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ABSTRACT

The most difficult problem to be solved by this demonstration project was the high dropout rate in the target schools. More than half of the students routinely dropped out in the tenth grade, leading to the decision to start the program at that level in an effort to hold potential dropouts by stimulating their interest in health-care occupations. The key to the demonstrated success of this effort was getting the students into hospitals the first week of school for orientation to the institutions, gradually working into "real life" task performance in the hospital environment. Academic credit was given by the school for the work experience, and as an incentive to participate a stipend of fifteen dollars a week was paid from project funds to each student involved in the work experience phase of the program. As the program starts its third year, most of the students have been placed in part-time hospital jobs, where their training will continue. In every instance they will leave high school with salable skills qualifying them for at least an entry level hospital job or for college credit for work already accomplished. Reactions to and ratings of the program by the hospitals, the students, their parents, and the project director were all generally quite favorable. Recommendations for improvements are included in the report. A related document is available as ED 064 474. (MF)

EVALUATIVE REPORT ON PHASE II

OF

THE SECONDARY SCHOOLS PROJECT

FOR

AN INTRODUCTION TO

THE ALLIED HEALTH PROFESSIONS

UNIVERSITY OF CALIFORNIA, LOS ANGELES

DIVISION OF VOCATIONAL EDUCATION

ALLIED HEALTH PROFESSIONS PROJECT

SEPTEMBER 1972

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Division of Vocational Education

SECONDARY SCHOOLS PILOT AND DEMONSTRATION PROJECT

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Division of Vocational Education
ALLIED HEALTH PROFESSIONS PROJECTS

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FOREWORD

The Secondary Schools Project, devoted to the general area of allied health, represents a significant step in the adjustment of high school programs toward the goal of relevancy. It provides an opportunity for high school students to have a variety of experiences in a family of occupations in the health field. To a very large extent this program is new in secondary education. Although some schools have experimented with specific programs such as one for the nurse aide, the allied health program covers a wide range of occupations related to patient care, clinical assistance, and facilities support and administration.

Evaluation of the Secondary Schools Project was planned as an integral part of the experimental and demonstration program. Evidence was sought upon which value judgments concerning the program could be made and which would also suggest curricular changes.

The evaluation program was planned and conducted under the direction of Dr. Clarence Fielstra, Professor, Graduate School of Education, University of California, Los Angeles. Dr. Barbara Rosenquist Chrispin, Research Analyst, Division of Vocational Education, University of California, Los Angeles, assisted with the implementation of the evaluation plan.

The evidence seems unquestionably to indicate that an allied health curriculum in the secondary schools can produce commendable educational results. The Secondary Schools Project is generalizable for other high schools and has been considerably expanded during the school year 1971-1972.

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INTRODUCTION

When the Secondary Schools Allied Health Careers demonstration project was started in 1968 in four urban area high schools in Los Angeles and Long Beach, the "career education" movement was several years in the future. As it enters its third and final year as an experimental program, the evaluation data in the report on the first year, and in this report on the second year, clearly indicate that this effort is successfully demonstrating that the basic ideas behind the career education movement are sound.

The most difficult problem to be solved was the high dropout rate in the target schools — in some instances, 60 percent and more. A high percentage of students routinely dropped out in the tenth grade, which led to the decision to start the Allied Health program at that level, in an effort to hold potential dropouts by stimulating their interest in health-care occupations. This effort was successful, as the evaluation data show; the key to this success was getting the tenth-grade students into the hospitals the first week of school for orientation to the institutions, gradually working into "real life" task performance in the hospital environment. Keeping the students in school is crucial to the success of this or any other program, as the schools certainly cannot influence them toward careers, academic excellence, or anything else if they are not there to be influenced.

As the program starts its third year, the students have, with few exceptions, made an appropriate career choice and are placed in part-time paid jobs in the hospitals, where their training will continue. Many of them have already become sufficiently skilled to hold full-time jobs, as they demonstrated during the summer vacation period when many worked full-time in the hospitals under Neighborhood Youth Corps sponsorship. A number plan to continue their career educations in college; others plan to go to work on graduating from high school; and in every instance they leave high school with saiable skills that qualify them for at least an entry level job in a hospital, or credit in college for work already accomplished.

The lessons learned in the first two years of the program have been made available to other California high schools, with the result that two are now starting their second-year Allied Health programs and twelve others will launch the first-year program in September, 1972. A schedule of three-day Instructor Training Institutes is set up for 1972-1973 to help these schools get off to a good start. The first was held August 1-3, 1972 at St. John's Hospital in Santa Monica. Curriculum materials, teachers guides, and teaching aids are completed and available, and a *Guide for Planning and Operating the Secondary Schools Allied Health Careers Program* is in the process of being published.

With some modifications and adaptations to local conditions, it is reasonable to believe that this program can be replicated in any high school where clinical facilities are available in the community. The evidence of successful attainment of its objectives is found in this evaluation report. It is hoped that others will initiate similar programs, to the end that we not only will guide more young people into rewarding careers, but will also make a substantial contribution to the solution of the serious manpower shortage in the allied health occupations.

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BACKGROUND OF THE PROJECT

In this report an evaluation is made of Phase II of the UCLA Secondary Schools Pilot and Demonstration Project for an Introduction to the Allied Health Professions. An earlier report (August, 1971) presented an evaluation of Phase I of the project. The Pilot and Demonstration Project is a curriculum research and development program funded by the U.S. Office of Education.

The instructional aspects of the pilot program cover a three-year period, beginning in September, 1970, and the program involves the cooperation of four hospital-school-community college complexes in the Los Angeles area. Upon completion of the program the student participant is expected to achieve the following broad objectives:

1. He will be prepared to make an appropriate career choice of an allied health occupation.
2. He will continue in an advanced educational or training program and/or will be employed in an allied health occupation.
3. He will be able to function satisfactorily as an employee in the health care system.
4. He will be a knowledgeable consumer of health care services.

During the first year of the project (Phase I), one hundred tenth-grade students (twenty-five in each of four inner-city high schools in the greater Los Angeles area) were exposed to a wide range of health-care occupations, and they were given opportunities to put into use at health-care facilities the basic knowledge gained in the high school course specifically designed for student participants in the project.

Summary of Findings Regarding Phase I of the Secondary Schools Project

The following were the most important findings based on the evaluation of Phase I of the Secondary Schools Project:

1. More than 900 incoming tenth-grade students applied for participation in the Secondary Schools Project, and 100 students were selected.

2. The principal reasons given by students for wanting to participate in the program were: specific interest in an allied health occupation (27 percent), general interest in career planning and decision making (21 percent), interest in helping people (16 percent), interest in getting a job and earning money (14 percent), and general interest in self-improvement (10 percent).

3. Composition of the project participants who were selected was as follows: 50 percent male, and 50 percent female; 16 percent high-ability level, 60 percent middle-ability level, and 24 percent low-ability level; 62 percent Black, 21 percent Mexican-American, 5 percent Oriental, and 12 percent other-Caucasian.

4. Students in the project expressed varying degrees of positive interest in 17 out of 18 curriculum topics which were included in the program; most interest was expressed in the following: hospital experience, relationship of individual to community health and social problems, mental health and drug overdose, maternal and child care, and folk medicine and quackery.

5. Students in the project expressed varying degrees of positive interest in 36 out of 37 health-care tasks which were included in the program; most interest was expressed in the following: blood typing, taking and recording blood pressure with sphygmomanometer, listening to heart with stethoscope, and taking blood count.

6. There was a wide range in the number of pupils who had an opportunity to have experience with health-care tasks; one task was performed by only 14 students, whereas another was performed by 62 students.

7. The taking of field trips was ranked by the students as an outstandingly interesting aspect of the project; they most enjoyed going to places where the personnel being visited made them feel welcome and worthy of attention and assistance.

8. Students in the project expressed varying degrees of positive interest in 22 out of 23 methods of learning used in the program; most interest was expressed in the following: taking field trips to health-care facilities; using films, slides, records, and other audiovisual materials; performing laboratory activities and hospital tasks in the classroom; working with "Buddies"; and having classroom discussions, and "rap" sessions.

9. In free-response comments concerning what they liked *best* about the AHPP program, students most frequently listed the following: learning technical skills and tasks; learning about health problems and concerns; having classroom "rap" sessions and discussions; having hospital experience and taking field trips; and role-playing, debating, and putting on skits and plays.

10. In free-response comments concerning what they liked *least* about the AHPP program, students most frequently listed the following: failure of health-care personnel to keep appointments; being ignored or unappreciated; having inadequate leadership; dealing with tasks that are too menial; and having to do too much writing.

11. In free-response comments concerning the AHPP program, parents were highly commendatory; but they expressed some fear that the work might not be counted for college entrance.

12. In free-response comments concerning the AHPP program, national leaders in the field of health care were highly commendatory; and they expressed the hope that the pattern of the program might also be implemented in other fields.

13. Students in the project rated their progress on each of the nine performance objectives as being "quite a bit."

14. Parents rated their children's progress on each of the nine performance objectives as being "quite a bit." Parent ratings were generally higher than those given by the students.

15. At the end of the first year of the project, 80 percent of the participants were able to specify a health occupation that they would be interested in entering.

16. The month-long hospital experience had greatest influence on vocational choices made by project participants.

17. At the end of the first year of the project, 78.9 percent of the participants could match occupational titles with descriptions of job functions; 64 percent could demonstrate an understanding of the career ladder concept; and 46.6 percent could identify occupational clusters.

18. At the conclusion of the students' month-long work experience in the hospitals, hospital supervisors rated each of their work performance factors as being satisfactory or above. Highest ratings were given to "job skills," "attitude," and "cooperation."

19. At the end of the first year of the project, participants in the program checked correct answers to 52.8 percent of the health problems in the *Health Behavior Inventory,* whereas a control group of students who had taken the regular course entitled Health Science checked correct answers to 36.1 percent of the problems.

20. While 8 percent of the 100 ninth-grade students who had been selected to enter the project in the tenth grade (the following September) left school or transferred to another school during the summer session before school opened, almost 23 percent of 92 ninth graders in the alternate equated group who had not been selected to enter the program left school or transferred to another school during the same period.

21. Attrition during the year in the number of students enrolled in the project was 18 percent. Reasons for the attrition were these: left school or transferred to other schools (8 percent); transferred to more academic programs (4 percent); no longer interested in health field (3 percent); program hours conflicted with interests in sports (2 percent); and married (1 percent).

22. Attendance records made by participants in the program were almost exactly the same as those made by students in a control group.

23. In spite of the loss of 37.5 percent of the high-ability students who had initially begun in the project, grade-point averages of participants in the program were the same at the end of the year as they were at the beginning; whereas grade-point averages of an equated control group dropped .3 during that period.

As a result of the above findings and the conclusions and recommendations based thereon, numerous instructional and curricular improvements were made in the Phase I program for the ensuing year. Revised curriculum guides were also developed. Another result of the pilot experience with Phase I of the program was the inauguration, during the ensuing year, of Secondary School Programs for Careers in Health Services in these *additional* school districts of California:

Chico Unified School District
Clovis Unified School District
Coachella Valley Joint Union High School District
Fresno City Unified School District
Grossmont High School District
Imperial Valley, Central Union High School District, El Centro
Jefferson Union School District, Serramonte High School, Daly City
Kern High School District, East Bakersfield High School

New Haven Unified School District, Union City
San Mateo Union High School District, Burlingame High School

Largely as a result of the eva[illegible]hase I, also, training institutes were planned and made available to a[illegible]uctors in the Secondary Schools Proj[illegible]t. Outlines of the first two of these institutes are included in Appendix A of this report (pp. 53-60).

Introduction to Phase II of the Project

During the second year (Phase II) of the UCLA Secondary Schools Project, the students worked in health-care facilities for approximately fifteen hours per week. The work was done under the direct supervision of a clinical instructor in the health-care facility. Academic credit was given by the school for the work experience. One unit of credit was given for each hour of work per week up to a maximum of ten units. As an incentive to participate in this work experience phase of the program, a stipend of fifteen dollars a week was paid from project funds to each student who was involved.

Throughout the year, the students were counseled by UCLA project personnel and by personnel in the high schools, so that maximum use might be made of the students' on-the-job training experiences in further developing their vocational and personal maturity. Attempts were also made to coordinate the students' work experiences with their continuing school activities.

Organization of this Evaluative Report

The descriptive and evaluative data presented in this report on Phase II of the Secondary Schools Project are organized under the following major headings:

1. Students participating in Phase II of the program (pp. 8-10).
2. Learning experiences provided by hospitals during Phase II of the program (pp. 10-14).
3. General quality and effectiveness of Phase II of the program (pp. 15-36).

4. Student progress toward achievement of performance objectives of the program (pp. 36-44).

5. Summary of findings, conclusions, and recommendations (pp. 45-50).

STUDENTS PARTICIPATING IN PHASE II OF THE PROGRAM

A total of seventy-seven students (thirty-eight males and thirty-nine females) who had completed Phase I of the Secondary Schools Project during their sophomore year in high school subsequently enrolled in Phase II of the program at the beginning of their junior year. The high schools attended by these students were Fremont High School (Los Angeles), Jordan High School (Los Angeles), Lincoln High School (Los Angeles), and Polytechnic High School (Long Beach). The ages of these students ranged from fifteen to seventeen years of age. The health-care facilities in which the high school students worked during Phase II are listed in Appendix H (pp. 105-106).

Ethnic Characteristics of the Students

The ethnic characteristics of students who participated in Phase II of the Secondary Schools Project were very similar to those of the students who had participated in Phase I (See Table I). During the first year 62 percent of the students were Black, 21 percent Mexican-American, 11 percent White (or Other Caucasian), 5 percent Asiatic (or Oriental), and one percent unrecorded. During the second year 74.2 percent of the students were Black, 19.7 percent Mexican-American, 4.5 percent White, and 1.6 percent Asiatic.

Ability Levels of the Students

The ability levels of students who enrolled in Phase II of the project were distributed as follows: upper ability — 14.3 percent; middle ability — 68.8 percent; and lower ability — 16.9 percent. As may be seen in Table II, this distribution is somewhat different from that of

students in Phase I during the previous year. Most noteworthy is the decrease in the percentage of lower-ability students and the increase in middle-ability students in Phase II of the project as compared with Phase I.

Table I

Ethnic backgrounds of Students in Secondary Schools Project

Ethnic Group	Percentage	
	Phase I 1970-1971 (N=100)	Phase II 1971-1972 (N=77)
Black	62	74.2
Mexican-American	21	19.7
White	11	4.5
Asiatic	5	1.6
Not recorded	1	0

Table II

Ability Levels of Students in Secondary Schools Project

Ability Level	Percentage	
	Phase I 1970-1971 (N=100)	Phase II 1971-1972 (N=77)
Upper (g.p.a. = 3.0 - 4)	16	14.3
Middle (g.p.a. = 2.0 - 2.9)	60	68.8
Lower (g.p.a. = less than 2.0)	24	16.9

A total of eleven students (three males and eight females) who had enrolled in Phase II of the project left the program before the end of the year. Of these students, three were in the upper-ability group, five in the middle-ability group, and three in the lower-ability group.

LEARNING EXPERIENCES PROVIDED BY HOSPITALS DURING PHASE II OF THE PROGRAM

The learning experiences which were afforded students who participated in Phase II of the UCLA Secondary Schools Project were largely determined by the functions of the hospital departments in which they worked. For example, a student who worked in radiology had learning experiences which were very different from those had by a student who worked in physical therapy or in nursing. Another factor which influenced the nature of the learning experiences of a given student was the readiness of that student to take part in various experiences. For instance, a highly motivated, conscientious, capable student learned many more tasks and higher-level tasks than did a student who was relatively indifferent or less capable.

The assignment of students to hospital departments was based as much as possible on the students' expressed interests and preferences. These preferences had been developed during the latter part of Phase I of the project as a result of exploratory work experiences which the students then carried on. The field coordinators of the project sought hospital departments in which each student could work at a job he was especially interested in. The coordinators also found hospital supervisors who would oversee and evaluate each of the student's work experience.

In Table III are shown the numbers of students in the project who were working in the various hospital departments at the conclusion of Phase II.

Table III

Numbers of Students Assigned to Various Hospital Departments

Hospital Department	No. of Students
Nursing	23
X-ray	10
Clinical Laboratory	6
Physical Therapy	4
Pharmacy	3
Social Work	3
Engineering	2
Business	2
Inhalation Therapy	2
Personnel	1
Central Services	1
Neurological Laboratory	1
Animal Laboratory	1
Housekeeping	1
Occupational Therapy	1

Since this was a pilot project, no pre-determined list of tasks was prescribed for inclusion in the learning experiences to be provided by a hospital department. The clinical instructors or supervisors in each of the cooperating hospitals, therefore, were free to teach those tasks which were most significant and most feasible in terms of the students' interests and abilities and the availability of facilities in the hospital.

Examples of lists of experiences (tasks) which were afforded the students in selected hospital departments are presented below:

Nursing

Recording temperature, pulse, and respiration
Running errands; answering the telephone
Assisting with serving trays
Assisting physician during examination of patient
Making unoccupied bed
Making occupied bed
Helping to ambulate a patient
Giving verbal reports regarding patient
Transporting a patient
Assisting in general care of patient
Answering patients' call lights
Giving back rubs
Assisting in care of patient units
Reading patient charts
Feeding patients
Putting patient on bedpan
Making admission charts
Filling water pitchers
Picking up medicine from pharmacy
Measuring urine output
Testing urine for sugar
Visiting patients
Making daily census sheets
Graphing patient's temperature
Helping patient in and out of bed
Combing patient's hair
Delivering flowers to patient

Radiology

Filing X-ray films
Filing reports
Mailing reports
Running errands to various departments
Unloading and reloading cassettes
Marking films

Processing films

Transporting patients to department and back to their rooms

Assisting technologist in positioning patients

Assisting in use of portable X-ray unit

Physical Therapy

Filling out data card on patient

Recording patient progress report on chart

Working with patients who can ambulate

Fitting patients' crutches

Giving patient upper extremity exercises

Giving patient lower extremity exercises

Transporting patient back to bed

Giving pre-crutch training exercises

Cleaning, filling, and emptying whirlpool

Mixing sterilization solution

Using Hudson Sprayer

Using neck hot packs

Removing dressings

Neurological Laboratory

Cleaning glassware

Making solutions:
- Cleaning solution
- Formalin solution
- Lithium carbonate
- 5% acid alcohol

Sterilizing biopsy clamps

Labeling slides

Filing slides

Labeling paraffin blocks

Picking up and delivering parafin blocks, film, biopsy clamps

Storing chemicals

Cleaning up laboratory

Engineering

Replacing air conditioner filters

Cleaning air conditioner filters

Overhauling window unit air conditioner
Overhauling cleaning coils of air conditioner
Assisting in overhauling water pump
Cutting and threading pipe
Rebuilding ice machine water pump
Assisting in installation of wall heater
Changing belts on kitchen door
Calibrating thermostat in X-ray
Cleaning cooling tower basin
Repacking elevator motor bearings

In Appendix C (pages 77-79) are reproductions of three typical monthly records actually kept of tasks performed by the students during their hospital work experience. In Appendix B (pages 63-74) are revised representative task lists for hospital departments; these lists were cooperatively developed during Phase II of the program.

General supervision of the entire program, as well as liaison between the secondary schools and the hospitals throughout Phase II, while the students were having the work experiences referred to above, was provided by the Deputy Director of the Secondary Schools Project and by the field coordinators on his staff. As previously stated, the UCLA project gave each student in this phase of the program a stipend of fifteen dollars per week. Transportation from the school to the hospital and back was also provided each student by the project; this was accomplished primarily through use of station wagons which the project acquired for that purpose when it was found that school busses and public busses could not adequately provide "individualized" transportation service at the various times and locations required.

GENERAL QUALITY AND EFFECTIVENESS OF PHASE II OF THE PROJECT

In this section of the evaluative report the following comparisons and appraisals are presented:

1. A comparison of the project group with a control group in grade-point averages
2. A comparison of the project group with a control group in dropouts from school
3. General appraisal of Phase II of the project by student participants
4. General appraisal of Phase II of the project by hospital supervisors
5. General appraisal of Phase II by the Deputy Director of the Project

Thus, in the first two parts of this section, data are presented relative to the relationship between participation on the project and success in school as indicated by superior grade-point averages and by greater retention in school. In the remaining parts of the section evaluative opinions of the project as expressed by selected personnel are reported. Data and opinions regarding student progress toward achievement of certain performance goals of the project are presented in the section of the report which follows this one.

Comparison of Project Group with Control Group in Grade-Point Average

As shown in Table IV, which follows, students in the Allied Health Project had a grade-point average of 2.4 prior to beginning work in the project (September, 1970). After maintaining that average during the first year of the project, they actually performed at a somewhat higher level during both the first and second semesters of the second year (Phase II) of the project. An equated control group of students whose grade-point average was 2.5 in September, 1970, earned a g.p.a. of 2.4 during the first semester of Phase II of the project and a g.p.a. of 2.3 during the second semester.

Thus, while students in the Allied Health Program have shown a slight improvement in academic performance between September, 1970, and June, 1972, students in the control group showed a net decline in their performance during that period.

Table IV

Eleventh Grade G.P.A.'s of Project and Control Students

Students	G.P.A. in Sept., 1970	G.P.A. for First Sem., Phase II (Jan., 1972)	G.P.A. for Sec. Sem., Phase II (June, 1972)	Net Change in G.P.A.
Project (N=64)	2.4	2.5	2.5	+ .1
Control (N=45)	2.5	2.4	2.3	- .2

Comparison of Project Participants with Control Group in Dropouts from School

One of the objectives of the Secondary Schools Pilot Project was the greater retention of disadvantaged youth in the high school. As indicated in Table V, this objective has apparently been achieved during the first two years of the project. The table shows that by the conclusion of Phase II of the project, only 2.6 percent of the participants in the program dropped out of school. Almost three times greater was the dropout rate of students in an equated control group.

Table V

School Dropouts During First Two Years of Project *

Students	Percent Who Dropped out of School
Project	2.6
Control	8.9

* Based on data for 114 project students and 79 Control students

The percentage of students who transferred to another school was also much lower for the students in the Secondary Schools Project than for students in the control group. As can be seen in Table VI, the percentage of the former was less than half the percentage of the latter.

Table VI

School Transfers During First Two Years of Project *

Students	Percent Who Transferred to Another School
Project	16.7
Control	34.2

* Based on data for 114 project students and 79 control students

School attendance during each of the first two years of the project was about the same for project participants and for students in the control group. There was less than half a day difference per year between the records of the two groups. As shown in Table VII, both groups had somewhat better attendance records during the second year (as juniors) than they had during the first year (as sophomores).

Table VII

Student Attendance Records During First Two Years of Project

Students	Days Absent First Year (mean number)	Days Absent Second Year (mean number)
Project	19.6 (N=78)	15.1 (N=64)
Control	19.3 (N=63)	14.8 (N=45)

General Appraisal of Phase II of the Project by Students

At the end of the first semester and again at the end of the second semester of Phase II of the Secondary School Project, student participants were asked to state "what they liked *best* about the program and what they liked *least* about the program." The responses concerning what they liked best were much more numerous than the responses concerning what they liked least. Furthermore, the positive responses were written in considerably more detail than were the negative ones.

A representative sampling of the positive comments is presented below:

> I have learned about patient care, how to work with people and understand them. I have learned something new from each one.
>
> • • •
>
> My most interesting and useful experience was getting into the different hospital departments and finding out about them.
>
> • • •
>
> I like what I'm doing. I like working with people and meeting new people. And I like helping people.
>
> • • •

My most interesting and useful experience in the project at the hospital was working in the pharmacy. In the pharmacy there was a lot to do, which was the most fun, and it helped me with my spelling in chemistry. The most interesting was watching the pharmacist put medicine together and running the pill machine.

• • •

Everything I did at this hospital when working with the patient is interesting, and I like it all.

• • •

I think everything has helped me learn more about the hospital work. I can't really say which part of the work is the most interesting and useful. I've met a lot of people. I've learned about how some departments are run. I've learned what goes on mainly in the whole hospital, how each department depends on the other, and how relationships between co-workers and bosses develop.

• • •

The experience I have gained working really helps out. I am depended on, and trusted, which really helps my morale. I super-enjoy helping people and being depended on. In the hospital I am able to work for people. It is all interesting and helpful. I really can't say what's helped me most, because everything has.

• • •

I'm working at the Intercommunity Exceptional Children's Home and have found it to be a very rewarding and beautiful experience. I have become close to the children and teachers. Probably I am learning just as much as the children. I've learned to love other people who are not like me, and have become more responsible for myself and others around me. I've learned understanding and compassion for these retarded children. Many times I reach out to them as much as they do to me . . . . No words can explain the fulfillment and joy that come from seeing these children learn. To watch the children get off the bus and run to you and hug you and kiss you is pure love. For a child to trust in you, to believe in you, and to return your love is fantastic. To be a part of this and to learn how to cope with and handle these children is an unbelievable experience for me.

• • •

My experience in the hospital is helping me to have more confidence in myself. As far as my goals are concerned, it has helped me a great deal — especially with my personality, grooming, working with others, and learning to keep some things to myself.

• • •

I got to know a lot more about how to talk with people, and I overcame my great shyness by getting used to being with different people.

• • •

I have a clearer picture of what it is like in the vocational field I have chosen, and my job now has helped me to make up my mind as to whether or not I really want to pursue this field. It has also given me an idea of what other jobs similar to the one I chose would be like.

• • •

AAHP has been most helpful to me. I have a job working in the field I wish to work in after I finish school, and I have learned a lot that has helped me in my life not only in the hospital but at home.

• • •

I would like to see this program continue at schools, because I think it would be a great help to the students.

• • •

In response to the question as to what experiences in Phase II of the project were least interesting and of least usefulness, almost half of the participants made such comments as the following:

All of my experiences were wonderful.

I found nothing the least bit not helpful in my work.

I liked everything.

I liked the whole project.

I didn't have any dislikes.

I believe everything was useful.

The relatively few negative comments which were made by the students in the program tended to fall into these categories:

1. Monotony of work — "doing same things over and over again."
2. Dullness of activity — "washing glassware"; "cleaning cassettes"; "folding towels, sheets, and pillow cases."
3. Paucity of activity — "least interesting when I didn't have anything to do"; "going to an activity where all I do is watch"; "when there was nothing to do except answer the phone."

As was stated earlier in this report, eleven students who were initially enrolled in Phase II of the program discontinued their participation in it before the end of the year. Reasons for their discontinuance are shown in Table VIII.

Table VIII

Reasons Students Discontinued Program During Phase II

Reasons for Discontinuing Program	Number of Students
Dropped out of school	2
Transferred to another school	2
Took another job	2
Gave more time to school sports	1
Had to give more time to family work	1
Had to meet a specific academic requirement	1
Took another medical course	1
No longer interested in health-care occupation	1

General Appraisal of Phase II of the Project by Hospital Supervisors

As was stated earlier, each of the students enrolling in Phase II was assigned to work under the supervision of hospital personnel in his area. The job title and level of responsibility of these personnel often differed considerably, including doctor and department head, lab assistant and secretary. Nevertheless, for the purposes of the project and this report, all are designated as "clinical instructors" or "supervisors."

During the second semester of Phase II, these supervisors were asked to appraise the strengths and weaknesses of the program. Their appraisals were gained through informal interviews, using interview guides designed for this purpose, during the supervisors' regular

working hours. (See Appendix F.) Altogether, 32 supervisors, from five hospitals, were interviewed. The responses to the items included in the guide were subsequently tabulated and reviewed by the evaluation team. Following are the findings revealed by these analyses:

When asked to respond to the question "What is your opinion about the AHPP Secondary Schools Project as a training program for allied health workers?" the supervisors were overwhelmingly positive. Their responses appeared to reflect their opinions of this program in comparison to the traditional school-based, academically-oriented high school program rather than to other training programs for allied health workers.

Among the many commendatory comments made by the supervisors about the program, the ones made most frequently included the following:

1. Provides the opportunity to make and verify an occupational choice
2. Provides the opportunity to develop a realistic view of the world of work
3. Provides the opportunity to develop job responsibility
4. Provides the opportunity to train in the allied health field
5. Provides the incentive and means by which to finish high school
6. Provides a service to the hospital department
7. Makes a social contribution to the community
8. Answers a desperate need in education

The large majority of supervisors responded "Yes" when asked if they thought the program should continue. They also affirmed their willingness to continue as training supervisors for the students in the program. Some concern was expressed, however, about the program's training value and whether it would really motivate, benefit, and provide enrichment for the students. There was expressed the feeling that:

1. Students might be used as cheap leabor
2. Students might be assigned the menial and boring jobs that no one else wants to do
3. Supervisors might be too busy to provide a good training experience for the students

These concerns revealed a strong predilliction on the part of the supervisors to support a structured, on-the-job training program, in which students learn by design rather than by chance.

Some supervisors also brought up questions concerning the cost and legality of the program. While only a few people raised these issues as problems, they do, nevertheless, have a critical bearing on the practicality of any such venture and the ultimate success of the program.

The director of training in one large private hospital estimated that the cost per student during the initial training (Phase II) did not exceed the salary for the time of the person doing the training and the cost (if any) of materials. Training, she added, was an accepted function of the hospital. The slogan "Develop your staff" is actively pursued, she said, through the willingness of the institution to recognize training as a job responsibility and to use personnel as training instructors.

Compensation of students, on the other hand, was recognized as a cost that would be difficult to arrange in the current budget. (Comments by parents and students, however, indicated that they attached less importance to the stipend than to training, as a motivating factor for continuing Phase II.)

The fears of the supervisors who raised questions regarding the legality of students being trained in areas where they do not meet the state age and licensure requirements were alleviated when it was clarified that a written agreement existed between the hospital and the project. This agreement detailed the general duties of both the hospital and the project which allowed for a mutually satisfactory working relationship. In most instances, a specific list of tasks was agreed upon before this agreement was reached, specifying the tasks students would be allowed to perform in a particular hospital and department, and specifying

the tasks which the hospital personnel believed they could teach the students. The supervisors were also relieved to learn that the students are covered by both workman's compensation and malpractice insurance through the school district.

Following an open-ended evaluation of the overall quality of Phase II, supervisors were asked to indicate any problems that they were having with specific aspects of the program. The topics covered included: the students, the student task performance list, student assignments and work schedules, monitoring and evaluation, student readiness, and the services rendered by the project staff. An analysis of their opinions is presented below.

Supervisors' Opinions Regarding the Students

The students involved in Phase II of the program, as reported earlier, were a heterogeneous group, including 11th graders from four inner-city schools, both males and females, and individuals from various ability levels and ethnic backgrounds. During Phase I, throughout the month of May, all had been involved in a four-week exploratory hospital experience. During the "May Experience" the students rotated through four departments of their choice, one week in each department, observing, learning, and performing elementary tasks. During the summer (between Phase I and Phase II of the project), approximately half of this group were employed by the hospital under Neighborhood Youth Corps (NYC) funds. Thus, each student had become somewhat familiar with the "climate" of the hospital and had been exposed to the hospital procedures and regulations. Additionally, many were assigned in Phase II to departments in which they had previously worked. With few exceptions, however, all had much to learn about the world of work.

In most cases, the supervisors were as new to the experience of working with high school students as the students were to training in the hospital. Many, however, had worked with older students, an experience which proved to be a decided asset in adjusting to their new training responsibilities.

The majority of supervisors found their students in Phase II to be "enthusiastic," "cooperative," and "willing" and reported no problems in working with them. Those who did report problems, most frequently cited poor attendance and inappropriate appearance as being among them. The supervisors were disturbed by students who failed to telephone in or to notify them in some other way that they would be absent. Many supervisors had planned activities in advance or had otherwise come to depend on the student, and were understandably irritated when they did not show up. Further, they were not interested in having a student come in only whenever he or she felt like it.

Many supervisors believed that poor attendance was indicative of the students' accommodation to failure. And because students with poor attendance were often the most unresponsive, there was also a tendency for their supervisors to become indifferent. The result was that in such instances training became negligible or at best sporadic. The supervisors concluded that these students need much positive social reinforcement. This, they believed could come from a department which takes responsibility for insuring that it provides a variety of interesting and enriching experiences for the student. These experiences, in turn, would motivate the student to want to be present. It was frequently recommended by the supervisors that the department staffing be planned in such a way that the student's absence would not affect the functioning of the department. They also recommended that students be required to punch a time card, so that the supervisor would be better able to reinforce punctuality and attendance requirements.

Supervisors' Opinions Regarding the Student Task Performance List

The Student Task Performance List, commonly referred to as the "Task List," was designed to function as an outline of a course of study for Phase II and to provide a record of student performance. The original agreement with each hospital specified that the project would provide curriculum and instructional materials for the students at each hospital in

cooperation with hospital personnel. The final curriculum, including all plans for observation and/or clinical experience, however, was to be subject to the approval of the hospital.

This plan anticipated that the task inventories developed by the staff of the Allied Health Professions Project, identifying the tasks that people perform in the various allied health professions, could be used by the supervisors as guides for identifying training activities for the students. The supervisors were requested to select from this list entry-level tasks which they felt the students could learn during the year. The tasks selected were to be compiled into a list and used to make up each student's individual curriculum framework. As each task was learned, that task item was to be checked off on the list and signed by the supervisor. This in turn was to be the student's performance record. The advantages of a task-oriented system are many, principally because it is not locked into a job-title, as are many other health occupations training programs. It reduces the possibility of conflicting with the current state age and licensure requirements. For example, entrance into a particular occupation, such as X-ray technician, might be predicated on age as well as on successful completion of a state-approved training program. Generally, high school students would be precluded from entering this occupation on one or both counts. However, there may be tasks that an X-ray technician does that can be entrusted to the student. It must be left to the hospital to select those entry-level tasks that the student can be trained to perform.

Another major advantage of the task-oriented system is that it provides a record of tasks the student has learned to perform, and for which he might receive credit if he decides to continue advanced training in his selected area. This method, then, lays the groundwork for an open-entry, open-exit performance-based system of education which meets the needs of the student but does not sacrifice the standards of the occupation.

By the end of Phase II it was found that the student task lists were still in various stages of development and use, depending on the department and supervisor involved. The majority

of supervisors enthusiastically supported the philosophy underlying the task lists. Development and use of the lists, however, was found to depend largely on the supervisor's previous experience in student training. Those who had worked with students before reported few problems with the task lists and generally found them helpful. They expressed the belief that the task lists eased their teaching responsibility by providing a framework within which to work. Supervisors in this category, moreover, did not feel locked into a rigid training plan but felt free to move students to different areas or different tasks when something interesting was going on elsewhere. Finally, these supervisors also said that the task lists contributed to the student's development of maturity by making him aware of his learning responsibilities and progress.

The supervisors who were less comfortable with their teaching role reported several problems with the task lists. The most common problems stated were:

1. Identifying and planning tasks for students to do
2. Providing staff to teach students
3. Monitoring activities on a daily basis
4. Knowing when to have students work and when to have them observe
5. Training students in an environment in which many tasks are done infrequently and on a rush basis
6. Providing a variety of learning experiences during the afternoon hours when activity slackens
7. Following the task list under the requirements of the present insurance carrier

Most of the identified problems seemed to reflect a lack of understanding about the task lists and the purpose of Phase II in general. As such, they suggest the need for more orientation of the supervisors at the onset of Phase II and for some type of ongoing inservice training to reinforce their understanding.

Many of the foregoing problems had begun to be resolved by the end of the year as the supervisors became more familiar with the goals of the project and with their areas of responsibilities. Their suggestions for improving the procedure for developing the task lists, in fact,

closely corresponded to the original procedural plan, enhanced by the added benefit of their insight into program operation. Specifically, the supervisors recommended that: (1) supervisors be provided with task lists developed in other locations to help increase their understanding of what is within the rules and regulations agreed to by the hospital, and (2) supervisors have the option to change any ready-made lists according to the needs and requirements of the department.

Supervisors' Opinions Regarding Student Assignments and Work Schedules

The procedure for assigning students to departments was reported to have worked out well in most situations. Each student had been asked to select an area or department in the hospital in which he would like to work. Supervisors of all requested areas were then contacted by the field coordinator to find out if they were interested in the program and willing to cooperate. The program was explained in detail to them, modifications were worked out to achieve a plan satisfactory to both school and hospital, and the specific tasks to be taught were identified. Subsequently, a work schedule was developed for each student, specifying the time and days he was to report to his department.

The basic project plan called for students to make a vocational choice after their exploratory hospital experience in Phase I and then receive training in the area of their choice during Phase II. It was anticipated, however, that students would proceed at different rates and that not all would be prepared to make a decision after Phase I. It was also expected that some would change their minds after having some first-hand experience in a department and finding out what really goes on. Changes were encouraged in these instances as beneficial to the student's overall opportunity to make a realistic vocational choice. In either of these situations, the procedure for assigning students to departments was repeated, after counseling with the student and ascertaining his new choice.

Supervisors were inclined to agree that departmental assignments should be based on student choice and that the students should be able to select the area they like and have an interest in. The only problems in using the foregoing procedure were experienced by supervisors involved with students who had made a poor choice or had, for some reason, changed their minds about their area of interest. In these cases supervisors were more likely to be bothered by attendance problems or have bored students. They were inclined to believe that the May exploratory hospital experience in Phase I was too short a time in which to expect students to make their Phase II choice. Some even believed that many students were given the more menial tasks to perform during that experience, leaving them with a jaundiced view of the department and likely, subsequently, to select a department on the basis of personality rather than function. Suggestions for remedying these problems included having students join the regular hospital orientation tour before selecting a department, and having students spend a month or two in a department and then rotate to another until they find an area of work they really like. Supervisors said that they would be interested, also, in having more information on the student before he enters the department, possibly including the student's reason for interest in the department, his plan for the future, and some personal background data.

Developing student work schedules which correspond to the most productive training periods in the department was reported to be very difficult in most cases because of the school schedule and transportation problems. For these reasons, most students were scheduled for their clinical experience during the afternoon hours and on weekends for an average of 15 hours per week. Supervisors reported that it was difficult to judge the minimum amount of time necessary to make the experience a useful one without considering the educational objective. Ten to twelve hours per week, however, was judged enough to get the student involved.

During the afternoon hours, however, students were often caught in the change of shifts when activity is winding down. In these instances, it was the opinion of the supervisors that

the students lost the full benefit of the program because their insight and observation were so badly limited. Concern was also expressed for the fact that no one was responsible for systematically keeping track of the student's hours, and that, in some cases, students were getting their stipend even if they were not reporting to their departments on time or were frequently absent. As mentioned above, it was especially irritating to the supervisors when students failed to notify them when they were going to be late or absent. The expectations of the supervisors in such a situation were clearly contradictory to those that the student had learned to expect in a school situation, where it is assumed that he will produce an "excuse" when he *returns* to class.

In the opinion of the hospital personnel, this conflict between the educational and employment perspective could be best resolved by giving the supervisors more say in, and responsibility for, monitoring the student's attendance. They suggested that they receive a copy of the student's work schedules and the school holidays, so that they can know when students are skipping. They also suggested that the education or training department of the hospital be informed as to when students are scheduled to be in each of the several departments and that the student be responsible for calling either his supervisor or the Director of Training if he is not coming in.

Additionally, inasmuch as lack of motivation seemed to be a factor related to poor attendance, it was suggested that students be required to keep time cards so that supervisors would be able to notice and comment on attendance and punctuality. It was also suggested that receipt of any stipend be at least partially dependent on attendance in order to help the student become motivated to change his behavior in the desired direction.

Supervisors' Opinions Regarding Monitoring and Evaluation

Throughout Phase II, the field coordinator was responsible for acting as a liaison agent between the school and hospital, resolving any potential or actual problems in the department, and ascertaining whether students were making reasonable progress in their ability to

do tasks. For the most part, the field coordinator's contact with the supervisor was on a frequent but nonscheduled basis. The field coordinator normally made his rounds of the various departments according to his own schedule, and discussion with the supervisor was limited to the time available by the supervisor at that particular moment. In the majority of cases, when no problems were apparent, this procedure proved adequate. Weaknesses manifested themselves, however, when problems developed or when supervisors had something specific to discuss with the coordinator. The supervisors reported that in many instances they found it difficult to contact the coordinators at the time they needed to talk to them. They suggested, therefore, that meetings between coordinator and supervisor be made on an appointment basis or at least on a regularly scheduled basis. Supervisors also reported that they would appreciate getting more information from the coordinator about the students' interests and background as well as some feedback on the students' progress in other respects.

Two forms were used during Phase II of the project to evaluate the student. One, the task list (discussed above), was developed to provide a measure of student performance. Supervisors were to check, on a daily basis, all tasks which the student accomplished successfully. This form was also designed to provide a record of the frequency with which each task was performed. The other form, called the Employer Performance Report, was developed for use by the supervisor in evaluating student behavior and attitude toward his work. Students were rated by their supervisors at the end of each 10-week grading period on attendance, dependability, initiative, job competence, progress on job, relations with others, and appearance.

The main problem with the procedure for evaluating task performance was that of checking activities on a *daily* basis. In many instances, the lists were long and detailed, and it became quite a burden for a supervisor to sit down and conscientiously go through the list every day. Many supervisors ultimately made the student himself responsible for checking off

his activities on a daily basis, and then the supervisors signed the list at the end of the month. The Employer's Performance Report, on the other hand, was unanimously regarded by the supervisors as adequate to the task of describing student work behavior and attitudes.

Supervisors' Opinions Regarding Student Readiness

Supervisors were then asked to identify ways in which they thought students could have been more adequately prepared for participation in Phase II. It was anticipated that their opinions would provide useful feedback for improving the Phase I curriculum. Most supervisors expressed the feeling, however, that they looked more for good work attitudes and the desire to learn on the part of the students than for abilities in any particular area. As one supervisor expressed it, "It's not necessary for the students to know tasks; they need to come in and get their feet wet." Another expressed the belief that it would not be feasible to provide a core curriculum to a group of students with such varied interests because the tasks which they would need to learn are often unique to a particular field.

Some supervisors, upon reflection, were able to think of general topics worthy of consideration in a preparatory program. These included understanding the functions of the hospital, the psychology of illness, handling patients, work readiness, and professional ethics. Others were able to identify broad areas that are basic to a variety of fields, such as medical terminology, general principles of chemistry and biology, and simple work skills (e.g., how to weigh and read scales). The supervisors also suggested that it would be helpful for them to know the tasks that students could perform before coming to the department, indicating that this would help to get the student involved more quickly in the work. They suggested, too, that supplemental materials which provide some of the theoretical rationale behind task performance would be most useful to the student in moving him along in his area. Without the combination of theoretical and practical experience, they pointed out, the student is limited in his choice of an occupation.

Supervisors' Opinions Regarding Services of the Project Staff

Inasmuch as this was a pilot and demonstration project, it was realized that problems would arise that were not anticipated. Supervisors, therefore, were asked to identify such problem areas and to indicate how the services rendered by the project staff might have been more helpful to them in resolving their problems.

The major problems identified by the supervisors have already been reported above under the various topics to which they apply. Most supervisors, however, said that they thought that many of the conflicts and problems which developed could have been avoided had communication been better between the project team and the hospital personnel. For example, supervisors cited several instances of problems developing and going unresolved because they did not understand what was expected of them. Were students in the department to help with odds and ends, or to be trained? What were the supervisors' responsibilities? Was the student responsible for turning in a time card? To whom? Was the supervisor responsible for discipline? What was the hospital's commitment to this type of training program?

Many aspects of the program specifically depended on the supervisors, and yet often they did not fully understand the program goals. Some, for example, believed that the May exploratory experience was a frustrating one because it was too short a time in which to really work with the students and to teach them something. The May experience, however, was designed primarily to be exploratory with some "hands-on" experience, doing "odds and ends" tasks.

Some other supervisors did not know that Phase II was designed as a structured on-the-job training experience and were wondering what they were expected to accomplish with the students. When problems and questions arose, moreover, they frequently found it difficult to contact the field coordinator and were at a loss as to how to respond to the student. This was particularly true during the summer while many students were working in the department under N.Y.C.

Probably the most serious breakdown in communication and understanding resulted from the lack of availability to the supervisors of any written agreement between the project and the hospital that they could refer to for guidance regarding insurance coverage and hospital responsibility. A definite need was expressed by the supervisors for a policy statement which would cover each of these points in detail. Numerous recommendations were made also for supervisors' inservice training to prepare them for their new role and responsibilities, and for meetings with the hospital administration and project or school staff to clarify the boundaries of responsibility and the extent of their commitment.

General Appraisal of Phase II by the Deputy Director of the Project

The one person who in all likelihood had the most comprehensive relationship to the many facets of Phase II was the Deputy Director of the Project. The evaluation team, therefore, in an interview with him sought his general reactions to the following questions:

1. What do you consider to be the greatest strengths of Phase II of the project?
2. What do you consider to be the greatest weaknesses of Phase II of the project?
3. What recommendations would you make for improving Phase II of the project?

Strengths of Phase II

In the judgment of the Deputy Director, the outstanding strengths of Phase II of the project were these:

1. It contributed strongly to the maturation of student participants; among the chief evidences of their maturation were their greater assumption of responsibility, their greater dependability, their greater adapability to unpleasant situations, and their greater dedication to service.
2. It demonstrated the feasibility of the allied health occupations work experience program in hospitals and the enthusiastic acceptance of the program by hospital personnel involved in supervising the student participants.

Weaknesses of Phase II

Some weaknesses in Phase II of the pilot program were identified by the Deputy Director as being those listed below:

1. Initial immaturity of students in terms of responsibility, dependability, and accountability, resulting in lack of adequate readiness for entry into the world of work
2. Lack of previous experience on the part of some hospital personnel in working with students in a training program.
3. Overly-wide dispersion of the project, making necessary the expenditure of much time in travel to the various hospitals both by the students and project coordinators
4. Understaffing of coordination service from the project office, making it difficult or impossible to deal with all the innumerable problems that arise in a pilot program.

Recommendations for Improving Phase II

Among the recommendations made by the Deputy Director for improving Phase II of the project, the following were particularly stressed:

1. More emphasis should be placed on the pre-service preparation of teachers and supervisory personnel involved in the project.
2. Students should be enabled to be more ready for the world of work before beginning participation in Phase II of the project; development of essential attitudes toward work should be given more emphasis in Phase I than thus far has been the case.
3. Orientation workshops should be given to hospital personnel prior to the beginning of Phase II, so that goals, expectations, responsibilities, limitations, and interrelationships of school, hospital, and project coordinators may be identified and clarified; hospital administrators, department heads, supervisors, clinical instructors, *et al.* should be present.
4. Inservice education workshops and training institutes should be made available to all teachers and hospital personnel who are involved in the project.
5. The school principal, counselor, teacher, and field coordinator, together with the hospital supervisor, must act as a *team* in serving students who participate in the project.

6. Hospitals which are selected for participation in the project should be reasonably close to the schools they work with, so that accessibility to the students is facilitated.

7. Choices of work assignments by students in Phase II should be less "free"; the assignment must be based not only on interests but also on needs, opportunities, requirements, and rewards.

STUDENT PROGRESS TOWARD ACHIEVEMENT OF PERFORMANCE OBJECTIVES

In this section of the report, data regarding student progress toward achievement of the performance objectives of the Secondary Schools Pilot Project are presented under the following headings:

1. Students' self-evaluation of progress
2. Parents' evaluation of students' progress
3. Evidence of progress toward achieving vocational maturity
4. Evidence of progress in developing skills and behaviors essential to working in the health-care system

Students' Self-Evaluation of Progress

One important measure of students' progress may be found in their own self-assessments of achievement, and so such assessments were obtained for each of the following performance objectives of the project:

Ability to tell what workers do in several allied health occupations

Ability to explain steps necessary to enter an allied health job

Ability to make a wise vocational choice

Demonstration of knowledge about how health-care facilities operate

Ability to perform basic skills in selected allied health occupations

Ability to identify and describe the functions of specific equipment used in the health-care system

Demonstration of behavior appropriate to the world of work (dependability, attendance, personal appearance, etc.)

Ability to maintain own health through the use of appropriate health care

Ability to refer family and friends to appropriate health-care facilities.

Students were asked to evaluate their progress toward the achievement of each of the objectives by checking any one of the following responses (See Appendix D, pp. 83-85):

None
Little
Quite a bit
Much
Don't know

As had been the case at the conclusion of Phase I of the program, so again at the conclusion of Phase II of the program, the mean evaluation given by the students to each of the performance objectives was that *quite a bit* of progress had been made in the achievement thereof.

The rank order of the objectives in terms of the students' opinions regarding their progress in achieving them is shown in Table IX for both Phase I and Phase II of the project. It may be noted in the table that the students ranked the following objectives as being the ones on which they had made greatest progress during Phase II of the project:

Demonstration of knowledge about how health-care facilities operate

Ability to tell what workers do in several allied health occupations

Ability to perform basic skills in selected allied health occupations

Ability to explain steps necessary to enter an allied health job

During Phase I of the project the students had ranked the following objectives as being the ones on which they had made greatest progress:

Demonstration of knowledge about how health-care facilities operate

Table IX

Rank Order of Performance Objectives in Terms of Students' Opinions Regarding Their Progress in Achieving Them *

Performance Objectives	Rank Order	
	Phase I	Phase II
Ability to tell what workers do in several allied health occupations	2.5	2
Ability to explain steps necessary to enter an allied health job	8.5	4
Ability to make a wise vocational choice	4.5	7
Demonstration of knowledge about how health-care facilities operate	1	1
Ability to perform basic skills in selected allied health occupations	2.5	3
Ability to identify and describe the functions of specific equipment used in the health-care system	8.5	8
Demonstration of behavior appropriate to the world of work (dependability, attendance, personal appearance, etc.)	4.5	9
Ability to maintain own health through the use of appropriate health care	7	6
Ability to refer family and friends to appropriate health-care facilities	6	5

* Students expressed the opinion that they had made quite a bit of progress toward the achievement of each of these objectives during Phase I and again during Phase II. The rank order presented in this table must be interpreted within that context.

Ability to tell what workers do in several allied health occupations

Ability to perform basic skills in selected allied health occupations

Ability to make a wise vocational choice

Demonstration of behavior appropriate to the world of work

Parents' Evaluation of Student's Progress

Parents of students participating in Phase II of the project were asked to assess their children's progress toward achieving the performance objectives. For each of the objectives they were requested to check one of the following evaluative comments regarding such progress:

None
Little
Quite a bit
Much
Don't know

As had been the case with regard to Phase I of the project, tabulation of the parents' responses indicated that their mean evaluation of progress made by their children on every one of the objectives during Phase II was *quite a bit*. Table X shows the rank order of the objectives in terms of the parents' opinions regarding their children's progress in achieving them during Phase I and during Phase II of the program.

It is apparent from the rankings shown in the following table that parents believed that Phase I contributed most to their children's progress on these personal-family-consumer-health objectives:

Ability to maintain own health through the use of appropriate health care

Ability to refer family and friends to appropriate health-care facilities

As well might be expected because of the nature of Phase II of the program, parents believed that this part of the project contributed most to their children's progress on these vocational health objectives:

Table X

Rank Order of Performance Objectives in Terms of Parents' Opinions Regarding Their Children's Progress in Achieving Them *

Performance Objectives	Rank Order	
	Phase I	Phase II
Ability to tell what workers do in several allied health occupations	8	1
Ability to explain steps necessary to enter an allied health job	8	7
Ability to make a wise vocational choice	8	2
Demonstration of knowledge about how health-care facilities operate	5	8.5
Ability to perform basic skills in selected allied health occupations	4	4.5
Ability to identify and describe the functions of specific equipment used in the health-care system	6	8.5
Demonstration of behavior appropriate to the world of work (dependability, attendance, personal appearance, etc.)	3	4.5
Ability to maintain own health through the use of appropriate health care	1	4.5
Ability to refer family and friends to appropriate health-care facilities	2	4.5

*Parents expressed the opinion that their children had made quite a bit of progress toward the achievement of each of these objectives during both Phase I and Phase II of the program. The rank order presented in this table must be interpreted within this context.

Ability to tell what workers do in several allied health occupations

Ability to make a wise vocational choice

In addition to the aforementioned written assessments of the program, oral assessments were also obtained from parents. The latter assessments were obtained in a series of conferences held by project staff members with parents at each of the four high schools involved in the program. Typical quotations from secretarial records of these conferences are presented below to indicate parental reaction to the program:

Mrs. H. stated that the program is beautiful. She said that it has helped her daughter to decide on an area to train in. At the beginning she thought that it would just be classes, but it has turned out to be more than she expected. She thinks her daughter is doing beautifully.

Mrs. O. said that her daughter would stay in the program even if the stipend were ended.

Mrs. G. said that this is a good program. It lets the students know what working is all about — not only earning money but learning the value of work. She thinks the program has settled her son down a little.

Mrs. F. thinks the program has really taught the value of money. Her son had thought it grew on trees.

Mrs. H. feels that the money helps to motivate the students and give them a greater desire to work but that if the stipend ended, her daughter would stay in the program.

Mrs. L. said that the experience has been very helpful to her son and that if the small stipend stopped, he would not. He genuinely likes what he is doing; he even works week-ends and holidays.

Mrs. B. said that the program is excellent, because it has made several changes in her son. He now has more interest in school and does his homework after he comes home from the hospital instead of running the streets. As a result of this, his grades have improved.

Evidence of Progress Toward Achieving Vocational Maturity

Although considerable evidence of student progress in achieving vocational maturity is reflected in Tables IX and X (pages 38 and 40), additional evidence was gained through the use of the *Vocational Development Inventory*, a fifty-item attitude scale developed by John O. Crites at the University of Iowa. The scale consists of statements about an adolescent's (1) involvement in the process of vocational choice, (2) orientation toward the problem of vocational choice, (3) independence in decision making, (4) preference for factors in vocational choice, and (5) conceptions of vocational choice. Internal reliability and external validity of the scale have been well established.

This attitude scale was administered as a pre-test and as a post-test to forty-five of the sixty-six students in Phase II of the project. As indicated in Table XI, a comparison of the pre-test scores with the post-test scores reveals that the students made statistically significant gains between the beginning and the conclusion of Phase II. Since these attitudinal gains were greater than might be expected solely as the result of the students' maturation in age, it is reasonable to conclude that the work experiences in Phase II contributed substantially to the students' growth in vocational maturity.

Table XI

Comparison of Pre-Test Scores with Post-Test Scores on the Vocational Development Inventory

	Pre-Test Scores	Post-Test Scores	N	t
Sum	1519.00	1574.00	45	
Mean	33.75	34.98	45	
				2.14 *

* $p \leq .05$, 44 df

Additional evidence of the students' growth in vocational maturity was gained from the use of forms requesting students to write down their occupational plans and to list the steps they would have to take to enter the occupation of their choice. (Appendix D, p. 88) This was done three times during the year, and on each successive occasion definite growth was shown in the maturity and realism of occupational plans. At the end of the year it was found that 100 percent of the students who intended to continue participation in the project wished to be placed, during Phase III, in work assignments which were similar to the ones they had experienced during Phase II. Furthermore, 77 percent of the students predicted that they would desire to continue in the same kind of work after they completed the total program in 1973.

Evidence of Progress in Developing Skills and Behaviors Essential to Working in the Health-Care System

Evidence of student progress in developing skills and behaviors essential to working in the health-care system has already been indicated in Tables IX and X. Additional, and somewhat "harder," evidence was gained from the analysis of the ratings of the students given by their hospital supervisors during the students' work experience in Phase II. These ratings were given at the conclusion of each month on a form designed for that purpose (Appendix G, p. 101). The form provided the supervisors a means for evaluating student growth in attendance, dependability, initiative, job competence, progress on job, relation with others, and appearance. Ratings used by the supervisors ranged from "unsatisfactory" to "excellent."

In Table XII are shown the supervisors' ratings of the students at the conclusion of the first semester of Phase II and at the conclusion of the second semester of Phase II. On the basis of the hospital supervisors' evaluations reported in this table, the following observations may be made regarding student behavior during Phase II:

1. In each of the behavioral characteristics rated by hospital supervisors, students showed improvement during Phase II of the project.
2. Greatest improvement by the students was made in relations with others, job competence, appearance, and initiative.
3. Least improvement and lowest ratings were made in student attendance and dependability, but in even these characteristics mean ratings of "low average" were given.

Table XII

Hospital Supervisors' Ratings of Student Progress During Phase II

Behavioral Characteristics	Ratings *	
	End of 1st Sem.	End of Year
Attendance	2.0	2.1
Dependability	2.2	2.3
Initiative	2.3	2.4
Job Competence	2.3	2.6
Progress on Job	2.4	2.5
Relations with Others	2.5	3.0
Appearance	2.5	2.8

* Excellent = 4
Above average = 3
Average = 2
Needs to improve = 1
Unsatisfactory = 0

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the evaluative study which is reported in this monograph was primarily to describe and to assess the progress which student participants in the UCLA Allied Health Professions Secondary Schools Pilot Project made during Phase II of that project toward achieving the stated goals of the program. This report supplements the 1971 *Evaluative Report on Phase I of the Secondary Schools Project.*

Findings of the Study

The following are the most important findings of the study reported in this volume:

1. Seventy-seven high school juniors (38 males and 39 females) initially enrolled in Phase II of the project (the phase evaluated in this report).
2. Ethnic characteristics of the students who participated in Phase II of the program were as follows: Black (74.2 percent), Mexican-American (19.7 percent), White (4.5 percent), and Asiatic (1.6 percent). Ethnic characteristics of students who had participated in Phase I of the program were these: Black (62 percent), Mexican-American (21 percent), White (11 percent), Asiatic (5 percent), and not recorded (1 percent).
3. The ability levels of students who participated in Phase II of the program were the following: upper ability (14.3 percent), middle ability (68.8 percent), and lower ability (16.9 percent). The ability levels of students who had participated in Phase I of the program were these: upper ability (16 percent), middle ability (60 percent), and lower ability (24 percent).
4. Student work experiences during Phase II of the program were carried on in fifteen different hospital departments; largest numbers of students worked in these departments: nursing (23), X-ray (10), Clinical Laboratory (6), Physical Therapy (4), Pharmacy (3), and Social Work (3).
5. Grade-point averages of students who participated in the project improved from 2.4 in September, 1970, to 2.5 in June, 1972 (end of Phase II); grade-point averages of the control group of students (non-participants in program) declined from 2.5 in September, 1970, to 2.3 in June, 1972.

6. The percentage of students in the program who dropped out of school during the first two years of the project (Phase I and Phase II) was 2.6 percent; the percentage of students in the control group who dropped out of school during that period was 8.9 percent.

7. The percentage of students in the program who transferred to another school during the first two years of the project was 16.7; the percentage of students in the control group who transferred to another school during the same period was 34.2.

8. Students in the program were absent from school a total of 34.7 days during the two years of the project: students in the control group were absent from school a total of 34.1 days during the same period.

9. In free-response written comments concerning what they liked best and what they liked least about their experiences in Phase II of the project, students expressed almost entirely positive reactions; but a few negative comments were made about work that was either monotonous or dull.

10. The reasons why a total of eleven students discontinued participation in Phase II of the program were these: Dropped out of school (2); Transferred to another school (2); Took another job (2); Gave more time to school sports (1); Had to give more time to family work (1); Had to meet a specific academic requirement (1); Took another medical course (1); and No longer interested in health-care occupation (1).

11. The thirty-two hospital supervisors who were interviewed regarding their reactions to Phase II of the Secondary Schools Pilot Project expressed strong support of the program in general, but they suggested the following improvements: that they be given more orientation and inservice education relative to their roles in the project; that expectations and delimitations of the program be specifically detailed in a written policy statement; that lists of tasks to be learned by students be more definitely specified; that more background information about the students be provided to the hospital supervisors; that during Phase I of the project greater emphasis be placed on the students' development of attitudes and behaviors which are essential to the world of work, such as accountability, dependability, and good attendance; and that at all times greater communication be maintained between the project coordinator and hospital personnel.

12. The Deputy Director of Phase II of the Secondary Schools Pilot Project evaluated the program during this phase as being strongly contributory to student maturation, especially with regard to attitudes and behaviors essential to success in the world of work; and he considered a major value of the project to be the fact that it demonstrated the feasibility and acceptability of the allied health occupations work experience program in hospitals. Among his suggestions for improving the program were these: that students be better prepared for the world of work during Phase I of the project, before beginning participation in Phase II; that orientation and inservice education be provided hospital personnel who are involved in the project; that greater communication be maintained between the project staff and hospital personnel; that hospitals which are selected for participation in the project should be reasonably close to the schools they work with, so that accessibility may be facilitated; and that work assignments of students in Phase II should be based not only on their interest but also on their needs and on job opportunities, requirements, and rewards.

13. Students in Phase II of the project rated their progress on each of the nine performance objectives as being "quite a bit" (next to the highest rating). The greatest improvement, from Phase I to Phase II, in the *rank order* of ratings of progress on these objectives was given to the "ability to explain steps necessary to enter an allied health job" (from 8.5 to 4).

14. Parents rated their children's progress during Phase II on each of the nine performance objectives as being "quite a bit" (next to the highest rating). The greatest improvement, from Phase I to Phase II, in the *rank order* of ratings of progress on these objectives was given to the "ability to tell what workers do in several allied health occupations" (from 8 to 1) and to the "ability to make a wise vocational choice" (from 8 to 2).

15. In oral comments regarding Phase II of the project, parents were strongly commendatory; and they expressed the opinion that even if no stipends for students were involved, their children would have been enthusiastic about the program.

16. Between the beginning of Phase II and the end of Phase II, statistically significant gains were made by the students in their mean scores on the *Vocational Maturity Inventory* (a standardized attitude scale developed by John O. Crites).

17. At the conclusion of Phase II of the project. 100 percent of the students who planned to continue participation in the project during Phase III (in 1972-1973) expressed their interest in being given work assignments in the same hospital departments in which they had worked during Phase II; and 77 percent of the students predicted that they would desire to continue in the same kind of work after they completed the final phase of the project.

18. Hospital supervisors' ratings of seven behavioral characteristics of students during Phase II indicated that between the end of the first semester and the end of the year students had improved in each one of the characteristics.

19. Behavioral characteristics of students rated lowest (low average) by hospital supervisors during Phase II were "attendance" and "dependability."

20. Behavioral characteristics of students rated highest (above average or high average) by hospital supervisors during Phase II were "relations with others," "appearance," and "job competence."

Conclusions

To the extent that the findings of this study are valid, the following conclusions may be justified:

1. During Phase II of the program, continuing student progress toward achievement of each of the following performance objectives of the Secondary Schools Project was made to a satisfactory extent or better:

   Ability to tell what workers do in several allied health occupations

   Ability to make a wise vocational choice

   Ability to explain steps necessary to enter an allied health job

   Demonstration of knowledge about how health-care facilities operate

   Ability to maintain own health through the use of appropriate health care

   Ability to refer family and friends to appropriate health-care facilities

   Ability to perform basic skills in selected allied health occupations

   Ability to identify and describe the functions of specific equipment used in the health-care system

   Demonstration of behavior appropriate to the world of work (dependability, attendance, personal appearance, etc.)

2. The ethnic composition of Phase II students was appreciably different from that of Phase I students; a considerably larger percentage of Blacks and Mexican-Americans and a considerably smaller percentage of Whites and Asiatics were enrolled in Phase II of the program than had been enrolled in Phase I.

3. The ability levels of students in Phase II of the project were somewhat less diverse than they had been in Phase I; a larger percentage of students of middle-level ability and a smaller percentage of students of either upper-level or lower-level ability were enrolled in Phase II of the program than had been enrolled in Phase I.

4. There was a positive relationship between the students' participation in Phase II of the program and their grade-point averages; this correlation was similar to that which was identified in Phase I.

5. Students who participated in the project were appreciably less likely to drop out of school or to transfer to another school than were non-participants in a control group.

6. Enthusiasm regarding the nature and outcomes of Phase II of the Secondary Schools Pilot Project was widely expressed by the student participants in the project, by their parents, and by hospital personnel who supervised the students' work.

7. The hospital supervisors and the Deputy Director of the Secondary Schools Project were in nearly complete agreement as to what improvements should be made in the operation of Phase II of the program. Among the needed improvements they agreed upon, the most important were the following: increased preparation of students, during Phase I, for accountability regarding absence from work; increased emphasis on orientation of hospital personnel to the program; provision of preservice and in-service education of hospital personnel involved in the program; increased communication between hospital personnel and project coordinators; and development of clear and specific statements of expectations of functions to be performed by hospital personnel in the performance of their student training function.

Recommendations

On the basis of the findings and conclusions of this study, the following recommendations are made:

1. That Phase II of the UCLA AHPP Secondary Schools Pilot Project serve as a model for the second year program of similar projects in other high schools throughout the United States.

2. That the concepts and practices underlying Phase II (as well as Phase I) of the UCLA AHPP Secondary Schools Pilot Project, relative to establishing close interrelationships between education and the world of work, be experimentally applied to a number of other occupational fields in addition to that of health-care services.

3. That in subsequent offerings of Phase II of the UCLA AHPP Secondary Schools Pilot Project, the following steps be taken:

   (a) Criteria for assignments of students to work experiences in health-care facilities should be more clearly specified. Among the criteria should be not only student interest but also student maturity, student need, job opportunities, and job requirements.

   (b) Greater emphasis should be placed on the orientation, preservice education, and inservice education of hospital personnel involved in the occupational training of students.

   (c) Closer and more continuous communication between the project staff and hospital personnel should be developed and maintained.

   (d) The occupational training experiences of students should be more fully structured and should be based on lists of tasks related to each of the health-care occupations to which the students are assigned.

   (e) Responsibilities and performance expectations of students, hospital supervisors, project coordinators, and all other personnel involved in the successful operation of this phase of the program should be more clearly and specifically detailed.

4. That in Phase III of the UCLA AHPP Secondary Schools Pilot Project (1972-1973), the findings of this study serve as an important basis for both corrective and developmental activity in the further achievement of the performance objectives of the total program.

APPENDICES

APPENDIX A

TRAINING INSTITUTE PROGRAMS

CAREERS IN HEALTH OCCUPATIONS PROGRAMS SEMINAR

California State Department of Education
Bureau of Industrial Education
UCLA Division of Vocational Education
Secondary Schools Allied Health Professions Project
Allied Health Professions Project Conference Room
1003 Wilshire Boulevard
Santa Monica, California 90401

April 5, 1972
9:00 AM — 5:00 PM

A G E N D A

8:30 — 9:00	Coffee
9:00 — 9:10	Introductions — Diane Watson, Specialist, Bureau of Industrial Education
9:10 — 9:30	Overview of Careers in Health Occupations Program Model
	Evaluation Rationale — Dr. Clarence Fielstra, Director of Evaluation, Secondary Schools Allied Health Pilot and Demonstration Project
9:30 — 10:00	Implementing the "Careers in Health Services Occupations Program"
	Modifying Model to Meet School District Objectives
	Establishing Advisory Committee
10:00 — 10:10	Coffee Break
10:10 — 10:30	Organization of Students — Bill Hudson, Deputy Director, Secondary Schools Allied Health Pilot and Demonstration Project
	Recruiting — Selection — Scheduling
10:30 — 11:00	Organization of School and Community — Bill Hudson, Gregory Threadgill, Field Coordinator, Secondary Schools Allied Health Pilot and Demonstration Project
	Personnel — Facilities — Parents — Community — Transportation — Field Trips — Tutorial Program — Dr. Barbara Rosenquist Chrispin
11:00 — 12:00	Medical Facility Organization — Jeff Reyes, Larry Hagman, Assistant Coordinators, Secondary Schools Allied Health Pilot and Demonstration Project, Bill Hudson, Gregory Threadgill, Resource People
	Selection of Medical Facilities — Personnel — Student Orientation — Hospital Personnel Orientation — Clinical Instructor Training

	Work Agreements — Contracts — Malpractice Insurance — Workmen's Compensation — Dr. Miles Anderson, Acting Director, Allied Health Professions Project
12:00 — 12:30	Developing an Evaluation Model — Dr. Barbara Rosenquist Chrispin, Evaluation Assistant, Secondary Schools Allied Health Pilot and Demonstration Project
	Procedure — Data Collection and Analysis — Results
12:30 — 1:00	Lunch
1:00 — 4:00	Utilization of Course of Study for Phase I — Jerry Epstein, Writer, Jeff Reyes, Secondary Schools Allied Health Pilot and Demonstration Project, Marcelin Fortain, Resource Person
	Philosophy and Design
	Modules — Purpose — Objectives — Procedures — Suggested Time — Teacher and Student Activities — Instructional Materials — Student Workbook
	Exploratory Work Experience
4:00 — 4:30	Seminar Summation and Seminar Evaluation
4:30 — 5:00	Planning for Subsequent Workshops Distribute Program Guide for Review
5:00 — 5:00	Adjournment

PRE-SERVICE TRAINING INSTITUTE FOR

SECONDARY SCHOOLS ALLIED HEALTH INSTRUCTORS

August 1, 2, and 3, 1972

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Division of Vocational Education
Allied Health Professions Project
Secondary Schools Program

In cooperation with

CALIFORNIA STATE DEPARTMENT OF EDUCATION
Bureau of Industrial Education and Professional
Development program Services Unit

and

ST. JOHNS HOSPITAL
Santa Monica, California

This program funded through Grant No. 19-30049-EF073-73 from the United States Office of Education, Educational Professional Development Administration, and the Professional Development Program Services Unit, Vocational Education Section, California State Department of Education

Pre-Service Training Institute for Secondary Schools
Allied Health Instructors

Tuesday, August 1, 1972

7:45 AM	Pick up	Front of Miramar Hotel
8:00-8:30	*Orientation*	St. John's Hospital In-Service Training Room C and D

Greetings and Introductions — Dr. Melvin L. Barlow, Director, Division of Vocational Education

Brief Report on California's Careers In Health Services Programs — Diane E. Watson, Specialist, Health Occupations, Bureau of Industrial Education

Institute Purpose and Objectives — Dr. Miles Anderson, Acting Director, Allied Health Professions Project

8:30-9:30 *Presentation* — Jerome Epstein, Curriculum Specialist, Secondary Schools Pilot and Demonstration Project

First Year Introduction to Allied Health Careers Curriculum
Sample Case II — Broken Leg (Fracture of the Tibia)

Purpose
Objectives
Procedures
Profile
Tasks — Their relationship to occupations and theory

9:30-10:30 *Hospital Observation* — Emergency Room, Admissions

10:30-10:45 Break

10:45-11:00 *Presentation* In-Service Training Room C and D

Actual Medical Record of a Broken Leg Case — Jerome Epstein

11:00-12:00 *"How to Teach a Task"* — Dr. Miles Anderson

12:00-1:00 Lunch

1:00-3:00 *Demonstration of Task Instruction* — Ken Daniel, First Aid Instructor, American Red Cross

Basic First Aid

Treatment for Shock
Splint Application
Sling for Broken Arm

Placing Patient on Guerney and Transporting (Film will be shown)

Individual Instruction and Practice

Feed-back Session

Wednesday, August 2, 1972

7:45 AM	Pick up	Front of [illegible] Hotel
8:00-8:15	*Presentation* — [illegible]	
	Actual medical record of a broken leg case (X-ray requested)	
8:15-9:00	*Lecture* — Larry Erdman, R.T., Supervisory of Radiology, St. John's Hospital	
	Purpose of X-rays Danger of overexposure to radiation X-ray procedures	
9:00-10:00	*Hospital Observation* — Radiology Department, Physical Therapy Department (Hydrotherapy)	
10:00-10:30	*Lecture*	
	Sample of X-rays (good and bad)	
10:30-12:00	*Demonstration of Task Instruction*	
	Loading a cassette Measuring with a centimeter Ruler	
12:00-1:00	Lunch	
1:00-3:00	*Demonstration of Task Instruction* — Joseph Rossi, R.P.T. Supervisor of P.T., Sharri Brient, R.P.T., St. John's Hospital	
	Walking on Crutches	
	Individual Instruction and Practice	
	Feedback Session	

Thursday, August 3, 1972

7:45 AM	Pick up	Front of Miramar Hotel
8:00-8:10	*Discussion*	

Resources for Task Instruction

Guest Lecturers
School Nurse/School Doctor
Clinical Site Instruction
Classroom Teacher
Audio-visuals

8:10-8:30 *Lecture* — Lucile Wood, Associate Director of Nursing, Allied Health Professions Project

Role of the Orderly
Role of the Aide
Role of the LVN
Role of the RN

Educational requirements

8:30-9:00 *Presentation* — Jerome Epstein

Actual medical record of a broken leg case

9:00-10:00 *Hospital Observation* — Nursing floors

10:00-10:15 Break

10:15-12:00 *Demonstration of Task Instruction* — June Huddleson, RN, Hospital Occupations Program Director, Monroe High School, Granada Hills

Handwashing

Taking and Recording Vital Signs

Temperature
Respiration
Pulse
Blood Pressure

12:00-1:00 Lunch

1:00-2:00 *Individual Instruction and Practice*

2:00-3:00 *Wrap-up and Evaluation Session*

APPENDIX B

EXAMPLES OF TASK LISTS

University of California. Los Angeles
Division of Vocational Education
Allied Health Professions Projects
Secondary School Allied Health Program

PHASES II AND III, NURSING WORK EXPERIENCE TRAINING PROGRAM

Required Reference Manual: Wood, Nursing Skills for Allied Health Service, I and II, Philadelphia: W.B. Saunders Co., 1972 ($10.00)

INSTRUCTIONS TO STUDENT

Before undertaking any task in the hospital, the student must review the legal and ethical aspects related to the job of nurse, safety practices, and the basic guidelines governing nursing practices. Study of the following topics in *Nursing Skills for Allied Health Services* until all test questions can be answered correctly is required.

1. The Health Worker and the Law, Unit 1, p. 1-10
2. Introduction to Ethics in the Healing Arts, Unit 2, p. 11-26
3. Environment and the Patient, Unit 3, p. 27-40
4. Guidelines for Performance of Nursing Skills, Unit 4, p. 41-52
5. Body Alignment, Balance, and Movement for Health Workers, Units 5 and 6, p. 53-98
6. Introduction to Charting, Unit 7, p. 99-122

The following tasks are listed starting with those that are simple and easy to learn, becoming more difficult as you progress. However, in the work experience training program it is not possible to follow this ideal arrangement, and you will often be called on to assist with or learn to do tasks that are more advanced before you complete all the simpler ones. This is normal in on-the-job training as there is no way to predict in advance what tasks must be learned immediately, as they are being done constantly in connection with almost every thing you do.

It is important for you to keep an accurate record of all the tasks you learn. It enables you and your supervisor to know what you have learned and what you still have to learn at any given time, and also serves as a valuable reference when seeking credit if you decide to go to college for further training, or when applying at the employment office for a job when you graduate from school.

When your supervisor or instructor is satisfied with your performance of a task, and you have correctly answered all the self-test questions about the task, have her sign and date the blank space by the task number. Patient care tasks must be performed with real patients in the hospital or health care facility. Simulated exercises in the nursing classroom are *not* acceptable. It is your responsibility to see that every task you learn is signed off in your record booklet. It is the *only* proof you will have of the work you have accomplished. Keep it with you at all times, and *do not lose it.*

The required instruction manuals, Nursing Skills for Allied Health Services, are a most essential part of your training program. Every task you see listed in your record book on the following pages is explained in detail, step-by-step, with illustrations, in the instruction manuals. The Unit number

shown for each task refers to a unit of instruction in the manuals. They can be quickly found by following the grey unit number identification blocks printed on the right hand edges of the pages in the manuals. The following instructions will help you get the most out of the materials, as you will be able to learn the "why" as well as the "how" of each task you do.

1. Study Units 1 through 7 at home and do your best to answer the self-test questions at the end of each unit. As with all of your work and study, if you read something that puzzles you, ask your supervisor to explain it to you.

2. All the tasks in your nursing course are explained and illustrated in your manuals, but never assume that because you have read the instructions in the manual you are ready to perform the task. First, your supervisor or instructor will demonstrate how to perform it, step-by-step, explaining as she proceeds. Then she will have you try it, giving you help and correcting your errors if you start to make any, and will have you repeat the task until she is satisfied with your ability to perform it. The purpose of the instructions in the manual is to enable her to teach you more quickly and thoroughly, and thus save time for both of you. Here is how it works. If you find out in advance that your supervisor plans to let you start learning a new task the following day, or within a day or two, look up that task in your manual and read the instructions that explain how to do it and why. It is a good idea to read the entire unit. For example, Unit 17 deals with feeding the patient, and there are 8 tasks in the unit. You can get a good overall understanding of patient nutrition by reading the entire unit, which is only 15 pages. Check on your understanding of the unit by writing the answers to the "Post Test" without looking at the answers on the opposite page, then check your answers with the correct ones and see how well you did. On those you missed, look back in the unit and see where you slipped up. Now, when your supervisor demonstrates to you how to perform the task, you will be able to follow her steps and explanations much more quickly, and will have a better background understanding of the "whys" of the task from your reading about it in the manual. The manual is a teaching aid for your instructor, enabling her to help you learn more, in less time, and remember it better, but it is never a substitute for an instructor. It is when you actually do the task under her supervision that you really learn how to perform correctly.

3. If your supervisor cannot let you know in advance what task you will be taught next, follow her demonstration closely, and listen to every word of explanation, then when you undertake to do it under her supervision, do your best to remember every step and key point and perform to the best of your ability. Then later, when you have an opportunity to do so, look up the task in your manual and review it carefully to impress the steps and key points in your mind, and to become familiar with any new words you learned so you will be able to recognize them in print. Answer the test questions as explained above.

4. The key to rapid progress in nursing is the extent to which you are willing to ACCEPT RESPONSIBILITY. No one has to tell a professional nurse to regularly read the articles in the nursing journals to keep up to date. She does it as part of her professional responsibility to be able to give the best possible care to her patients. Start now to develop the habit of reading about nursing by reading your manuals without being told to do so, and at every opportunity, pick up copies of nursing magazines and journals and read them. The more you read, the better you will be at doing it, and it will become a skill that will be useful to you all your professional life.

A. Hand Washing and Making Hospital Beds

_____1. Hand washing technique for medical asepsis (Unit 8)
_____2. Make an unoccupied bed (Unit 9)
_____3. Adjust a bed to various positions (Unit 9)
_____4. Prepare the bed and unit for the patient (Unit 9)
_____5. Make an anesthetic or surgical bed (Unit 9)
_____6. Make an occupied bed (Unit 9)

B. Giving the Patient Personal Care

_____ 7. Assist patient to dress and undress (Unit 10)
_____ 8. Give patient a partial bath (Unit 11)
_____ 9. Give patient cleansing bath (Unit 11)
_____10. Give patient a medicated bath (Unit 11)
_____11. Give patient a therapeutic bath (Unit 11)
_____12. Give patient a sitz bath (Unit 11)
_____13. Give patient a back rub (Unit 11)
_____14. Comb and brush patient's hair (Unit 12)
_____15. Shampoo patient's hair (Unit 2)
_____16. Give patient stretcher shampoo (Unit 12)
_____17. Care for an incontinent patient (Unit 13)
_____18. Give skin care for patient who is in one position for a long time (Unit 13)
_____19. Care for patient with colostomy or ileostomy appliances (Unit 13)
_____20. Care for patient's fingernails and toenails (Unit 13)

C. Helping the Patient Ambulate

_____21. Give patient passive range-of-motion exercises (Unit 14)
_____22. Assist patient to dangle legs (Unit 14)
_____23. Assist patient to walk (Unit 14)
_____24. Assist patient from bed to wheelchair (Unit 15)
_____25. Assist (with help) helpless patient from bed to wheelchair (Unit 15)
_____26. Assist patient to use walker (Unit 15)
_____27. Fit crutches to patient (Unit 15)
_____28. Assist patient to walk with crutches (3-point gait) (Unit 15)
_____29. Assist patient to walk with crutches (4-point gait) (Unit 15)
_____30. Assist patient to walk with crutches (2-point gait) (Unit 15)
_____31. Assist patient to put on back brace (Unit 15)
_____32. Assist patient to put on long leg brace (Unit 15)
_____33. Assist patient to put on short leg brace (Unit 15)
_____34. Assist in transferring patient from bed to wheelchair using Hoyer lift or similar device (Unit 15)
_____35. Assist patient to learn special skills for crutch walking (stairs, opening doors) (Unit 15)

D. Positioning the Patient in bed

_____36. Place patient in supine position (Unit 16)
_____37. Place patient in lateral and Sims' position (Unit 16)
_____38. Place patient in prone position (Unit 16)
_____39. Place patient in Fowler's position (Unit 16)
_____40. Place patient in semi-Fowler's position (Unit 16)
_____41. Place patient in Trendelenburg's position (Unit 16)
_____42. Move patient toward head of bed (Unit 16)

E. Assisting the Patient with Meals

_____43. Prepare patient for meal (Unit 17)
_____44. Serve diet tray (Unit 17)
_____45. Feed an adult patient (Unit 17)
_____46. Feed a blind patient (Unit 17)
_____47. Remove diet tray and clean up area (Unit 17)
_____48. Feed infant (to 2 rs. age) (Unit 17)
_____49. Feed toddler (18-26 mos. age) (Unit 17)
_____50. Feed pre-school child (3-6 yrs.) (Unit 17)

F. Measuring Patient Fluid Intake and Output

_____51. Measure urine output (Unit 18)
_____52. Observe and assist with intravenous therapy (Unit 19)
_____53. Assist with spiritual care (Unit 20)

G. Helping the Patient with Urine Elimination

_____54. Assist the patient to use the bed pan (Unit 21)
_____55. Assist the patient to use the female urinal (Unit 21)
_____56. Assist the patient to use the fracture pan (Unit 21)
_____57. Assist the patient to use the male urinal (Unit 21)
_____58. Assist the patient to use the male urinal (Unit 21)

H. Collecting Urine Specimens for Dianostic Tests

_____59. Collect routine urine specimen (Unit 21)
_____60. Collect mid-stream or clean-catch urine specimen (Unit 21)
_____61. Do a 24-hour urine collection (Unit 21)
_____62. Do a timed urine collection (Unit 21)

I. Doing Common Tests for Sugar and Acetone in Urine

_____63. Do a Clinitest urine test for sugar (Unit 21)
_____64. Do a Tes-Tape urine test for sugar (Unit 21)
_____65. Do an Acetest urine test for acteone (Unit 21)
_____66. Do a Ketostix urine test for acetone (Unit 21)
_____67. Do a Keto-Diastix test for sugar and acetone (Unit 21)
_____68. Collect urine from a Foley catheter (Unit 21)

J. Assisting Patient with Bowel Elimination

_____69. Remove fecal impaction (Unit 22)
_____70. Insert rectal suppository (Unit 22)
_____71. Collect a stool specimen (Unit 22)
_____72. Give patient a cleansing enema (Unit 22)
_____73. Give patient a retention enema (Unit 22)
_____74. Give patient a Harris flush (Unit 22)
_____75. Irrigate a colostomy (Unit 22)

K. Collection of Sputum and Gastric Specimens

_____76. Collect a sputum specimen (Unit 23)
_____77. Care for a vomiting patient (Unit 23)
_____78. Collect a gastric content specimen (Unit 23)

L. Perineal Care, Care of Patient with Gastrointestinal Tubes

_____79. Give perineal care for female patient (Unit 24)
_____80. Give perineal care for male patient (Unit 24)
_____81. Assist in insertion of gastric tube for drainage purposes (Unit 25)
_____82. Assist in insertion of intestinal tubes for drainage purposes (Unit 25)
_____83. Assist in insertion of tube for gastric analysis (Unit 25)
_____84. Assist in gastric gavage feeding of patient (Unit 25)
_____85. Assist in gastrostomy feeding of patient (Unit 25)
_____86. Assist in enterostomy feeding of patient (Unit 25)
_____87. Assist in proctoclysis or feeding through colon (Unit 25)
_____88. Empty and measure the contents of drainage bottles (Unit 25)

M. Measuring Temperature, Pulse, Respiration, Blood Pressure

_____89. Measure patient's temperature with oral thermometer (Unit 26)
_____90. Measure patient's temperature with rectal thermometer (Unit 26)
_____91. Measure patient's temperature by the axillary method (Unit 26)
_____92. Measure the patient's pulse, radial (Unit 26)
_____93. Measure patient's pulse, temporal (Unit 26)
_____94. Measure patient's pulse, femoral (Unit 26)
_____95. Measure patient's apical pulse rate (Unit 26)
_____96. Measure patient's respiration rate (Unit 26)
_____97. Measure patient's blood pressure (Unit 26)

N. Admitting, Transferring, and Discharging Patients

_____ 98. Prepare patient's room for new admittance (Unit 27)
_____ 99. Admit patient to his room (Unit 27)
_____100. Transfer patient from one bed or room to another (Unit 27)
_____101. Discharge patient (Unit 27)
_____102. Care for dying patient (Unit 28)
_____103. Give postmortem care for patient (Unit 28)

O. Care of Patients Receiving Oxygen Therapy

_____104. Give patient oxygen by nasal catheter (Unit 29)
_____105. Give patient oxygen by face mask (Unit 29)
_____106. Give patient oxygen by tent (Unit 29)
_____107. Care for patient receiving oxygen by Intermittent Positive Pressure (IPPB) (Unit 29)
_____108. Give nursing care for patient receiving oxygen (Unit 29)

P. Cardiopulmonary Resuscitation

_____109. Give mouth to mouth resuscitation (Unit 30)
_____110. Give cardiac compression (Unit 30)

Q. Assisting with Hot and Cold Applications

_____111. Apply hot water bottle to patient (Unit 31)
_____112. Apply disposable hot pack to patient (Unit 31)
_____113. Apply ice bag or ice collar to patient (Unit 31)
_____114. Apply disposable cold pack to patient (Unit 31)
_____115. Apply electric heating pad to patient (Unit 31)
_____116. Apply heat cradle to patient (Unit 31)
_____117. Give patient hypothermia treatment (Unit 31)
_____118. Apply aquathermia pad (hypothermia/hyperthermia) to patient for local treatment (Unit 31)

R. Operating Patient Turning Frames

_____119. Set up and transfer patient to Stryker frame (Unit 31)
_____120. Help patient with bedpan on Stryker frame (Unit 31)
_____121. Set up and transfer patient to Circ-O-Lectric bed (Unit 31)
_____122. Turn the patient to a prone position on a Circ-O-Lectric bed (Unit 31)
_____123. Help patient with bedpan in a Circ-O-Lectric bed (Unit 31)
_____124. Adjust positions of the Circ-O-Lectric bed (Unit 31)

S. Applying Patient Restraints

_____125. Apply a limb-holder or wrist-type restraint to patient (Unit 31)
_____126. Apply a jacket restraint to patient (Unit 31)
_____127. Apply an elbow restraint on an infant (Unit 31)
_____128. Apply a safety belt or restraint strap to patient (Unit 31)

T. Applying Bandages and Binders

_____129. Apply a circular bandage to patient's limb (Unit 32)
_____130. Apply a Figure-8 bandage to patient's limb (Unit 32)
_____131. Apply an Ace (elastic) spiral bandage to patient's limb (Unit 32)
_____132. Apply a spiral reverse bandage to patient's limb (Unit 32)
_____133. Apply a recurrent bandage to amputee's stump (Unit 32)
_____134. Apply a Scultetus binder to patient's abdomen (Unit 32)
_____135. Apply a straight binder to patient's abdomen or chest (Unit 32)
_____136. Apply a T-Binder or Double T-Binder to patient's perineal area (Unit 32)
_____137. Apply a sling (triangular) bandage to support patient's arm (Unit 32)

U. Pre-Operative Care of Patient

_____138. Give patient day-before-surgery care (Unit 33)
_____139. Give patient day-of-surgery care (Unit 33)
_____140. Obtain consents and releases (Unit 34)
_____141. Make an incident report (Unit 34)

V. Post-Operative Care of Patient

_____142. Prepare the post-operative unit (Unit 35)
_____143. Assist patient to maintain respiratory function (Unit 35)
_____144. Check patient's operative site (Unit 35)
_____145. Provide for patient's comfort, needs, and safety (Unit 35)
_____146. Treat patient for shock and complications (Unit 35)

W. Isolation Technique

_____147. Set up an isolation unit (Unit 36)
_____148. Put on an isolation face mask (Unit 36)
_____149. Put on an isolation gown (Unit 36)
_____150. Remove an isolation gown (Unit 36)
_____151. Put on sterile or non-sterile single use gloves (Unit 36)
_____152. Remove sterile or non-sterile single use gloves (Unit 36)
_____153. Serve diet tray to patient in isolation (Unit 36)
_____154. Remove diet tray from patient in isolation (Unit 36)
_____155. Help patient in isolation with bedpan and urinal (Unit 36)
_____156. Collect specimens from patient in isolation (Unit 36)
_____157. Dispose of waste materials from isolation unit: double-bag technique (Unit 36)
_____158. Remove linens from isolation unit (Unit 36)
_____159. Take TPR and BP in isolation unit (Unit 36)
_____160. Transport patient out of isolation unit (Unit 36)
_____161. Transfer isolation patient to another hospital or unit (Unit 36)
_____162. Perform terminal disinfection of isolation unit (Unit 36)

Tasks Learned Not Included in List

_____163.
_____164.
_____165.
_____166.
_____167.
_____168.
_____169.
_____170.

University of California, Los Angeles
Division of Vocational Education
Allied Health Professions Project
Secondary School Allied Health Program

PHASE II AND III, CLINICAL LABORATORY ASSISTANT WORK EXPERIENCE TRAINING PROGRAM STAGE I

Required Reference Manual: Taub, Cullen, and Walker, *Fundamental Skills in the Clinical Laboratory*. University of California, Division of Vocational Education, Allied Health Professions Project, 1003 Wilshire Boulevard, Santa Monica, California 90401. ($10.00)

INSTRUCTIONS TO THE STUDENT

The objective of this work experience program (Stage I) is to help you master the fundamental skills in the clinical laboratory, so that you can qualify for a job as a Clinical Laboratory Assistant. If you successfully complete the course and wish to do so, you can obtain a job in that capacity in a hospital or private clinical laboratory or other facility. If you wish to advance in the profession you can enroll in a college that offers work at a higher level, leading to qualification as a Medical Technologist, for example.

The tasks listed in this record booklet are those you will be required to master to qualify as a Clinical Laboratory Assistant. They are listed with the simpler ones first, becoming more difficult as you progress. However, in the work experience program it is not always possible to follow this ideal order of progression. You may often be called on to assist with or learn to do tasks that are more difficult, as it is seldom possible to predict the day-to-day flow of work into the laboratory. This is one reason it is so important for you to keep an accurate record of what tasks you have learned, so you and your supervisor, at any time, can quickly see what you still must learn to complete your training.

Your reference manual, *Fundamental Skills in the Clinical Laboratory* explains how to perform each task in the course in detail, step-by-step, with illustrations and explanations of the "why" as well as the "how" of each task. If you can know in advance of a new task you will be expected to learn, read the instructions for that task in advance, and it will make it easier and quicker for you to master it. If you do not understand all the words and ideas, mark them and ask your supervisor to explain them to you. The tests are included so you can test yourself to see how well you understand the ideas and steps explained in the text. Do your best to understand the material and answer the questions correctly, but do not become discouraged if you are not able to do it perfectly. Remember, practice makes perfect, so don't give up. You will gradually become more and more skilled at reading the manual, and soon the words that seem strange will become old friends that you will recognize every time you meet them.

Never assume that reading about how to do a task in the manual enables you to do it. First, your supervisor or instructor will demonstrate how to perform the task, step-by-step, explaining as he goes along. Then he will have you do it, while he gives help as needed and corrects any errors you might start to make. The manual is a teaching aid for your instructor. If you have had a chance to read about the task beforehand, you can follow his demonstration and explanation more quickly and intelligently. This will save time for your instructor and you will learn more, in less time, and remember it better. The manual is also useful as a reference to "brush up" on a task you are asked to do which you have already learned, but have not done for some time.

If you do not have a chance to read about a task before being taught how to do it in the laboratory, read the section on that task in the manual afterward. This will help you to remember the steps, and enable you to recognize the new words used when you see them in print.

When you have done a new task enough times that your supervisor judges you have mastered it, he will sign and date it in your record book. *It is up to you to see that this is done.* Keep this book with you at all times, and above all, *do not lose it.* It is your only proof of what you have learned, and is extremely valuable when you apply for credits if you wish to go on to college, or if you want to apply for a job in a laboratory.

A. Cleaning Laboratory Glassware

_____ 1. Clean a dirty vessel (new or used)
_____ 2. Clean a stained/encrusted vessel
_____ 3. Dry and store glassware

B. Measuring Volumes; Weighing; Preparing Solutions

_____ 4. Use a volumetric flask and a beaker
_____ 5. Use a graduate
_____ 6. Prepare a volume/volume solution
_____ 7. Prepare a weight/volume solution
_____ 8. Use a 10 ml volumetric transfer pipet
_____ 9. Use a 2 ml Ostwald pipet
_____ 10. Use a 10 ml Mohr pipet
_____ 11. Use a 5 ml Serological pipet
_____ 12. Clean pipet
_____ 13. Calibrate a medicine dropper
_____ 14. Calculate percent concentration from a pure (100%) solute
_____ 15. Calculate weight/weight solutions of unknown densities
_____ 16. Calculate percent concentration from solutes in a solution
_____ 17. Calculate percent concentration from a concentrated reagent (acids and bases)
_____ 18. Calculate a percent concentration from units
_____ 19. Calculate the gram molecular weight of a solute
_____ 20. Calculate the molar concentration of a solution
_____ 21. Calculate the weight of solute required for a solution
_____ 22. Calculate the amount of solute needed to prepare a reconstituted solution of lower molarity from one of higher molarity.
_____ 23. Calculate the amount of solute needed for a solution specified normality using gram equivalent weights.
_____ 24. Adjust and zero a torsion or beam balance.
_____ 25. Weigh with a torsion or beam balance
_____ 26. Determine the sensitivity of a balance

C. Media Preparation

_____ 27. Prepare a solution of the medium
_____ 28. Heat the medium to obtain a solution
_____ 29. Sterilize the medium
_____ 30. Examine the medium for contamination
_____ 31. Dispose of used and old culture media
_____ 32. Distribute medium to culture tubes
_____ 33. Cool sterilized tubed media
_____ 34. Cool sterilized flask medium
_____ 35. Pour sterilized medium into culture dishes
_____ 36. Prepare blood agar
_____ 37. Prepare chocolate agar
_____ 38. Rapid cool sterilized flash medium
_____ 39. Pour medium into Petri dishes
_____ 40. Use repid method to fill culture tubes

d. Laboratory Inventory

_____ 41. Take inventory of supplies in stock (daily)
_____ 42. Count items used during the day
_____ 43. Make adjustments for discrepancies
_____ 44. Establish a minimum daily level of laboratory items
_____ 45. Identify laboratory items

E. Specimen Processing and Preparation

_____ 46. Perform a capillary puncture
_____ 47. Prepare a thick and thin blood smear
_____ 48. Measure volume of 12 to 24-hour urine specimen
_____ 49. Collect a qualitative single (random) voided urine specimen
_____ 50. Label a clinical specimen
_____ 51. Distribute urine specimens
_____ 52. Distribute blood specimens
_____ 53. Distribute cerebrospinal fluid specimens
_____ 54. Distribute miscellaneous specimens (bile, feces, milk, saliva, sputum, stomach contents, tissue)
_____ 55. Distribute a specimen with multiple requests
_____ 56. Log clinical specimens
_____ 57. Separate clinical specimens (blood and urine) by centrifugation
_____ 58. Mail blood specimens
_____ 59. Mail specimen for bacteriological study
_____ 60. Mail specimen for viral rickettsial studies

F. Miscellaneous

_____ 61. Fill test tube trays
_____ 62. Fill blood drawing trays
_____ 63. Prepare special kits
_____ 64. Use autoclave
_____ 65. Streak urine plates
_____ 66. File charts
_____ 67. Prepare slide for stain

University of California, Los Angeles
Division of Vocational Education
Allied Health Professions Projects
Secondary School Allied Health Program

PHASE II AND III, INHALATION THERAPY AIDE

INSTRUCTIONS TO THE STUDENT

The objective of this work experience is to help you master the fundamental skills in Inhalation Therapy, so that you can qualify for a job as an Inhalation Therapy Aide. If you successfully complete the course and wish to do so, you can obtain a job in that capacity in a hospital or other facility. If you wish to advance in the profession you can enroll in a college that offers work at a higher level, leading to qualification as an Inhalation Therapist, for example.

The tasks listed in this record booklet are those you will be required to master to qualify as an Inhalation Therapy Aide. They are listed with the simpler ones first, becoming more difficult as you progress. However, in the work experience program it is not always possible to follow this ideal order of progression. You may often be called on to assist with or learn to do tasks that are more difficult, as it is seldom possible to predict the day-to-day flow of work into the laboratory. This is one reason it is so important for you to keep an accurate record of what tasks you have learned, so you and your supervisor, at any time, can quickly see what you still must learn to complete your training.

Never assume that reading about how to do a task in a textbook enables you to do it. First, your supervisor or instructor will demonstrate how to perform the task, step-by-step, explaining as he goes along. Then he will have you do it, while he gives help as needed and corrects any errors you might start to make.

When you have done a new task enough times that your supervisor judges you have mastered it, he will sign and date it in your record book. It is up to you to see that this is done. Keep this book with you at all times, and above all, do not lose it. It is your only proof of what you have learned, and is extremely valuable when you apply for credits if you wish to go on to college, or if you want to apply for a job in a hospital.

A. Maintaining Physical Condition of Facilities and Equipment

_____ 1. Disassemble, clean, and reassemble Bird respiratory circuit
_____ 2. Disassemble, clean, and reassemble PR-2 respiratory circuit
_____ 3. Disassemble, clean, and reassemble MA-1 respiratory circuit
_____ 4. Disassemble, clean, and reassemble CPAP respiratory circuit
_____ 5. Disassemble, clean, and reassemble infant Bird respiratory circuit
_____ 6. Disassemble, clean, and reassemble infant PR-2 respiratory circuit
_____ 7. Disassemble, clean, and reassemble heated aerosol
_____ 8. Disassemble, clean, and reassemble Bourns respiratory circuit
_____ 9. Disassemble, clean, and reassemble Dranger respiratory circuit

B. Therapeutic Techniques

_____ 10. Operate treatment IPPB
_____ 11. Operate assistor respirator
_____ 12. Operate aerosol generator, steam vaporizer
_____ 13. Operate aerosol generator, bubbler type
_____ 14. Operate aerosol generator, jet type
_____ 15. Operate humidifier, nebulizer type
_____ 16. Operate humidifier, ultrasonic type
_____ 17. Administer oxygen, nasal
_____ 18. Administer oxygen, mask
_____ 19. Administer oxygen, tent
_____ 20. Perform artificial respiration
_____ 21. Recognize and report complications or adverse reactions to treatments
_____ 22. Use portable oxygen (tank)
_____ 23. Use piped oxygen
_____ 24. Use bronchodilator (pharmacological aid) as directed

C. Clerical and Miscellaneous

_____ 25. Answer telephone
_____ 26. Transport patients
_____ 27. Stock and dispense cylinder gas
_____ 28. Report treatment given on patient's chart

APPENDIX C

EXAMPLES OF FREQUENCY OF PERFORMANCE CHECK LISTS

SECONDARY SCHOOL PILOT AND DEMONSTRATION PROJECT AHPP UCLA

MONTH: February 1972

FREQUENCY OF TASK PERFORMANCE

HOSPITAL: L.A. COUNTY - USC MED. Center

SUPERVISOR(S): _____

STUDENT: _____

DEPARTMENT: Nursing - Pediatrics (5)

TOTAL DAYS PRESENT: 14

ACTIVITY	TASK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	FREQ. RATING
	CHECK(✓) IF PRESENT DAY →				✓	✓		✓		✓	✓	✓	✓						✓	✓		✓		✓	✓	✓	✓						14
	Answering phone				✓	✓						✓	✓											✓	✓		✓						7
	Placing charts and reports away				✓	✓							✓											✓	✓		✓						6
	Discharge patients				✓	✓																											2
	Take temp, oral - rectal				✓			✓		✓	✓	✓	✓						✓	✓		✓		✓	✓	✓	✓						13
7/9/72	pulse, resp.				✓			✓		✓	✓	✓	✓						✓	✓		✓		✓	✓	✓	✓						13
	Change clothing and linen				✓					✓	✓	✓							✓	✓		✓			✓								9
	Make occupied and unoccupied beds									✓												✓											2
	Report patients' behavior				✓			✓		✓	✓	✓	✓						✓	✓		✓		✓	✓	✓	✓						13
	Deliver specimen to lab																																
	Request to pharmacy				✓	✓					✓																						3
	Verbal communication with patients				✓			✓		✓	✓	✓	✓						✓	✓		✓		✓	✓	✓	✓						13
	SUPERVISOR'S INITIALS																																

HPF

SECONDARY SCHOOL PILOT AND DEMONSTRATION PROJECT AHPP UCLA

FREQUENCY OF TASK PERFORMANCE

MONTH: March 1972

HOSPITAL: L.A. COUNTY

SUPERVISOR(S):

STUDENT:

DEPARTMENT: Inhalation Therapy

TOTAL DAYS PRESENT: 23

ACTIVITY	TASK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	FREQ. RATING
	CHECK(✓) IF PRESENT DAY→	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	23
	Cleaning and assembling																																
	(1) infant Bird circuits	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	23
	(2) infant PR-2 circuit	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	23
	(3) heated aerosols	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	23
78	(4) making respiration rounds	✓	✓	✓			✓		✓					✓		✓	✓				✓	✓		✓	✓			✓		✓	✓	✓	16
	Changing continous resp. circuits on Pt.																																
	(5) Bird	✓	✓	✓			✓	✓		✓				✓		✓					✓	✓	✓					✓		✓		✓	14
	(6) PR-2	✓	✓	✓			✓	✓		✓					✓							✓		✓					✓		✓		11
	(7) MA-1	✓	✓	✓																													3
	(8) CPAP	✓	✓	✓			✓	✓		✓						✓	✓					✓		✓					✓		✓		12
	SUPERVISOR'S INITIALS																																

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SECONDARY SCHOOL PILOT AND DEMONSTRATION PROJECT AHPP UCLA

FREQUENCY OF TASK PERFORMANCE

MONTH: February 197

HOSPITAL: L.A. COUNTY - USC MED. Center

SUPERVISOR(S): _____

STUDENT: _____

DEPARTMENT: Neurology

TOTAL DAYS PRESENT: 12

ACTIVITY	TASK	CHECK(✓) IF PRESENT DAY→ 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	FREQ. RATING
		✓		✓						✓						✓	✓	✓					✓	✓	✓	✓			✓	✓			12
Reg. Duties	Cleaning Glassware	✓		✓						✓						✓	✓	✓					✓	✓		✓			✓	✓			11
Making Sol.	Cleaning Solution	✓								✓																							2
	Formalin Solution			✓																										✓			2
Sterilizing	Biopsy Clamps	✓								✓																							2
Slides	Labeling	✓																					✓	✓	✓								4
79/80	Filing																						✓	✓	✓								3
Paraffin Bl.	Labeling									✓						✓																	2
Pick-up and deliver	Paraffin Blocks, Film, Bio. Clamps																	✓					✓	✓									3
Rab. Autopsy	Observing and Receiving Knowledge																	✓											✓	✓			3
Storeroom WK.	Storing chemicals									✓																							1
	Cleaning up the laboratory	✓		✓						✓						✓	✓	✓					✓	✓	✓	✓							10
Making So.	Lithium Carbonate & 5% Acid Alcohol																												✓	✓			2
	SUPERVISOR'S INITIALS																																

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APPENDIX D

EVALUATION FORMS USED BY STUDENTS

SECONDARY SCHOOL PROJECT, AHPP

Students' Evaluative Opinions

Directions to students:

In the left-hand column below are questions about what you have learned in the Secondary School Project this year. In the right-hand column are spaces for you to check your answers. Please place a check mark (✔) in the space that best describes the amount of progress that you think you have made.

This is not a test. There are no right or wrong answers. Do not sign your name.

Questions	**My Opinion about My Progress this Year** (Check only one answer for each question.)
1. How much progress have you made in developing your ability to tell what workers do in several allied health occupations?	_____ None _____ Little _____ Quite a bit _____ Much _____ Don't know
2. How much progress have you made in developing your ability to explain steps necessary to enter an allied health job, including the training and educational background needed?	_____ None _____ Little _____ Quite a bit _____ Much _____ Don't know

3. How much progress have you made in developing your ability to make a wise vocational choice?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

4. How much progress have you made in developing your ability to demonstrate knowledge of how health care facilities operate?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

5. How much progress have you made in developing your ability to perform basic skills in selected allied health occupations?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

6. How much knowledge have you gained about how health care facilities operate?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

7. How much progress have you made in your ability to identify and describe the functions of specific equipment used in the health care system?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

8. How much have you improved your behavior appropriate to the world of work (dependability, attendance, personal appearance, etc.)?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

9. How much have you gained in your ability to maintain your own health through the use of appropriate health care?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

10. How much have you gained in your ability to refer your family and friends to appropriate health care facilities?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

SECONDARY SCHOOLS PROJECT, AHPP

Critical Incident Report

Directions to student:

During the past semester you have done many things in the Secondary School Project. As you recall these experiences, do you remember some of them that were much more interesting and much more useful to you than the other experiences in the Project?

In the spaces provided, will you please very briefly describe the one *most interesting and useful* experience you had in the Project at a *hospital* or *health facility:*

My Most Interesting and Useful Experience
in the Project at the Hospital
or Health Facility

My Least Interesting and Least Useful Experience in the Project at the Hospital or Health Facility

SECONDARY SCHOOLS PROJECT, AHPP

Occupational Plans

Directions to students:

Some of you have decided upon the occupation you are going to enter and some of you have not.

If you have decided, write your occupational choice at the top of the attached sheet of paper, and then list the steps you will have to take to enter it. For example:

Policeman

1. Take a general course in high school.
2. Pass police qualifying examination.
3. Go to Police Academy for training.

If you have not decided, write about why it has been hard for you to make a choice and what you plan to do about it. Have you thought about a lot of occupations, or just a few? Have you talked to anyone about choosing an occupation, or not? How long do you think you can wait before you make a choice? Write about these questions and anything else that comes to mind about choosing an occupation.

APPENDIX E

EVALUATION FORM USED BY PARENTS

SECONDARY SCHOOLS PROJECT, AHPP

Parent's Evaluative Opinions

Directions to parent:

In the left-hand column below are questions about what your son or daughter has learned in the Secondary Schools Project this year. In the right-hand column are spaces for you to check your answers. Please place a check mark (✓) in the space that best describes the amount of progress that you think (he or she) has made.

This questionnaire indicates your attitude about the project. There are no right or wrong answers. Do not sign your name.

Questions	My Opinion about My Son or Daughter's Progress this Year (Check only one answer for each question.)
1. How much progress has your son or daughter made in developing his or her ability to tell what workers do in several allied health occupations?	_____ None _____ Little _____ Quite a bit _____ Much _____ Don't know
2. How much progress has your son or daughter made in developing his or her ability to explain the steps necessary to enter an allied health job, including the training and educational background needed?	_____ None _____ Little _____ Quite a bit _____ Much _____ Don't know
3. How much progress has your son or daughter made in developing his or her ability to make a wise occupational choice?	_____ None _____ Little _____ Quite a bit _____ Much _____ Don't know

4. How much progress has your son or daughter made in developing his or her ability to demonstrate knowledge of how health-care facilities operate?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

5. How much progress has your son or daughter made in developing his or her ability to perform basic skills in selected allied health occupations?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

6. How much knowledge has your son or daughter gained about how different health-care facilities operate?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

7. How much progress has your son or daughter made in his or her ability to identify and describe the uses of specific equipment in the health-care system?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

8. How much progress has your son or daughter made in developing attitudes and behaviors appropriate to the world of work (dependability, attendance, personal appearance, etc.)?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

9. How much ability has your son or daughter gained in maintaining his or her own health through the use of appropriate health care?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

10. How much ability has your son or daughter gained in giving your family and friends helpful information about health-care facilities?

_____ None
_____ Little
_____ Quite a bit
_____ Much
_____ Don't know

APPENDIX F

CHECK LIST FOR INTERVIEW WITH HOSPITAL PERSONNEL

Checklist for Interview with Department Heads and Supervisors

Name _____ Position _____

1. What is your opinion about the AHPP Secondary Schools Project as a training program for allied health workers? (What is purpose of program?) what are its strong points/weak points?

2. Would you like to see this program continue? Why/Why not?

3. Would you like to continue as a training supervisor for the students in this program? Why/Why not?

4. What problems have you experienced with this program?

   a. The students

   b. The training sequence, i.e., observation, OJT, cooperative work-study

   c. The procedure for developing task lists

   d. The procedure for assigning students to departments

   e. The procedure for assigning work schedules

   f. The procedure for monitoring students

   g. The procedure for evaluating student performance

   h. The services rendered by the project staff

5. Of the students that you have supervised, which ones do you feel will be employable (in this department) by the end of the year?

   a. Name

   b. To do what?

   c. At what pay?

6. If the student would not be employable in this department please state:

   a. Name

   b. What other area could he/she be employed in?

   c. Would you give the student a recommendation for this area?

   d. Do you have any recommendations to further aid student?

APPENDIX G

STUDENT EVALUATION FORM USED BY HOSPITAL SUPERVISORS

LINCOLN HIGH SCHOOL

Education Department
Office of Occupational Preparation

Employer's Progress Report
Work Experience Education Program

Employer _____ Date _____

The student's grade for work experience will depend to a very large extent on your evaluation. Would you please indicate on the following chart the rating that best describes:

_____
Name of Student

	Excellent	*Above Average*	*Average*	*Needs to Improve*	*Unsatis-factory*
1. Attendance					
2. Dependability					
3. Initiative					
4. Job Competence					
5. Progress on Job					
6. Relations with Others					
7. Appearance					

Employer's comments _____

_____

_____

Has the student averaged ten hours or more on the job each week? Yes _____ No _____

_____
Employer's Signature

APPENDIX H

PARTICIPATING HEALTH CARE FACILITIES AND PERSONNEL

Participating Health Care Facilities and Personnel in Secondary Schools Project

1. *Lincoln High School*
   Peter Martinez, Principal
   Laurence Arellanes, Head Counselor
   May Kishiyama, Teacher
   Marilyn Morgan, Jeff Reyes, Larry Hagman, Field Coordinators

   Cedars-Sinai Medical Center
   Paul Rubenstein, Director of Professional Services
   Jan Costa, Training Director
   Leonard Swartzman, Director of Medical Education

   USC Medical Center
   Leslie Smith, Hospital Administrator
   Marshall Celestin, Head Training Officer
   Edgar Aquilar, Assistant Training Officer

2. *Jordon High School*
   Lionel Joubert, Leon Jordon, Principals
   John DeBoise, Head Counselor
   Elaine Hadden, Teacher
   Gregory Threadgill, Field Coordinator

   Harbor General Hospital
   Les Smith, Assistant Administrator
   Joe Williams, Training Director

3. *Fremont High School*
   Donald Bolton, Principal
   Richard Browning, Ann Barrington, Vice Principals
   Phyllis Smith, Head Counselor
   Maude Peronneau, Eva Manson, Teachers
   Gregory Threadgill, Field Coordinator

   St. Francis Hospital
   Ralph Miller, Training Director

   Kaiser Permanente-Harbor City
   Don Martine, Training Director
   Ed Bunting, Clinic Administrator

   Martin Luther King, Jr. Hospital
   Harry Douglas, Personnel Director
   Tom Hawkins, Training Director

4. *Long Beach Polytechnic High School*
Jack DeBose, Principal
Don Menke, Head Counselor
Marcelin Fortain, Teacher
William Hudson, Field Coordinator

St. Mary's Hospital
Anthony Abbot, Vice President, Personnel
Beverly Bohaty, Personnel Director
Naomi Tanikawa, Director of Education