guimarin, Director, Texas Health Careers Program, Austin, Texas, interview, February 8, 1971.

⁴Spencer Guimarin, "The First Five Years," Texas Hospitals, XXVI (August, 1970), 13; Texas Hospital Association, Texas Health Careers Program, A Synopsis (Austin, Texas: Texas Hospital Association, n.d.), p. 25. (Mimeographed.)

⁵Guimarin, "The First Five Years," p. 15; B. Jobes, "Texas Health Careers Program Since 1964," Texas Hospitals, XXVI (August, 1970), 23; T. H. Morrison, Jr., "Development of the Texas Health Careers Program: 1964-65," Texas Hospitals, XXVI (August, 1970), 10.

⁶Texas Hospital Association, pp. 5-7, 11.

⁷Jobes, pp. 24-25; and Gerald Spraggins, Field Director, Texas Health Careers Program, Austin, Texas, interview, February 8, 1971.

⁸Texas Hospital Association, pp. 3-4; and Guimarin interview.

⁹Texas Hospital Association, p. 4.

¹⁰Texas Health Careers Program, Annual Report 1968-69 (Austin, Texas: Texas Hospital Association, 1969), p. 1.

¹¹Virginia Council on Health and Medical Care, Facts about the Virginia Council on Health and Medical Care (Richmond: Virginia Council on Health and Medical Care, n.d.); and a telephone interview with James Lloyd, Associate Director, Virginia Health Careers, Richmond, Virginia, March 25, 1971.

¹²"Partners in Health Careers--Virginia's Action Program," Cross-Reference on Careers, III (August, 1968), 1.

¹³Virginia Council on Health and Medical Care, 1970 Annual Report (Richmond: Virginia Council on Health and Medical Care, 1970), p. 3; Virginia Council on Health and Medical Care, Facts About the Virginia Council on Health and Medical Care, p. 3.

¹⁴"Partners in Health Careers," p. 2; Virginia Council on Health and Medical Care, 1970 Annual Report, p. 2; Virginia Council on Health and Medical Care, Facts About the Virginia Council on Health and Medical Care, pp. 3-4.

¹⁵"Partners in Health Careers," p. 1; Virginia Council on Health and Medical Care, 1970 Annual Report, p. 1.

¹⁶Virginia Council on Health and Medical Care, 1970 Annual Report, p. 2.

¹⁷"Partners in Health Careers," p. 1.

¹⁸Guimarin interview.

¹⁹Letter from William M. Lacy, President, Lacy, Skloss, and Plueckhahn, Inc., Austin, Texas, March 25, 1971.

²⁰B. Jobes, Assistant Director, Texas Health Careers Program, Austin, Texas, telephone interview, March 25, 1971.

²¹Jack Hubby, Liaison Officer, Data Processing, St. Joseph Hospital, Albuquerque, New Mexico, Interview, March 17, 1971.

²²Russell E. Cresto, Public Affairs Director, KGGM Radio and Television, Albuquerque, New Mexico, telephone interview, February 18, 1971.

CONCLUSION

²³Frank Keller, Sales Manager, Albuquerque Division of Markem Advertising Company, telephone interview, March 19, 1971.

²⁴Guimarin interview.

²⁵Flo Wyrick, President Auxiliary to the New Mexico Hospital Association, Albuquerque, New Mexico, March 17, 1971.

²⁶Hubby interview.

Recommendations

As a result of this study, it is recommended that the following actions be taken:

1. Recommend that the proposed plan for an eighteen-month experimental health careers program described in Chapter III be implemented.

2. Recommend that a study be conducted to determine the number and types of professional and allied health educational programs necessary to support the population of New Mexico.

3. Recommend that a study concerning the various ways a student may finance his professional or allied health education in New Mexico be conducted.

4. Recommend that a study be conducted to determine a feasible means of financing the health careers program in New Mexico.

CHAPTER IV

CONCLUSION

A combination of a centralized and decentralized health careers program is best for the state of New Mexico. Centralization of certain functions at the state level will insure proper coordination and control of recruiting activities. Decentralization of other functions will reduce the cost of the program. The program should be operated by the New Mexico Hospital Association.

Recommendations

As a result of this study, it is recommended that the following actions be taken:

1. Recommend that the proposed plan for an eighteen-month experimental health careers program described in Chapter III be implemented.
2. Recommend that a study be conducted to determine the number and types of professional and allied health educational programs necessary to support the population of New Mexico.
3. Recommend that a study concerning the various ways a student may finance his professional or allied health education in New Mexico be conducted.

4. Recommend that a study be conducted to determine a feasible means of financing an "on going" health careers program in New Mexico.

APPENDIX A

SENIOR HIGH-SCHOOL STUDENT

POPULATION CENTERS



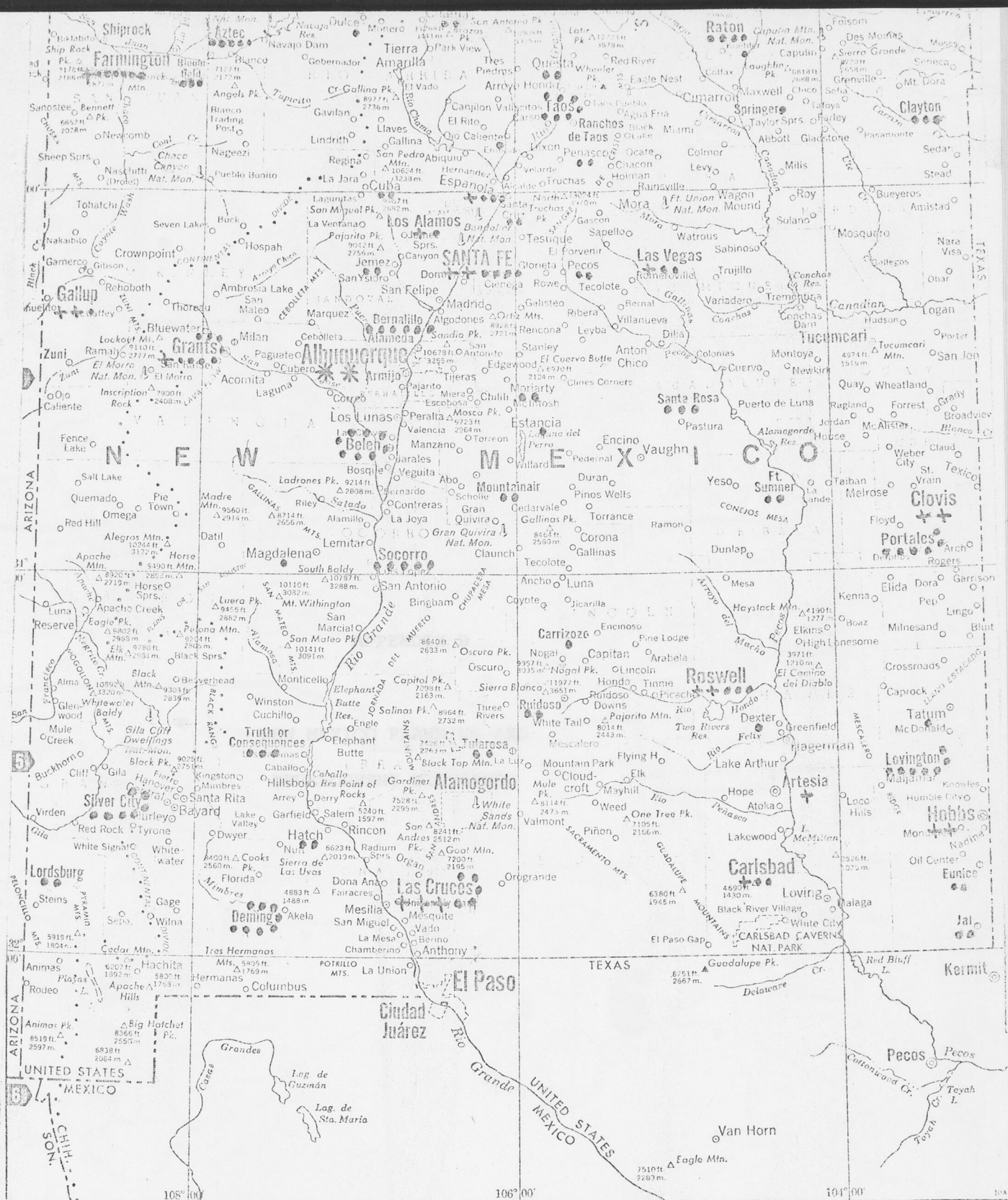
APPENDIX A

SENIOR HIGH-SCHOOL STUDENT
POPULATION CENTERS

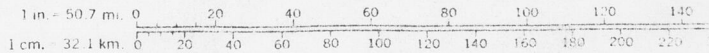
1/3,210,000

- approximately 100 senior high school students
- + approximately 1,000 senior high school students
- * approximately 10,000 senior high school students

Source: New Mexico State Department of Education, Santa Fe, New Mexico.



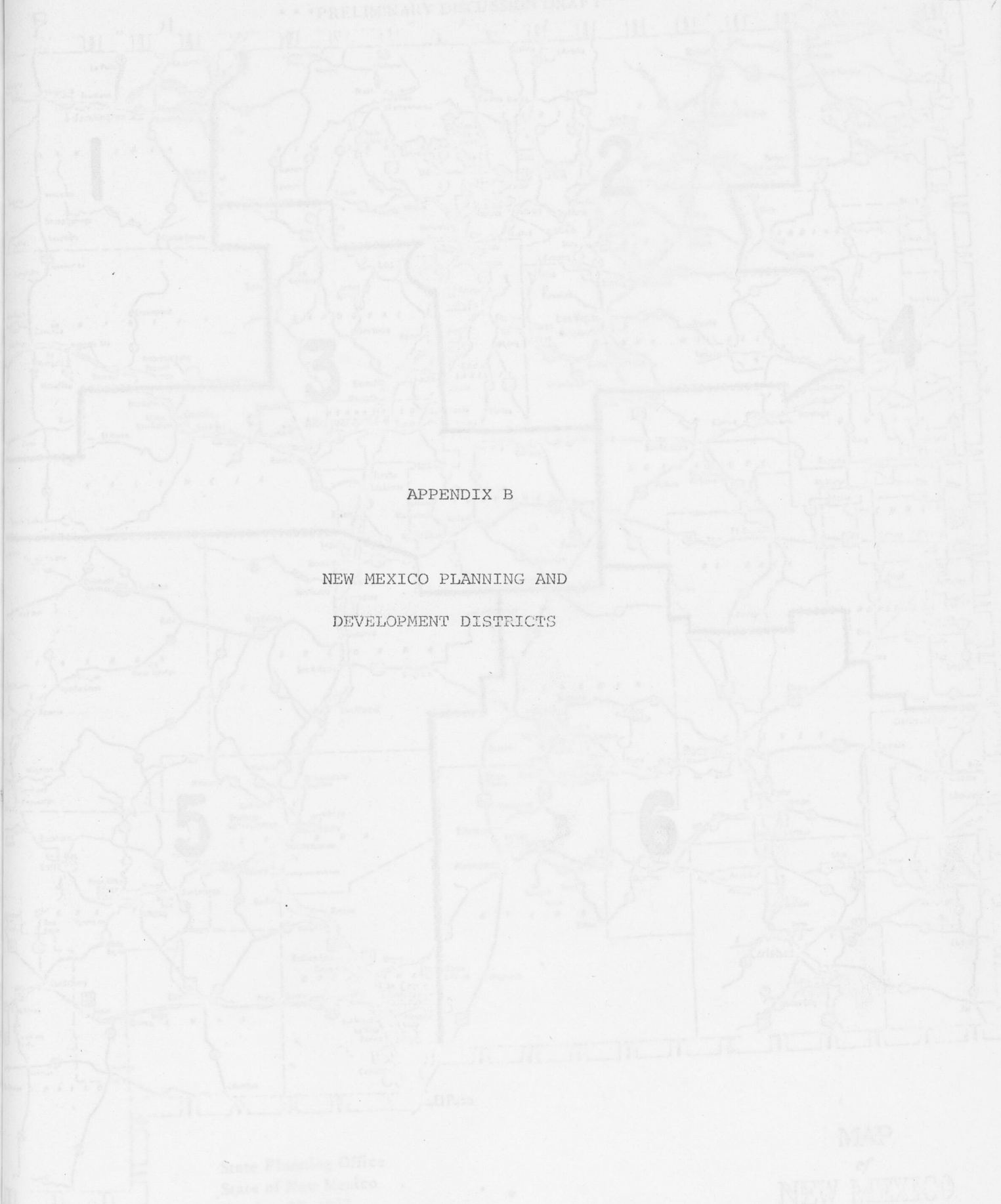
1/3,210,000



- . approximately 100 senior high school students
- + approximately 1,000 senior high school students
- * approximately 10,000 senior high school students

Source: New Mexico State Department of Education, Santa Fe, New Mexico.

... PRELIMINARY DISCUSSION DRAFT ...



APPENDIX B

NEW MEXICO PLANNING AND
DEVELOPMENT DISTRICTS

State Planning Office
State of New Mexico
October 15, 1957

MAP
of
NEW MEXICO

DISTRICTING NEW MEXICO for
 PLANNING, DEVELOPMENT AND STATE AGENCY ADMINISTRATIVE PURPOSES

PRELIMINARY DISCUSSION DRAFT



State Planning Office
 State of New Mexico
 October 30, 1967

MAP
 of
 NEW MEXICO

Source: New Mexico State Planning Office, Santa Fe,
 New Mexico.

BIBLIOGRAPHY

Government Publications

Report of the National Advisory Commission on Health Manpower, Volume I and II. J. Irwin Miller, Chairman. Washington, D.C.: Government Printing Office, 1967.

Report of the Task Force in Health Manpower, National Commission on Community Health Services. Lenox S. Sparks, Chairman. Washington, D.C.: Public Affairs Press, 1967.

Report of the Third National Conference on Public Health Training. James George, Chairman. Washington, D.C.: Government Printing Office, 1967.

Struss, Herman H. Technology and Manpower in the Health Service Industry 1965-75. Report of the U.S. Department of Labor, Manpower Research Bulletin number 14. Washington, D.C.: Government Printing Office, May, 1967.

U.S. Department of Health, Education and Welfare. Health Manpower, United States, 1968. Washington, D.C.: Government Printing Office, 1968.

U.S. Department of Labor. Health Careers Guidebook. Washington, D.C.: Government Printing Office, 1965.

Books

Bureau of the Census, U.S. Department of Commerce. The American Almanac. New York: Crowell and Dunlap, 1971.

Ginsberg, Eli; Ginsburg, Sol W.; Anshel, Sidney; and Herma, John L. Occupational Choice. New York: Columbia University Press, 1951.

Greenfield, Harry I. Allied Health Manpower: Trends and Prospects. New York: Columbia University Press, 1968.

BIBLIOGRAPHY

Government Publications

Report of the National Advisory Commission on Health Manpower, Volume I and II. J. Irwin Miller, Chairman. Washington, D.C.: Government Printing Office, 1967.

Report of the Task Force in Health Manpower, National Commission on Community Health Services. Lenor S. Goerke, Chairman. Washington, D.C.: Public Affairs Press, 1967.

Report of the Third National Conference on Public Health Training. James George, Chairman. Washington, D.C.: Government Printing Office, 1967.

Strum, Herman M. Technology and Manpower in the Health Service Industry 1965-75. Report of the U.S. Department of Labor, Manpower Research Bulletin Number 14. Washington, D.C.: Government Printing Office, May, 1967.

U.S. Department of Health, Education, and Welfare. Health Manpower, United States, 1965-67. Washington, D.C.: Government Printing Office, 1968.

U.S. Department of Labor. Health Careers Guidebook. Washington, D.C.: Government Printing Office, 1965.

Books

Bureau of the Census, U.S. Department of Commerce. The American Almanac. New York: Grosset and Dunlap, 1971.

Ginzberg, Eli; Ginzburg, Sol W.; Axelrod, Sidney; and Herma, John L. Occupational Choice. New York: Columbia University Press, 1951.

Greenfield, Harry I. Allied Health Manpower: Trends and Prospects. New York: Columbia University Press, 1969.

Periodicals

- Blackman, R. B. "Teens Find Volunteer Work an Effective Means of Career Exploration." Volunteer Leader, XI (September, 1970), 1-5.
- "Broader Approach Urged in Health Careers Efforts." Hospitals, XLIII (October, 1969), 27.
- Bunnell, Kevin P. Address at the Third National Conference on Health Careers sponsored by the National Health Council. Reprinted in Health Careers Exchange, October, 1962.
- "Careers Without College: Plenty of Good Ones." U.S. News & World Report, LIX (November, 1965), 68-70.
- Coombs, Robert H.; Robertson, Robert; Stein, Louis; and Toole, James F. "Attracting Young People into Careers in the Health Professions." Journal of Medical Education, XLV (June, 1970), 415-20.
- Edgel, Ralph L. "Projections of the Population of New Mexico and Its Counties to the Year 2000." University of New Mexico Bureau of Business Research. Albuquerque: University of New Mexico, August, 1965.
- Goerke, Lenor S. "Utilization, Recruitment, and Training of Health Manpower." American Journal of Public Health, LV (October, 1965), 1511-20.
- Guimarin, Spencer. "The First Five Years." Texas Hospitals, XXVI (August, 1970), 12-13, 15, 43.
- Hardy, C. W., and Young, M. A. C. "Youth Toward Health Careers--On Evaluation Study." Public Health Reports, LXXXII (February, 1967), 99-107.
- "Health Careers: Challenge, Change, Opportunity." Today's Health, XLV (January, 1967), 33-35.
- "Health Careers Program." Texas Hospitals, XX (January, 1965), 13-14.
- "Imaginative Recruiting Gets Results: Bridgeport, Connecticut Hospital." Hospitals, XLIII (February, 1969), 34.
- Jobes, B. "Texas Health Careers Program Since 1964." Texas Hospitals, XXVI (August, 1970), 22-26.

- Magoffin, F. "Health Careers Program Opens New Vistas in Employment Fields." Southern Hospitals, XXXIII (July, 1965), 12.
- Moody, M. "Orientation to Hospital Careers: Toronto General Hospital." Canadian Nursing, LXV (September, 1969), 47.
- Morgan, Phillip W. "New Jersey Students Explore Hospital Career Opportunities." Hospitals, XLII (December, 1968), 41-45.
- Morrison, T. H., Jr. "Development of the Texas Health Careers Program: 1964-65." Texas Hospitals, XXVI (August, 1970), 8, 10, 46.
- "New Health Careers Program Launched in New York: Mount Sinai Hospital." Nursing Outlook, XVII (August, 1968), 8-9.
- "Partners in Health Careers--Virginia's Action Program." Cross-Reference on Careers, III (August, 1968), 1-2.
- "Program Proposed to Attract Minorities to Health Field: University of Chicago." Hospitals, XLIV (March, 1970), 103.
- Robbins, A. "Allied Health Manpower." Inquiry, VII (March 1970), 55-56.
- Rodman, E., and Vandow, E. S. "Hospital and High School Collaborate in Health Careers Program." Hospitals, XXXIX (May, 1965), 48-50.
- Smith, J. I., and Whitehurst, E. H. "Lessons Learned in Developing a Successful Health Careers Program." Auxiliary Leader, VIII (September, 1967), 9-12.
- "Teen Seminars Explore Health Careers." Hospitals, XLII (October, 1968), 39.
- "Teen Seminars Explore Health Careers: Little Company of Mary Hospital, Evergreen Park, Illinois." Volunteer Leader, X (March, 1969), 13-14.
- "These Career Programs Have One Aim: Get Them Young and Keep Them Coming." Modern Hospitals, CXIV (May, 1970), 81-83.
- Toole, J. F. "Attracting Young People Into Careers in the Health Professions." Journal of Medical Education, XLV (June, 1970), 415-20.

Velie, L. "Health Careers Unlimited." Reader's Digest, LXXXVII
(August, 1965), 108-12

Spragins, Gerald, Field Director, Texas Health Careers Program,
Austin, Texas

Personal Interviews

- Cresto, Russell E. Public Affairs Director, KGGM Radio and Television, Albuquerque, New Mexico, telephone interview, February 18, 1971.
- Fitz, Reginald H., Director, Regional Medical Program, University of New Mexico, Albuquerque, February 19, 1971.
- Flake, Norma. Administrative Assistant, New Mexico Hospital Association, Albuquerque, February 17, 1971.
- Guimarin, Spencer, Director, Texas Health Careers Program, Austin, February 8, 1971.
- Hubby, Jack. Liaison Officer, Data Processing, St. Joseph Hospital, Albuquerque, New Mexico, March 17, 1971.
- Jobes, B. Assistant Director, Texas Health Careers Program, Austin, Texas, telephone interview, March 25, 1971.
- Keller, Frank. Sales Manager, Albuquerque Division of Marken Advertising Company, Albuquerque, telephone interview, March 19, 1971.
- LaCombe, James L. Executive Director, New Mexico Hospital Association, Albuquerque, February 16, 1971.
- Lacy, William M. President, Lacy, Skloss, and Plueckhahn, Inc., Austin, Texas, letter, March 25, 1971.
- Lloyd, James. Associate Director, Virginia Health Careers, Richmond, Virginia, telephone interview, March 25, 1971.
- Meyer, Norman H. Chairman, Manpower and Labor Relations Committee, New Mexico Hospital Association, Albuquerque, March 16, 1971.
- Perry, H. Ann, Secretary, New Mexico Hospital Association, Albuquerque, February 17, 1971.

- Quintana, Alyce, Administrative Officer, Division of Statistics, New Mexico State Department of Education, Albuquerque, letter, February 21, 1971.
- Spraggins, Gerald, Field Director, Texas Health Careers Program, Austin, Texas, February 8, 1971.
- Thompson, Marian. Supervisor, Vocational Education, New Mexico State Department of Education, Albuquerque, telephone interview, March 22, 1971.
- Wyrick, Flo, President Auxiliary to the New Mexico Hospital Association, Albuquerque, New Mexico, March 17, 1971.

Other Sources

- Alabama Health Careers Council Newsletter, IV (Special Edition), January, 1971.
- Connelly, Tom, Jr. "Motivation of Health Career Students in Kentucky--1969." Health Careers in Kentucky, Louisville, March 1, 1970. (Mimeographed.)
- Dillon, John B. Summation of Task Group Reports, National Congress on Health Manpower. Report to the Council on Health Manpower. Chicago: American Medical Association, October, 1970.
- New Mexico Hospital Association. Report of Medical Manpower Survey, February 1, 1970. (Mimeographed.)
- Report of the National Commission on Community Health Services, Health is a Community Affair. Marion B. Folsom, Chairman. Cambridge, Mass.: Harvard University Press, 1967.
- Texas Health Careers Program. Annual Report 1968-69. Austin, Tex.: Texas Hospital Association, 1969.
- Texas Hospital Association. Texas Health Careers Program, A Synopsis. Austin, Tex.: Texas Hospital Association, n.d.
- Virginia Council on Health and Medical Care. 1970 Annual Report. Richmond: Virginia Council on Health and Medical Care, 1970.

Facts About the Virginia Council on Health and Medical Care. Richmond: Virginia Council on Health and Medical Care, n.d.

James E. Carroll was born in Dexter, Missouri, March 19, 1939. He attended elementary and high school at Wheaton, Missouri, graduating in 1957; and enrolled in South-west Missouri State College at Springfield, Missouri. In 1961, he graduated with a Bachelor of Science degree in Biology. He was married in 1961 and currently has two children. In 1963, he entered the military service, serving in the Medical Service Corps. He has served at Fort Benning, Georgia, and Fort Riley, Kansas; has attended the Officer Basic and Captain Courses at Fort Benning, Texas; and has served in Germany, Korea, Japan, and Vietnam.

BIOGRAPHICAL SKETCH

James E. Cantrell [REDACTED]

[REDACTED] He attended elementary and high school at Wheaton, Missouri, graduating in 1957; and enrolled in South-west Missouri State College at Springfield, Missouri. In 1961, he graduated with a Bachelor of Science degree in Education. He was married in 1961 and currently has two children. In 1961, he entered the military service, serving in the Medical Service Corps. He has served at Fort Benning, Georgia, and Fort Riley, Kansas; has attended the Officer Basic and Career Courses at Fort Sam Houston, Texas; and has served foreign tours in Korea, Japan, and Vietnam.

The problem was to develop a program which would encourage senior high school students to enter a health career. This was achieved through several interviews, review of the literature, and a study of eight existing health careers programs. The methods selected for conducting a health careers program in New Mexico were based upon the data.

The conclusion of the study was that a combination of a centralized and decentralized health careers program was best for New Mexico.

A plan was developed for a proposed eighteen-month experimental health careers program in New Mexico. The plan included the following four phases: (1) Program Design and Introduction; (2) Student Career Activities; (3) Operational Program; and (4) Evaluation.

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