Service to public health and allied professionals has long been the concern and major function of the Program for Continuing Education in Public Health, sponsored by the four Schools of Public Health in the West--and by the Western Regional Office of the American Public Health Association (APHA). To assess the effectiveness of this program, a study of continuing education needs and interests was made during 1966-67. Data were obtained on age, sex, education and training, experience, hierarchical position, type of employing agency, and other relevant characteristics of 1355 professional public health workers in the western states, as well as on preferences for 78 course types and for newly proposed methods and techniques of instruction. Nineteen topics were selected by 20% or more of the respondents; eleven of these were already available or being developed. General problem areas, and skills in community-and organizational problem-solving, were the major concerns: multidisciplinary courses were widely favored over single discipline courses; and television and videotapes were widely supported, but not teaching machines. Typically, participants were older, had more experience and higher positions, more often had advanced degrees, and were more likely to belong to the APHA or a state association, than nonparticipants. However, 66% of full-time professionals lacked a degree in public health.
Public Health Professionals and Continuing Education
The Program of Continuing Education in Public Health is sponsored by the four Schools of Public Health in the West—the University of California at Berkeley and Los Angeles, the University of Hawaii and Loma Linda University, and the Western Regional Office, American Public Health Association. The purpose of the Program is to provide health professionals of the Western States an opportunity to keep abreast of new trends and developments in the field of public health. Courses are presented through the Confederation of Western Affiliates of the American Public Health Association.

PROGRAM OF CONTINUING EDUCATION IN PUBLIC HEALTH

Nicholas Parlette, M.P.H., Chief
James P. Lovegren, M.P.H., Education Associate
William R. Manning, M.P.H., Education Associate
Louis J. Pansky, M.P.H., Education Associate

Survey Completed June, 1967
Results Published June, 1968
PUBLIC HEALTH PROFESSIONALS
AND
CONTINUING EDUCATION

— a survey of interests and needs in
continuing education in the West—

SUMMARY REPORT PREPARED BY:

Nicholas Parlette, M.P.H.
Laurence B. Callan, Ph.D.
Alvin R. Leonard, M.D., M.P.H.
Meeting the emerging needs of public health and allied professionals as they strive to keep abreast of the rapidly changing health field has long been the concern and major function of the Program of Continuing Education in Public Health sponsored by the Schools of Public Health, University of California at Berkeley and Los Angeles, the University of Hawaii, and Loma Linda University; the Western Regional Office, American Public Health Association; and the Confederation of Western Affiliates of the American Public Health Association.

In an attempt to find out whether this Program is, in fact, achieving its goal, a study of interests and needs in continuing education was carried out during 1966-67.

The information from this study will materially assist the Faculty Advisory Committee, State Continuing Education Committees, and the Program staff in the development of new courses and teaching methods. It will also permit improvement of management practices and thereby increase the Program’s effectiveness and capacity to meet the increasing need and demand for high quality continuing education.

Of central importance to curriculum development is: what topics are areas of concern to the practitioner? Ranked below are the topic titles which were selected by over 20% of the respondents as the most preferred or second most preferred courses. There were 78 courses grouped in eight broad categories; each person could choose two courses in each category. The percentages were derived by dividing the number of respondents (1355) into the number of times a course was selected.

The results of the study indicate that the Program’s structure, developed over a six year period, consisting of faculty and practitioner advisory committees is a reasonably reliable mechanism for determining interests and needs in continuing education. Of the 19 courses receiving the highest percentage of selections, 11 were currently available or in the process of development by the Program at the time of the study. These are identified by an asterisk in the preceding list.

It is essential, however, to supplement the recommendations of these advisory bodies for course development with periodic, systematic surveys and other studies.

There is a clear indication that the major concerns of public health professionals are general problem areas, not specific diseases nor narrow subjects. Their primary interest in continuing education is for courses which are addressed to these broad problems (Multi-Problem Family, Urbanization, Mental Health of Teenagers, etc.) and with acquiring skills which will increase their capacity for solving organizational and community problems (Communications, Consultation, Motivation, etc.). Courses such as Cardiovascular Disease, Biostatistics, Medical Economics, Geriatrics, Respiratory Diseases, received comparatively lower percentages of selections. See pages 14 through 22 for amplification.

While the majority of respondents prefer courses designed for multi-disciplinary audiences, a significant percentage (30%) in all disciplines and all organizational levels indicated a preference for single discipline courses. (see page 26).

There is overwhelming support by all respondents to the use of TV and video tapes as a supplementary means of providing continuing education opportunities (see page 25).

In comparison to TV, respondents are relatively resistant to the use of teaching machines. Because of
the high percentage of individuals who did not respond to questions on the use of this method there is a possibility that they are not familiar with the technique (see pages 25, 26).

The primary reasons cited for non-attendance were: not being notified, lack of recognition by agency, and too heavy a workload (see page 27).

There are marked differences in course selection when the basis for comparison is among administrative levels within the organization (see page 12).

Differences in choice of courses among the various disciplines are more a factor of the general category than of the individual course titles within the category (see page 23).

Respondents who indicated they have attended courses of the Program as a group have been in the field of public health longer; are in higher positions within their agency; are older; have advanced degrees; and, are likely to be a member of A.P.H.A. or their state association than are non-participants (see pages 12, 13).

A significant percentage (66%) of persons employed in full-time professional positions do not possess a public health degree (see page 11).
Acknowledgements

This study was a collaborative undertaking of the staff of the Program of Continuing Education in Public Health, who wish to acknowledge their indebtedness to a number of colleagues for their generous and invaluable contributions:

L. S. Goerke, M.D., M.S.P.H., Dean of the School of Public Health, University of California at Los Angeles, who authorized allocation of the basic funds for the study and provided direction throughout;

The late Charles E. Smith, M.D., Dr.P.H., Dean of the School of Public Health, University of California at Berkeley, who gave his warm and enthusiastic support during the early planning phases of the study;

Richard K. C. Lee, M.D., Dr. P.H., Dean of the University of Hawaii's School of Public Health, who gave his encouragement.

Special appreciation is due Reuel Stallones, M.D., M.P.H.; Mary Arnold, Dr.P.H.; Harold Gustafson, Dr. P.H., and Milton Roemer, M.D., M.P.H., from the California Schools of Public Health. They provided immeasurable assistance by their critiques of early drafts of the questionnaire, and their review of progress throughout the survey.

As is often the case, a critical phase in the study — the initial field interviewing — could be concluded on schedule only because Ray Carlow, Treavor Beard, M.D., and Marcella Egens, at the time graduate students at Berkeley School of Public Health, volunteered their Christmas vacation to conduct most of the 100 field interviews. We are grateful.

The Study was conducted in cooperation with the Survey Research Center of the University of California at Berkeley, whose staff were extremely helpful. Especially so were William Nicholls, II, who gave general consultation and assistance in sample design; Mrs. Sheila Babbie, who made countless contributions; Phillip Ettinger and Jeanne Durbin, who assisted throughout the project; and Mrs. Renon, a student from Germany, who contributed excellent suggestions to early questionnaire structure and format.

Finally, we wish to express our appreciation to the individuals who took time from their busy activities to complete the questionnaire.

This Study was supported in part by Hill-Rhodes Formula Funds to the Schools of Public Health, and by the National Institute of Mental Health Grant #MH-07661-06.

Purpose

The purpose of the Survey was to determine preferences of different groups of public health professionals by:

1. Soliciting expressions of interest in and needs for continuing education courses from a representative consumer sample;
2. Obtaining indications of preferences for newly-proposed techniques and methods in instruction; and
3. Gathering data on the characteristics of the professional health workers in the West — their age, sex, pre-professional education, professional training, longevity in the health field, hierarchical position, type of employing agency, and other relevant data.

The analysis of the data collected can provide a valuable benchmark for future planning and evaluation of the Program of Continuing Education in Public Health.

Background

The Program of Continuing Education in Public Health provides university-level post-graduate education on topics of concern to professional health workers in the thirteen Western States. The Program is unique in that it is a partnership of professional schools and professional associations; it is a model program for similar endeavors and emerging programs in other parts of the country; and it brings continuing professional education into the field, near the participants' home area, and is thus more readily available and accessible than are many on-campus educational offerings.

With a heritage reaching back to 1949, the Program of Continuing Education in Public Health was formally launched ten years later in 1959. In its early stages, special attention was given to logical planning, definition of goals, fact-finding and exploration of alternative educational approaches. Careful curriculum-building, course presentation and re-evaluation of goals and approaches has helped assure that the Program, from its inception, would be a viable and adaptable activity.

The Program functions through several committees concerned with policy formation, subject matter, selection, course content and perspective. These are:
THE FACULTY ADVISORY COMMITTEE, consisting of faculty members from the four participating Schools of Public Health;

THE CONFEDERATION'S CONTINUING EDUCATION COMMITTEE, made up of the thirteen chairmen representing each member state association's continuing education committee;

THE STATE CONTINUING EDUCATION COMMITTEES, made up of public health professionals belonging to each state's public health association.

One of the real strengths of the Program, and a source of pride to its sponsors, is the commitment of its part-time field faculty, which now numbers over 500 individuals drawn from the faculties of the sponsoring graduate schools, parent universities, and other major universities, as well as from private practice, industry and operating health and social agencies.

The tempo and variety of course offerings have greatly increased since the Program fielded its first of four presentations in 1960. From 1960 through 1966, 4,772 participants have attended courses — with 1,629 registered during 1966. In 1967, 37 courses were presented with over 2,000 participants.

Professionals engaged in nursing, medicine, administration, environmental health and education — in that order — have been the most frequent participants. The student body composition naturally varies according to the subject matter of the course, even though most courses are designed for inter-disciplinary audiences.

Need for Study

A basic consideration in designing any educational venture must be the requirements of its potential consumers. The goal of this study was to secure from the grass roots, on as wide a basis as possible, indications of need and interest. This pin-pointing is considered essential because of the expansion of the Program of Continuing Education in Public Health brought on by the demand for the service from the thirteen Western States, all of which are faced with a critical shortage of manpower in the health professions.

Recent Federal legislation, specifically Public Law 89-749 and Public Law 89-239, further underscores the necessity for such a survey and the importance of the data collected. In this legislation, dealing with Comprehensive Health Planning and Regional Planning of Medical Facilities, continuing education has been identified as a major resource by which to cope with health manpower shortages.

Study Design

The Survey was conducted in four phases: Field Interviews; Pre-Test Self-Administered Questionnaire; Mailed Self-Administered Questionnaire; and Data Analysis.

Interviews were undertaken with individuals in ten Western States* by requesting each State Continuing Education Chairman to select persons representing a cross-section of health disciplines in his state.

One hundred interviews were conducted by the Program staff and three graduate students from the School of Public Health, University of California at Berkeley. The interviews were open-ended and exploratory. Their purpose was to secure data to assist in developing a self-administered questionnaire.

Before going into the field, interviewers and program staff met and discussed the history and operation of the Program, the purpose of the study, questions to be asked, areas to be probed and other pertinent details. A post-interview meeting of staff and interviewers was held to review the written findings and the synopsis of impressions developed by each interviewer.

Data were summarized and categorized. From this compilation, a pre-test self-administered questionnaire was developed. This was mailed to:

1. The 100 individuals originally interviewed;
2. One hundred additional professionals from the same states, named by the original interviewees; and
3. One hundred individuals randomly selected from professional staff rosters of health departments located in the Western Region.

The Purpose of the pre-test was two-fold:

First, to test the questions for accuracy and clarity.
Second, to predict the response rate of the final survey. A 62% response rate was achieved in the pre-test period.

*Alaska and Hawaii were not included in the field interviews because of travel expense. They were, however, a part of the mailed questionnaire sample. Colorado, which is not presently a part of the Confederation, was not included in the study, except for United States Public Health Service Staff in Region VIII.
Nature of the Sample

Due to the budgetary considerations, the study population was limited to health professionals in departments of public health and selected voluntary health agencies in the thirteen Western States. Data contained in this report is limited to information collected from the health professionals in official health agencies. A separate report has been prepared containing information collected from professionals in voluntary health agencies. If additional funding becomes available, this study will be expanded to include health professionals in other health-related organizations.

A professional was defined as one whose position/title was included in Compensation of Full Time Professional and Technical Personnel, California Department of Public Health.

Rosters of all professional personnel were obtained from twelve state health departments; all seven city health departments; Regional Offices VII, VIII, and IX of the U.S. Public Health Service; all county health departments serving a population of more than 250,000; and a stratified random sample of county health departments serving populations of less than 250,000.

It is estimated that the total number of professionals employed by departments of public health in the thirteen Western States is approximately 10,000. About half of these are employed in California. Returns were weighted in order to provide equivalent bases for comparison between California and non-California respondents. The study was also designed so that responses from participants in courses of the Program could be compared with non-participants. This additional factor entered into the final determination of the sample size.

Sampling was done in the following manner: in California, every fifth name was selected from the rosters of the Federal (Region IX, U.S. Public Health Service), State and City Health Departments, and County Health Departments serving a population of more than 250,000. In the eleven other states, every third name was taken from the rosters of the Federal (Regions VII and VIII, U.S. Public Health Service), State and City Health Departments, and County Health Departments, according to the same population criterions.

Next, using a stratified random sample of county health departments serving populations of less than 250,000, every fifth department in California and every third department in all other Western States was selected. Every name was taken from the rosters of these departments. In this manner—since one-fifth of the small county departments in California and one-third of the small county departments in all other Western States were included—the sampling ratio of one-fifth in California and one-third in other Western States was preserved.

Rosters of professional personnel were cross-checked to eliminate duplication of names and to exclude clerks, laboratory assistants, and other non-professionals who were included on some of the lists received from the cooperating agencies.

### TABLE I

<table>
<thead>
<tr>
<th>Sample Drawn and Return by Region</th>
<th>Percent Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>56 %</td>
</tr>
<tr>
<td>Non-California</td>
<td>55 %</td>
</tr>
<tr>
<td>Totals</td>
<td>55 %</td>
</tr>
</tbody>
</table>

NOTE: 97 Questionnaires were rejected as incomplete or returned by the Post Office.

### TABLE II

<table>
<thead>
<tr>
<th>Composition of Respondents by Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Responding</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>1355</td>
</tr>
</tbody>
</table>

Percent Responding

<table>
<thead>
<tr>
<th>Percent Responding</th>
<th>Calif.</th>
<th>Non-Calif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 %</td>
<td>43 %</td>
<td>57 %</td>
</tr>
</tbody>
</table>
Data Collection Techniques

The self-administered questionnaire was mailed on March 31, 1967, to the 2,534 individuals sampled. A second mailing on April 30, 1967, was addressed to those individuals whose questionnaires had not been returned as of that date. The final cut-off date for data collection was June 6, 1967.

Upon return of the completed questionnaire to the University of California Survey Research Center at Berkeley, each instrument was coded and processed for direct key punching. Tabulations were prepared employing an IBM 1620 computer.

Background of Respondents

In terms of academic attainment, there was little difference between California and non-California respondents. However, when comparing participants with non-participants, the participant group shows a much higher percentage who had obtained a master’s degree or doctorate (see TABLE IV)

It is significant to note in TABLE V that a high percentage of respondents have not received formal public health training. This reinforces the need for increased efforts in continuing education in public health. Also, a higher percentage of participants have the M.P.H. or Dr.P.H. than do non-participants. The table further reveals that, among persons who have no formal public health training, fewer attend continuing education courses than do not attend. This suggests that ways must be found to motivate the individuals who may need the continuing education most.

### TABLE III

<table>
<thead>
<tr>
<th></th>
<th>Totals</th>
<th>Participating in C.E.P.M.</th>
<th>Number Participated in C.E.P.M.</th>
<th>Number Not Participated in C.E.P.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>583</td>
<td>19%</td>
<td>116</td>
<td>463</td>
</tr>
<tr>
<td>Non-California</td>
<td>772</td>
<td>26%</td>
<td>279</td>
<td>483</td>
</tr>
<tr>
<td>Totals</td>
<td>1355</td>
<td>29%</td>
<td>395</td>
<td>946</td>
</tr>
</tbody>
</table>

### TABLE IV

<table>
<thead>
<tr>
<th>Level Attained</th>
<th>All Respondents (1,355)</th>
<th>California (583)</th>
<th>Non-California (772)</th>
<th>By Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>By Region</td>
<td>By Participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>College (No Degree)</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>AA.</td>
<td>9%</td>
<td>7%</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>R.N.</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>R.S.</td>
<td>49%</td>
<td>52%</td>
<td>45%</td>
<td>39%</td>
</tr>
<tr>
<td>Bachelor</td>
<td>19%</td>
<td>18%</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Master</td>
<td>13%</td>
<td>14%</td>
<td>11%</td>
<td>17%</td>
</tr>
</tbody>
</table>

1 Percentages were to three decimal points and have been rounded to the nearest whole number; therefore, totals may add to 99 or 101.

* Weighted (California respondents five, Non-California times three).

* Not Weighted, actual number of cases.

*** Less than .01%.

* 14 individuals did not answer the question on participation.

NOTE: The above referenced symbols will be used throughout the report on all tables unless otherwise noted.
### TABLE V
**Possession of a Degree in Public Health of Respondents by Region and Participation**

<table>
<thead>
<tr>
<th>PUBLIC HEALTH DEGREES</th>
<th>ALL RESPONDENTS (2231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION*</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>66% ¹</td>
<td>62% ¹</td>
<td>70% ¹</td>
</tr>
<tr>
<td>P.H.N.</td>
<td>22%</td>
<td>24%</td>
<td>18%</td>
</tr>
<tr>
<td>M.S.P.H.</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>M.P.H. or D.P.H.</td>
<td>11%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Dr. P.H.</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Ph.D. (a)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The distribution of disciplines responding appears nearly equivalent for California and the other states, as it does for CEPH participants and non-participants. However, physicians and non-medical administrators have participated in the Program proportionally more than other disciplines. Laboratory personnel, statisticians, and health investigators are under-represented in the participant population (see TABLE VI).

### TABLE VI
**Primary Professional Role of Respondents by Region and Participation**

<table>
<thead>
<tr>
<th>PROFESSION</th>
<th>ALL RESPONDENTS (2231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentists</td>
<td>1% ¹</td>
<td>1% ¹</td>
<td>1% ¹</td>
</tr>
<tr>
<td>Physicians</td>
<td>9%</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Nurses</td>
<td>37%</td>
<td>36%</td>
<td>39%</td>
</tr>
<tr>
<td>Environmentalists</td>
<td>23%</td>
<td>23%</td>
<td>22%</td>
</tr>
<tr>
<td>Health Investigators</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Statisticians</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Educators</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Social Workers</td>
<td>9%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Nutritionists</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Non-Medical Administrators</td>
<td>5%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>Laboratory Personnel</td>
<td>7%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

### TABLE VII
**Jurisdiction of Respondents Employing Agency by Region, by Participation**

<table>
<thead>
<tr>
<th>JURISDICTION</th>
<th>ALL RESPONDENTS (2231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>4% ¹</td>
<td>2% ¹</td>
<td>6% ¹</td>
</tr>
<tr>
<td>State</td>
<td>27%</td>
<td>18%</td>
<td>19%</td>
</tr>
<tr>
<td>District</td>
<td>47%</td>
<td>62%</td>
<td>29%</td>
</tr>
<tr>
<td>City</td>
<td>15%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>City/County</td>
<td>16%</td>
<td>13%</td>
<td>20%</td>
</tr>
</tbody>
</table>
A considerably higher percentage of CEPH participants than non-participants are in top management positions. Individuals in staff positions are under-represented as CEPH participants. This may be explained, in part, by the types of courses offered, since many are concerned with management and aimed at personnel with administrative responsibilities. Another possible explanation may be that those in the upper echelon have more freedom to attend courses of their choice (see TABLE VIII).

CEPH participants tend to have been in their present positions longer than non-participants; 55% of CEPH participants have been in their present position five years or longer, as compared with 38% of non-participants. This same trend is evidenced with regard to the length of time in public health; 65% of CEPH participants have been in the field of public health ten or more years, as compared with 42% of non-participants (see TABLE IX and X). These two factors may be a concomitant of the over-representation of top managers among CEPH participants.

### TABLE VIII
**Hierarchical Position of Respondents Within Their Agency by Region and Participation**

<table>
<thead>
<tr>
<th>POSITION</th>
<th><strong>ALL RESPONDENTS</strong></th>
<th><strong>BY REGION</strong></th>
<th><strong>BY PARTICIPATION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(5221)</td>
<td>Calif. (5221)</td>
<td>Non-Calif. (7725)</td>
</tr>
<tr>
<td>Head of Agency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Head of Sub-Unit Within Agency</td>
<td></td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Supervisor</td>
<td></td>
<td>22%</td>
<td>28%</td>
</tr>
<tr>
<td>Staff</td>
<td>58%</td>
<td>42%</td>
<td>53%</td>
</tr>
</tbody>
</table>

As can be seen from TABLE XI, CEPH participants, as a group, are somewhat older than non-participants, which correlates with data on longevity in the health field. In comparing California and non-California respondents, there is an overall balance in age groupings; 52% of all respondents were female; 48% were male. There was a fifty-fifty break in sexes of responding CEPH participants.

An exceedingly high percentage of respondents are not members of any professional public health association (see TABLE XII). CEPH participants are more likely to be members of one or both (70%) than non-participants (32%). One of the major reasons cited for not attending CEPH course offerings is that the respondent had not been notified of the availability of courses. The Program staff uses the membership rosters of state public health associations as a primary source of notification. The disparity may also reflect a tendency of those who have high professional motivation both to join their professional association and to take continuing education courses.

*A separate report has been prepared on membership in APHA and its affiliates. Three factors seem to be of prime importance in determining whether a person will join his professional association or not. These are: education (possession of a public health degree encourages membership); length of service (the longer one has been in the field, the more likely he is to be a member); hierarchical position (the higher the person is in his organization, the more likely he is to join his professional association).*

### TABLE IX
**Respondents Length of Time in Present Position by Region and by Participation**

<table>
<thead>
<tr>
<th>LENGTH OF TIME</th>
<th><strong>ALL RESPONDENTS</strong></th>
<th><strong>BY REGION</strong></th>
<th><strong>BY PARTICIPATION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(5221)</td>
<td>Calif. (5221)</td>
<td>Non-Calif. (7725)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 Years</td>
<td>34%</td>
<td>33%</td>
<td>36%</td>
</tr>
<tr>
<td>2 to 4 Years</td>
<td>25%</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td>5 to 9 Years</td>
<td>20%</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>10 to 14 Years</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>15 or More Years</td>
<td>11%</td>
<td>10%</td>
<td>12%</td>
</tr>
</tbody>
</table>
TABLE X
RESPONDENTS LONGEVITY IN PUBLIC HEALTH
BY REGION, BY PARTICIPATION

<table>
<thead>
<tr>
<th>LONGEVITY</th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(166)%</td>
<td>Calif (165)</td>
<td>Non-Calif (173)</td>
</tr>
<tr>
<td>Less than 2 Yrs</td>
<td>13%</td>
<td>12%</td>
<td>14%</td>
</tr>
<tr>
<td>2 to 4 Yrs</td>
<td>15%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>5 to 9 Yrs</td>
<td>24%</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>10 to 14 Yrs</td>
<td>15%</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>15 to 19 Yrs</td>
<td>12%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>20 or More Yrs</td>
<td>21%</td>
<td>19%</td>
<td>22%</td>
</tr>
</tbody>
</table>

TABLE XI
AGE OF RESPONDENTS BY REGION AND BY PARTICIPATION

<table>
<thead>
<tr>
<th>AGE</th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(233)%</td>
<td>Calif (165)</td>
<td>Non-Calif (173)</td>
</tr>
<tr>
<td>Under 30 Yrs</td>
<td>19%</td>
<td>22%</td>
<td>15%</td>
</tr>
<tr>
<td>30 to 39 Yrs</td>
<td>25%</td>
<td>24%</td>
<td>26%</td>
</tr>
<tr>
<td>40 to 49 Yrs</td>
<td>38%</td>
<td>37%</td>
<td>30%</td>
</tr>
<tr>
<td>50 to 59 Yrs</td>
<td>21%</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>60 or More Yrs</td>
<td>6%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>No Answer</td>
<td></td>
<td></td>
<td>1%</td>
</tr>
</tbody>
</table>

TABLE XII
MEMBERSHIP IN A.P.H.A. AND/OR STATE PUBLIC HEALTH ASSOCIATION

<table>
<thead>
<tr>
<th>MEMBERSHIP</th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = (166)%</td>
<td>Calif (165)</td>
<td>Non-Calif (173)</td>
</tr>
<tr>
<td>Member of Both A.P.H.A. and State P.H.A.</td>
<td>16%</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>Member of Fellow of A.P.H.A. Only</td>
<td>5%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Member of State P.H.A. only</td>
<td>20%</td>
<td>14%</td>
<td>29%</td>
</tr>
<tr>
<td>Not a Member of Either</td>
<td>56%</td>
<td>66%</td>
<td>43%</td>
</tr>
<tr>
<td>No Answer</td>
<td></td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>
Course Offerings

In this section of the questionnaire, titles of specific courses which were already developed and ready for presentation, or in development stages, or which were considered feasible for development from those suggested in the initial pre-test interview stage, were listed by groupings under eight general subject areas. The subject areas were:

- Administration
- Chronic Disease
- Communication and Coordination
- Environmental Health
- General Public Health
- Maternal and Child Health
- Medical Care Organization
- Mental Health

A total of 78 different course titles were grouped into these eight general content areas. (Each area had nine or ten course topics, but because of IBM card limitations, ten was the maximum number possible in any broad area.) Each person was first asked if he had an interest in the area or the courses listed. If not, he was instructed to proceed to the next area. If he did, he was asked to indicate the course topic in which he was most interested and that in which he was next most interested.

Later in this section of the questionnaire, the respondent was asked to suggest additional courses he would like to see offered, and these suggestions will be considered for future course development.

Course Offerings – Administration

In the subject area of Administration the highest percentage of respondents selected Introduction to Administration and Decision-Making as the course they would be most or second-most interested in taking.

Urbanization: Its Effects on Public Health and Research Methods: Including Use of Computers and Program Evaluation follow as the next most often selected courses.

Of least interest to respondents in this area were Occupational Medicine and the Law and Medical-Health Economics.

In comparing CEPH participants with non-participants, frequency of selection was similar, except for the course Introduction to Administration and Decision-Making. This course was selected less frequently by those who had attended CEPH presentations. For the course Political Science, Public Administration Health Programs, the reverse was true. A possible explanation for the former is that many participants may have taken the Introduction to Administration course which was offered throughout the region. This would, of course, affect the percentage selecting Political Science.

Respondents who were either heads of agencies or of major sub-units within agencies selected Research Methods most frequently. The choice of individuals in supervisory capacities was Introduction to Administration and Decision-Making, while for staff personnel the top choice was Urbanization and Its Effect on Public Health.

By professional category, Research Methods was the first choice of physicians, health investigators, statisticians, nutritionists, social workers and laboratory personnel. Educators and non-medical administrators selected Political Science as their first choice. Environmentalists chose Urbanization, while nurses and social workers picked Introduction to Administration and Decision-Making.

A person's position within an agency determined to a great extent his selection of courses within this curriculum area. Ninety-Four percent (94%) of heads of agencies, 91% of deputy heads, 82% of supervisors, and only 57% of staff personnel selected specific courses in the Administration area.

<table>
<thead>
<tr>
<th>Total Cases = 100%</th>
<th>ALL RESPONDENTS (5331)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cass. (5232)</td>
<td>Non-Cass. (772)</td>
<td>CEPH (1417)</td>
</tr>
<tr>
<td>Chose Course Title(s)</td>
<td>70%</td>
<td>66%</td>
<td>72%</td>
</tr>
<tr>
<td>Indicated No Interest in the Area</td>
<td>27%</td>
<td>31%</td>
<td>22%</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>3%</td>
<td>3%</td>
<td>5%</td>
</tr>
</tbody>
</table>

TABLE XIII A
Respondents Interest in Curriculum Area of — Administration
TABLE XIII B  
DISTRIBUTION OF SELECTIONS BY RESPONDENTS INDICATING  
INTEREST IN CURRICULUM AREA OF ADMINISTRATION

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS (2463)$</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases = 100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Budget Development and Personnel Management</td>
<td>24%*</td>
<td>24%*</td>
<td>23%*</td>
</tr>
<tr>
<td>2. Executive Development</td>
<td>12%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>3. Federal Legislation and Health Programs</td>
<td>21%</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>4. Introduction to Administration and Decision Making</td>
<td>33%</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>5. Medical-Health Economics</td>
<td>11%</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>6. Occupational Medicine and the Law</td>
<td>9%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>7. Political Science, Public Administration &amp; Health Programs</td>
<td>23%</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>8. Urbanization: Its Effects on Public Health</td>
<td>31%</td>
<td>33%</td>
<td>29%</td>
</tr>
<tr>
<td>9. Research Methods: Including Use of Computers; Prop. Evaluation</td>
<td>31%</td>
<td>32%</td>
<td>30%</td>
</tr>
</tbody>
</table>

*Weighted (California respondents times five (5); Non-California respondents times three (3); Fourteen (14) individuals did not indicate whether or not they had participated in CEPH courses.

^Percentages are the sum of the first and second choices, not all individuals made both a first and second choice, and therefore will total to more than 100% but not more than 200%.
Course Offerings – Chronic Disease

The most frequently selected course by all respondents was Epidemiology, followed by Dangerous and Addictive Drugs and Multi-Phasic Screening for Chronic Diseases. There was little difference between California and non-California respondents in course preference.

CEPH participants differed from non-participants in several course topics. Individuals who had participated in the Program selected as their top preferences, after Epidemiology, the following courses: Multi-Phasic Screening, Geriatrics, and Dangerous Drugs. Non-participants, after Epidemiology, chose Drugs, Alcoholism, and Multi-Phasic Screening, in that order.

Chronic Disease was the most popular curriculum area for nurses, with only 2% indicating no interest in this area. Multi-Phasic Screening was their primary course selection. The top course priority for health educators was Dangerous Drugs; for social workers, Alcoholism; for nutritionists, Quackery. Epidemiology was the top course choice for physicians, environmentalists, health investigators, statisticians, non-medical administrators and laboratory personnel.

### TABLE XIV a
**RESPONDENTS INTEREST IN CURRICULUM AREA OF — Chronic Disease**

<table>
<thead>
<tr>
<th></th>
<th>ALL RESPONDENTS (5231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Calif. (3838)</td>
<td>Non-Calif. (773)</td>
<td>C.E.P.H. (1417)</td>
</tr>
<tr>
<td>Chose Course Title(s)</td>
<td>76%</td>
<td>76%</td>
<td>82%</td>
</tr>
<tr>
<td>Indicated No Interest in the Area</td>
<td>16%</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

### TABLE XIV b
**DISTRIBUTION OF SELECTIONS BY RESPONDENTS INDICATING INTEREST IN CURRICULUM AREA OF CHRONIC DISEASE**

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS (4080)</th>
<th>BY REGION</th>
<th>BY PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases = 100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Alcoholism</td>
<td>20% a</td>
<td>21% a</td>
<td>17% a</td>
</tr>
<tr>
<td>2. Cardiovascular Disease</td>
<td>11%</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>3. Chronic Respiratory Diseases</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>4. Dangerous &amp; Addictive Drugs</td>
<td>27%</td>
<td>30%</td>
<td>23%</td>
</tr>
<tr>
<td>5. Dental Research Applied to Public Health</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>6. Epidemiology</td>
<td>40%</td>
<td>39%</td>
<td>41%</td>
</tr>
<tr>
<td>7. Geriatrics: Problems of the Aging</td>
<td>21%</td>
<td>18%</td>
<td>14%</td>
</tr>
<tr>
<td>8. Multi-Phasic Screening for Chronic Diseases</td>
<td>25%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>9. Quackery: Consumer Education</td>
<td>19%</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>10. Stroke-Rehabilitation</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
</tr>
</tbody>
</table>
Course Offerings – Communication & Coordination

This curriculum area grew out of the field interviews. Most of the courses listed in this category were suggested by respondents during the field interviews. Eighty-three percent (83%) of all respondents selected courses in the area of Communication and Coordination. Of the eight general curriculum areas, it received the second highest frequency of selection. Of the nine courses listed, Motivation and Persuasion was by far the first choice, with 46% of all respondents selecting it as their first or second preference. Next was Communications – Individual and Organizational, with a 33% selection. Third was Community Organization: Development and Use of Resources, with a 29% selection.

Californians chose Communications as their second highest priority course, and Community Organization as their third choice. Non-Californians reversed these preferences. There was little difference in selection between CEPH participants and non-participants.

Some interesting variations occur when hierarchical position is the variable. For example, 18% of the heads of agencies selected Coping with the Legislature and Management Decision, while only 9% of staff personnel chose this topic. Interdisciplinary Coordination was selected by 40% of the agency heads and 17% of staff personnel. For the course, Interpersonal Relationships, the reverse was true — 27% of the staff personnel chose this topic, while only 10% of the agency heads expressed an interest.

Of those with public health degrees, 21% selected Coping with the Legislature and Management Decisions. The course was picked by only 11% of those not having public health degrees. Those with an M.P.H. followed the same trend as heads of agencies; those without public health degrees followed the trend of staff personnel.

By discipline, Motivation and Persuasion Techniques was the first choice of dentists, physicians, nurses, environmentalists, educators and non-medical administrators. Statisticians picked Technical Scientific Report Writing as their first choice; social workers, Community Organization; nutritionists, Interdisciplinary Coordination; and laboratory personnel, Technical and Scientific Report Writing.

### TABLE XV A

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Cases = 100%</td>
<td>Calif. (472)</td>
<td>Non-Ca. (672)</td>
</tr>
<tr>
<td>Chose Course Title(s)</td>
<td>83%</td>
<td>81%</td>
<td>87%</td>
</tr>
<tr>
<td>Indicated No Interest In the Area</td>
<td>12%</td>
<td>15%</td>
<td>8%</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>5%</td>
<td>4%</td>
<td>5%</td>
</tr>
</tbody>
</table>

### TABLE XV B

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Cases = 100%</td>
<td>Calif. (424)</td>
<td>Non-Ca. (672)</td>
</tr>
<tr>
<td>1. Audio-Visual Methods</td>
<td>12%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>2. Communications: Individual and Organizational</td>
<td>33%</td>
<td>36%</td>
<td>28%</td>
</tr>
<tr>
<td>3. Community Organization: Development &amp; Use of Resources</td>
<td>29%</td>
<td>26%</td>
<td>32%</td>
</tr>
<tr>
<td>4. Coping with Legislative and Management Decisions</td>
<td>10%</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>5. Interdisciplinary Coordination</td>
<td>19%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>6. Interpersonal Relationships</td>
<td>23%</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>7. Motivation &amp; Persuasion Techniques</td>
<td>46%</td>
<td>47%</td>
<td>45%</td>
</tr>
<tr>
<td>8. Technical/Scientific Report Writing</td>
<td>16%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>9. Terminology for Medicine &amp; Nursing In Public Health</td>
<td>7%</td>
<td>6%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Course Offerings – Environmental Health

In this curriculum area, 77% of the respondents selected course titles. Environmentalists, as might be expected, selected Environmental Health as their top curriculum area, with 98% expressing interest.

Of the four course titles most frequently selected by respondents, Air and Water Pollution was the first choice of dentists, environmentalists, health investigators and laboratory personnel; Environmental Sociology and Anthropology was the first choice of nurses, statisticians, social workers and non-medical administrators; Accident and Injury Prevention was the first choice of educators; and Food and Drug was the overwhelming selection of nutritionists.

There was little difference in the choices of California and non-California respondents, the only minor exception being Housing. More Californians expressed an interest in this topic than did individuals outside of California.

TABLE XVI A
RESPONDENTS INTEREST IN CURRICULUM AREA OF — Environmental Health

<table>
<thead>
<tr>
<th>Total Cases = 100%</th>
<th>ALL RESPONDENTS (5231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Calif. (523)</td>
<td>Non-Calif. (772)</td>
<td>C.E.P.H. (1417)</td>
</tr>
<tr>
<td>Chose Course Title(s)</td>
<td>77 %</td>
<td>75 %</td>
<td>79 %</td>
</tr>
<tr>
<td>Indicated No Interest in the Area</td>
<td>17 %</td>
<td>18 %</td>
<td>15 %</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>6 %</td>
<td>7 %</td>
<td>6 %</td>
</tr>
</tbody>
</table>

TABLE XVI B
DISTRIBUTION OF SELECTIONS BY RESPONDENTS INDICATING INTEREST IN CURRICULUM AREA OF — Environmental Health

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>Total Cases = 100 %</th>
<th>ALL RESPONDENTS (4028)</th>
<th>BY REGION</th>
<th>BY PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Calif. (437)</td>
<td>Non-Calif. (610)</td>
<td>C.E.P.H. (1180)</td>
</tr>
<tr>
<td>1. Accident - Injury Prevention and Control</td>
<td>26 % *</td>
<td>24 % *</td>
<td>29 % *</td>
<td>29 % *</td>
</tr>
<tr>
<td>2. Air and Water Pollutons Prevention and Control</td>
<td>40 %</td>
<td>38 %</td>
<td>40 %</td>
<td>36 %</td>
</tr>
<tr>
<td>3. Environmental Sociology and Anthropology</td>
<td>39 %</td>
<td>39 %</td>
<td>39 %</td>
<td>45 %</td>
</tr>
<tr>
<td>4. Food and Drugs</td>
<td>25 %</td>
<td>26 %</td>
<td>24 %</td>
<td>22 %</td>
</tr>
<tr>
<td>5. Housing</td>
<td>15 %</td>
<td>19 %</td>
<td>10 %</td>
<td>12 %</td>
</tr>
<tr>
<td>6. Occupational Medicine Review</td>
<td>6 %</td>
<td>5 %</td>
<td>7 %</td>
<td>5 %</td>
</tr>
<tr>
<td>7. Radiological Health</td>
<td>5 %</td>
<td>4 %</td>
<td>6 %</td>
<td>3 %</td>
</tr>
<tr>
<td>8. Sanitation Monitoring Methods</td>
<td>9 %</td>
<td>9 %</td>
<td>9 %</td>
<td>11 %</td>
</tr>
<tr>
<td>9. Sewerage and Solid Waste Disposal</td>
<td>11 %</td>
<td>9 %</td>
<td>13 %</td>
<td>11 %</td>
</tr>
<tr>
<td>10. Toxicological Considerations of Environment</td>
<td>19 %</td>
<td>20 %</td>
<td>19 %</td>
<td>20 %</td>
</tr>
</tbody>
</table>
Course Offerings – General Public Health

This general category received the highest percentage of respondent interest. Eighty-eight percent (88%) selected courses from its subject area. Like Communications and Coordination, the General Public Health curriculum grew out of the pre-test field interviews and pre-test self-administered questionnaires. Titles listed are a synthesis of courses suggested by most of the pre-test group as needed in their daily affairs and not currently available, to their knowledge, from any other source of continuing education.

Courses receiving top priority in this curriculum area were Consultation: How to Use It; How to Give It and Comprehensive Health Planning. Comprehensive Health Planning ranked as the highest priority for CEPH participants. Non-Californians gave Comprehensive Health Planning a higher priority than did California respondents. It might be noted that, at the time the questionnaire was mailed out, national and regional conferences on Comprehensive Health Planning had been convened.


The course Applied Behavioral Sciences and Public Health had a high degree of selection. There was no discernible difference between California and non-California respondents, or between CEPH participants and non-participants in selecting this course.

Comprehensive Health Planning was chosen more often by individuals possessing a public health degree than by those not having the degree. Hierarchically, the heads of agencies chose Comprehensive Health Planning more frequently than did those in staff positions—45% as opposed to 18%. The reverse is true of Consultation, in which 36% of the staff personnel expressed an interest, as opposed to only 17% of heads of agencies. Health Education Techniques is a choice of staff — 34% versus only 12% for heads of agencies. On the other hand, Principles, Practices and Philosophies of Public Health is a choice of agency heads — 32% versus only 19% for staff personnel.

### TABLE XVII A

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS (5231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL CASES = 100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chose Course Title(s)</td>
<td>88%</td>
<td>90%</td>
<td>86%</td>
</tr>
<tr>
<td>Indicated No Interest in the Area</td>
<td>8%</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

### TABLE XVII B

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS (4603)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL CASES = 100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Applied Behavioral Sciences and Public Health</td>
<td>26%</td>
<td>27%</td>
<td>26%</td>
</tr>
<tr>
<td>2. Basic Public Health for Non-Public Health Trained Personnel</td>
<td>12%</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>3. Biostatistics for Public Health Worker</td>
<td>8%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>4. Comprehensive Health Planning</td>
<td>27%</td>
<td>23%</td>
<td>32%</td>
</tr>
<tr>
<td>5. Consultation: How to Use It; How to Give It</td>
<td>34%</td>
<td>35%</td>
<td>33%</td>
</tr>
<tr>
<td>6. Current Trends in Biochemistry &amp; Microbiology</td>
<td>12%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>7. Public Health Law</td>
<td>20%</td>
<td>24%</td>
<td>16%</td>
</tr>
<tr>
<td>8. Principles, Practices &amp; Philosophies of Public Health</td>
<td>19%</td>
<td>23%</td>
<td>16%</td>
</tr>
<tr>
<td>9. Public Health Laboratory: Techniques &amp; Instrumentation</td>
<td>10%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>10. Techniques of Health Education and Teaching</td>
<td>27%</td>
<td>22%</td>
<td>32%</td>
</tr>
</tbody>
</table>
Course Offerings – Maternal and Child Health

This curriculum area did not attract as much interest among respondents as did the other general categories discussed thus far. Non-Californians chose courses from this category more frequently than did Californians, and CEPH participants had a higher response rate than did non-participants.

Courses receiving the most responses were: Family Planning and Community Services, Neurological Disorders in Children, Health of the School-Age Child and Child Development.

In comparing respondents by region, we find that the course, Health of the School-Age Child was considered more popular with non-California than with California respondents. Thirty-one percent (31%) of non-Californians chose this course title, versus only 18% of the Californians. More Californians than non-Californians, on the other hand, chose Child Development and Neurological Disorders in Children.

When we note differences in priorities between CEPH participants and non-participants, two courses stand out. Twenty-five percent (25%) of CEPH participants expressed an interest in Genetic Counseling, while only 15% of non-participants did. The reverse is true in Child Development, a course picked by 25% of the non-participants, as contrasted with only 16% of CEPH participants.

Family Planning was the top course selection of physicians, nurses, educators and non-medical administrators. Migrant Health Programs was the overwhelming first choice of environmentalists and health investigators. Dentists chose Health of the School-Age Child; laboratory personnel chose Genetic Counseling; social workers chose Neurological Disorders of Children; nutritionists chose Problem Areas in Nutrition; and statisticians chose Infant Mortality and Morbidity.

There seemed to be little differentiation on the basis of possession of a public health degree. Some variation did show up, in that more individuals without a public health degree than with one expressed interest in the course Child Development. The reverse was true for the courses Migrant Health Programs and Reducing Infant Morbidity and Mortality.

### TABLE XVIII A

<table>
<thead>
<tr>
<th>Total Cases = 100 %</th>
<th>ALL RESPONDENTS (5331)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Calif. (583)</td>
<td>Non-Calif. (772)</td>
<td>C.E.P.H. (1417)</td>
</tr>
<tr>
<td>Chose Course Title(s)</td>
<td>66 %</td>
<td>62 %</td>
<td>72 %</td>
</tr>
<tr>
<td>Indicated No Interest in the Area</td>
<td>26 %</td>
<td>30 %</td>
<td>21 %</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>8 %</td>
<td>8 %</td>
<td>7 %</td>
</tr>
</tbody>
</table>

### TABLE XVIII B

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>Total Cases = 100 %</th>
<th>ALL RESPONDENTS (5433)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Calif. (541)</td>
<td>Non-Calif. (553)</td>
<td>C.E.P.H. (1034)</td>
<td>Non-C.E.P.H. (2399)</td>
</tr>
<tr>
<td>1. Child Development</td>
<td>23 %</td>
<td>26 %</td>
<td>20 %</td>
<td>16 %</td>
</tr>
<tr>
<td>2. Family Planning and Community Services</td>
<td>31 %</td>
<td>28 %</td>
<td>31 %</td>
<td>30 %</td>
</tr>
<tr>
<td>3. Genetic Counseling</td>
<td>19 %</td>
<td>20 %</td>
<td>19 %</td>
<td>25 %</td>
</tr>
<tr>
<td>4. Health of the School Age Child; School Health Programs</td>
<td>24 %</td>
<td>18 %</td>
<td>31 %</td>
<td>28 %</td>
</tr>
<tr>
<td>5. Mental Retardation and Community Services</td>
<td>18 %</td>
<td>16 %</td>
<td>21 %</td>
<td>16 %</td>
</tr>
<tr>
<td>6. Migrant Health Programs</td>
<td>20 %</td>
<td>22 %</td>
<td>20 %</td>
<td>19 %</td>
</tr>
<tr>
<td>7. Neurological Disorders in Children</td>
<td>24 %</td>
<td>27 %</td>
<td>20 %</td>
<td>22 %</td>
</tr>
<tr>
<td>8. Pediatric Immunization Programs</td>
<td>7 %</td>
<td>5 %</td>
<td>8 %</td>
<td>6 %</td>
</tr>
<tr>
<td>9. Problem Areas in Nutrition</td>
<td>12 %</td>
<td>15 %</td>
<td>11 %</td>
<td>12 %</td>
</tr>
<tr>
<td>10. Reducing Infant Morbidity and Mortality</td>
<td>17 %</td>
<td>17 %</td>
<td>17 %</td>
<td>18 %</td>
</tr>
</tbody>
</table>
Course Offerings – Medical Care Organization

Despite exciting new developments in this field, the curriculum area of Medical Care Organization received a low response rate. A full 31% of the persons surveyed indicated no interest in this area. Within the curriculum, preferences centered on courses dealing with regional planning of services and facilities, quality control and evaluation, public medical care, organized health care and medical care law. Interest then dropped off sharply for the other course topics listed. There was little difference between California and non-California respondents, except that non-Californians tended to select regional planning as their central concern, while Californians chose both regional planning and quality control.

In comparing responses by CEPH participants and non-participants, we find some minor variations, the most notable was to the course entitled, Regional Planning of Services and Facilities. Forty-five percent (45%) of the CEPH participants selected this topic, as contrasted with only 31% of non-participants. Courses entitled, Health Manpower and Organized Health Care received higher priorities from CEPH participants than non-participants, while Medical Care Law received a higher frequency of selection by non-participants than participants.

When hierarchical position is examined as a factor, the following breakdown results: among heads of agencies, 92% selected courses in this curriculum area; among agency sub-unit heads, 72% selected courses; among supervisory personnel, 62% selected courses; and among staff personnel, 57% selected courses. Heads of agencies, deputy heads and supervisors tended to center their selections on the two courses, Quality Control and Regional Planning. Staff personnel tended to spread their selection more evenly throughout all courses listed.

Neither possession of a public health degree, nor longevity within the field of public health seemed to be a deciding factor in selection of courses.

By discipline, Regional Planning of Health Facilities and Services, was the top course selection for physicians, nurses, environmentalists, educators, social workers and non-medical administrators. Quality Control and Evaluation was the first preference for health investigators, statisticians (overwhelmingly) and laboratory personnel. Nutritionists chose Health Manpower, while dentists, perhaps understandably, chose Dental Care.

### TABLE XIX A

**RESPONDENTS INTEREST IN CURRICULUM AREA OF — Medical Care Organization**

<table>
<thead>
<tr>
<th></th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(5231)</td>
<td>Calif. (592)</td>
<td>Non-Calif. (773)</td>
</tr>
<tr>
<td>One Course Title(s)</td>
<td>61%</td>
<td>60%</td>
<td>64%</td>
</tr>
<tr>
<td>Stated No Interest in the Area</td>
<td>31%</td>
<td>33%</td>
<td>28%</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
</tbody>
</table>

### TABLE XIX B

**DISTRIBUTION OF SELECTIONS BY RESPONDENTS INDICATING INTEREST IN CURRICULUM AREA OF — Medical Care Organization**

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>ALL RESPONDENTS</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2191)</td>
<td>Calif. (192)</td>
<td>Non-Calif. (964)</td>
</tr>
<tr>
<td>1. Dental Care</td>
<td>10%*</td>
<td>9%*</td>
<td>11%*</td>
</tr>
<tr>
<td>2. Drug Control</td>
<td>15%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>3. Health Insurance</td>
<td>10%</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>4. Health Manpower</td>
<td>16%</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>5. Hospital Administration</td>
<td>10%</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>6. Medicare Law</td>
<td>21%</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>7. Organized Health Care</td>
<td>22%</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>8. Public Medical Care</td>
<td>22%</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>9. Quality Control and Evaluation</td>
<td>30%</td>
<td>32%</td>
<td>27%</td>
</tr>
<tr>
<td>10. Regional Planning of Services and Facilities</td>
<td>35%</td>
<td>31%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Course Offerings — Mental Health

There was very little difference between California and non-California respondents and CEPH participants and non-participants in their course choices within this subject area. The only notable variation was that more CEPH participants (24%) gave priority to Comprehensive Mental Health Planning than did non-participants (14%). Courses with the highest priority from all respondents were, in order: The Multi-Problem Family, Mental Health of Children and Teenagers, Mental Disorders of Concern to Public Health Personnel, and Mental Health Problems of Race Relations and Poverty Populations.

With only minor variations, possession of a public health degree, longevity in the health field and age appeared to have little influence on course selection. When choices are examined hierarchically, we find that four courses show some differentiation. Individuals high in their organizations tended to choose Community Psychiatry and Comprehensive Mental Health Planning more frequently than staff level individuals. The reverse was true when the courses Mental Disorders of Concern to Public Health Personnel and Mental Health of Children and Teenagers were compared with position within the agency. The course, The Multi-Problem Family, received the highest percentage of choices throughout all hierarchical levels.

The general area of Mental Health, as determined by the percentage of course title selections, was the highest for physicians (81% choosing courses in this area), nurses (95%) and social workers (90%). Course selection by discipline showed that dentists picked Comprehensive Mental Health Planning as their first choice, as did non-medical administrators. Environmentalists, educators and laboratory personnel chose Mental Disorders of Concern to Public Health Personnel. Nurses, social workers and nutritionists chose The Multi-Problem Family; physicians, Mental Health of Children and Teenagers; statisticians, The Mental Patient in the Community; and environmentalists and health investigators, Mental Health Problems of Race Relations and Poverty Populations.

### Table XX A
RESPONDENTS INTEREST IN CURRICULUM AREA OF — Mental Health

<table>
<thead>
<tr>
<th>Total Cases</th>
<th>ALL RESPONDENTS (5231)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chose Course Title(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>72%</td>
<td>71%</td>
<td>73%</td>
</tr>
<tr>
<td>Indicated No Interest in the Area</td>
<td>23%</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>Did Not Answer, Rejected or Not Interested in Courses Listed</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
</tr>
</tbody>
</table>

### Table XX B
DISTRIBUTION OF SELECTIONS BY RESPONDENTS INDICATING INTEREST IN CURRICULUM AREA OF — Mental Health

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>Total Cases = 100%</th>
<th>ALL RESPONDENTS (2764)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Community Psychiatry</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>2. Comprehensive Mental Health Planning</td>
<td>17%</td>
<td>16%</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>3. Mental Disorders of Concern to Public Health Personnel</td>
<td>27%</td>
<td>28%</td>
<td>24%</td>
<td>23%</td>
</tr>
<tr>
<td>4. Mental Health of Children and Teenagers</td>
<td>32%</td>
<td>31%</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>5. Mental Health and Home Care Services</td>
<td>9%</td>
<td>7%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>6. Mental Health Problems of Race Relations &amp; Poverty Population</td>
<td>22%</td>
<td>24%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>7. Organization &amp; Administration of Community Mental Health Ctrs.</td>
<td>11%</td>
<td>8%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>8. Suicide</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>9. The Mental Patient in the Community</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
<td>18%</td>
</tr>
<tr>
<td>10. The Multi-Problem Family</td>
<td>38%</td>
<td>40%</td>
<td>35%</td>
<td>39%</td>
</tr>
</tbody>
</table>
Interest in Curriculum Areas By Discipline

Some marked differences in interest in overall curriculum areas were shown by respondents to the survey according to the various disciplines they represented. The differences can be measured by the percent of individuals actually selecting courses in a given curriculum area. Table XXI summarizes this information.

As can be seen from the table, physicians tended to select uniformly from all general curriculum areas. Environmental health was their lowest priority, with 70% selecting such courses, while mental health was their highest, with 81% selecting courses.

Nurses showed a relative lack of interest in only one area — administration. Only 61% selected courses dealing with this subject. The areas of Mental Health, Chronic Disease, General Public Health, Communication and Coordination, and Maternal and Child Health were all of high priority to nurses. Over 90% selected courses in these areas.

Environmentalists centered their interest in the area of Environmental Health, with 98% picking course titles under this category. Their next area of priority was General Public Health, with an 85% selection factor. In the categories of Maternal and Child Health, Medical Care Organization, and Mental Health, less than half of the individuals in this discipline selected courses.

Social workers clustered their selection of choices in the areas of Mental Health (90%), Communication and Coordination (85%), and Maternal and Child Health (80%).

Non-medical administrators chose courses with high frequency in four general areas: Administration (95%), General Public Health (95%), Communication and Coordination (94%), and Medical Organization (83%).

Laboratory personnel as a group tended to select courses with less frequency than other disciplines. The only area receiving a substantial number of selections by these individuals was General Public Health (91%). The area of next greatest concern was Environmental Health, with 79% expressing interest.

Educators, while tending to select courses in all general curriculum areas, picked courses in Communication and Coordination and General Public Health with the greatest frequency.

The areas of Administration, General Public Health and Chronic Disease were the most popular with statisticians. Health investigators most often selected courses under the general headings of General Public Health, Environmental Health and Chronic Disease. Dentists and nutritionists were represented in small numbers within the sample, and they tended to select courses in all curriculum areas. The exceptions were that nutritionists less often chose courses in Mental Health (only 44%) and Medical Care Organization (only 67%).

TABLE XXI
RESPONDENTS INTEREST IN GENERAL CURRICULUM AREAS — PERCENT SELECTING COURSES BY DISCIPLINE

<table>
<thead>
<tr>
<th>GENERAL CURRICULUM AREA</th>
<th>All Respondents</th>
<th>Dentists</th>
<th>Medical</th>
<th>Nurses</th>
<th>Environmentalists</th>
<th>Health Investigators</th>
<th>Administration</th>
<th>Education</th>
<th>Social Workers</th>
<th>Non-Academic Admin.</th>
<th>Laboratory Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>72%</td>
<td>94%</td>
<td>71%</td>
<td>61%</td>
<td>79%</td>
<td>75%</td>
<td>92%</td>
<td>89%</td>
<td>64%</td>
<td>73%</td>
<td>96%</td>
</tr>
<tr>
<td>Communication and Coord.</td>
<td>83%</td>
<td>88%</td>
<td>75%</td>
<td>91%</td>
<td>79%</td>
<td>76%</td>
<td>72%</td>
<td>95%</td>
<td>65%</td>
<td>79%</td>
<td>50%</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>78%</td>
<td>94%</td>
<td>78%</td>
<td>93%</td>
<td>61%</td>
<td>85%</td>
<td>84%</td>
<td>76%</td>
<td>73%</td>
<td>100%</td>
<td>58%</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>77%</td>
<td>73%</td>
<td>70%</td>
<td>96%</td>
<td>82%</td>
<td>56%</td>
<td>79%</td>
<td>52%</td>
<td>90%</td>
<td>90%</td>
<td>52%</td>
</tr>
<tr>
<td>General Public Health</td>
<td>88%</td>
<td>88%</td>
<td>79%</td>
<td>92%</td>
<td>85%</td>
<td>88%</td>
<td>86%</td>
<td>77%</td>
<td>100%</td>
<td>96%</td>
<td>91%</td>
</tr>
<tr>
<td>Maternal and Child Health</td>
<td>66%</td>
<td>85%</td>
<td>80%</td>
<td>91%</td>
<td>31%</td>
<td>48%</td>
<td>56%</td>
<td>71%</td>
<td>80%</td>
<td>81%</td>
<td>37%</td>
</tr>
<tr>
<td>Medical Care Organization</td>
<td>61%</td>
<td>100%</td>
<td>76%</td>
<td>70%</td>
<td>42%</td>
<td>44%</td>
<td>49%</td>
<td>77%</td>
<td>55%</td>
<td>47%</td>
<td>83%</td>
</tr>
<tr>
<td>Mental Health</td>
<td>72%</td>
<td>79%</td>
<td>81%</td>
<td>95%</td>
<td>39%</td>
<td>63%</td>
<td>57%</td>
<td>84%</td>
<td>90%</td>
<td>44%</td>
<td>49%</td>
</tr>
</tbody>
</table>
New Course Areas

Respondents were asked to indicate any courses not mentioned in the questionnaire which they would like to see added to the curriculum. Suggestions obtained from that open-ended question will be excerpted and compiled at a later date.

Respondents were also asked to indicate their interest in either or both of two topical areas: current national trends as they affect the health field, and basic preparatory areas, such as new math, symbolic logic, systems theory and calculus. Thirty-seven percent (37%) of the respondents said that they would be interested in both areas, and 13% indicated no interest in either. When asked to select only one of the two areas, 40% chose “current national trends,” while only 6% chose “new math, symbolic logic, systems theory and calculus.” Four percent (4%) did not answer this question. There was no apparent difference between CEPH participants and non-participants, nor between Californians and non-Californians. Neither did there seem to be any significant difference when discipline was the factor for comparison.

Respondents were then asked to suggest the maximum number of courses they would be interested in attending during a given year’s time. The chart which follows indicates that the majority of respondents suggested two courses per year. Again, there was little difference when participation in the Program, residence and discipline were comparison factors. (See Chart I).

Lastly, in this section, respondents were asked to designate those curriculum areas which they believed would be the most useful for them, and then the most useful for other professionals in their own discipline. Tables XXII and XXIII summarize this information.

Looking at the “All-Respondents” category in the preceding tables, we see that there is reasonably uniform distribution of choice among Administration, Communication and Coordination, Environmental Health, General Public Health, and Maternal and Child Health as selections for oneself. However, when asked to select courses needed by others in their discipline, respondents were unanimous in choosing Communication and Coordination as the most needed area, followed by General Public Health.

### Chart I

**OPTIMUM NUMBER OF COURSES PER YEAR REQUESTED BY RESPONDENTS**

<table>
<thead>
<tr>
<th>Number of Courses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2%</td>
</tr>
<tr>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>49%</td>
</tr>
<tr>
<td>3</td>
<td>16%</td>
</tr>
<tr>
<td>4</td>
<td>6%</td>
</tr>
<tr>
<td>5</td>
<td>3%</td>
</tr>
</tbody>
</table>

### Table XXII

**COURSE AREAS SELECTED AS MOST USEFUL FOR SELF**

<table>
<thead>
<tr>
<th>COURSE AREA</th>
<th>ALL RESPONDENTS (3231)*</th>
<th>BY REGION</th>
<th>BY PARTICIPATIONa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(58%1)</td>
<td>Calif. (585)*</td>
<td>Non-Calif. (773)*</td>
</tr>
<tr>
<td>Administration</td>
<td>18%1</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Communication and Coordination</td>
<td>17%</td>
<td>16%</td>
<td>18%</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>18%</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>General Public Health</td>
<td>14%</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td>Maternal and Child Health</td>
<td>12%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>Medical Care Organization</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Mental Health</td>
<td>9%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Not Answering</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Percentages may not add to 100% due to rounding.

1. Includes 7% of respondents who did not answer the question.

a. CEPH includes those respondents who have completed or are currently enrolled in a CEPH program.

b. Non-CEPH includes those respondents who have not completed or are not currently enrolled in a CEPH program.

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TABLE XXIII
COURSE AREAS SELECTED AS MOST USEFUL FOR OTHERS

<table>
<thead>
<tr>
<th>COURSE AREA</th>
<th>ALL RESPONDENTS (2255)</th>
<th>BY REGION</th>
<th>BY PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cal. (1825)</td>
<td>Non-Cal. (430)</td>
<td>C.E.P.H. (1117)</td>
</tr>
<tr>
<td>Administration</td>
<td>9%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>5%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Communication and Coordination</td>
<td>28%</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>14%</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>General Public Health</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Maternal and Child Health</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Medical Care Organization</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Mental Health</td>
<td>8%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Not Answering</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Variations of Course Presentations**

In this section of the questionnaire we were interested in what the respondents thought about new presentation methods, i.e., innovative techniques integrated into programs as supplementary learning experiences and augmentations to current in-the-field offerings. A short introductory paragraph summarizing possible alternative uses of each technique preceded the questions. Techniques about which respondents were queried were: use of TV-Telephone tie-up, use of circuit riding faculty, use of teaching machines, and use of programmed texts. Opinions on the desirability and usefulness of these techniques were cross-tabulated according to position, professional discipline, age and sex of the respondents.

**TV-Telephone Tie-Up**

Approximately the same response pattern was found for CEPH participants and non-participants and for Californians and non-Californians; therefore the standard table format used in the preceding sections will not be employed for comparison purposes here. There were also no significant differences in regard to position, discipline, age or sex of respondents. Overall, respondents thought:

- TV-Telephone Tie-Up would definitely be useful: 35%
- TV-Telephone Tie-Up might be useful: 53%
- TV-Telephone Tie-Up would not be useful: 9%
- No reply: 4%

The responses of individuals who worked in rural areas and in suburban areas were checked and compared, since these would be the groups who might benefit most from this technique. There did not, however, appear to be any noticeable differences when compared with the overall response.

**Circuit Riding Faculty**

As in the previous question, there was very little variation from the total pattern among any of the major categories; therefore, the full table is not presented here. The total response indicated overwhelmingly that respondents would like to see the circuit riding faculty technique introduced, but they did not want to lose the advantage of attending meetings at central sites.

The opinions solicited and percentage responses in this question were as follows:

- I would like to see meetings only at central sites: 13%
- I would like to see Circuit Riding Faculty only: 4%
- Introduce Circuit Riding Faculty, but keep central meeting sites: 78%
- No reply: 5%

In cross-tabulations no major change emerged from the overall pattern.

**Programmed Instruction**

Programmed learning techniques have been suggested as possible supplementary educational aids to the in-the-field course offerings. The Program has invested time and effort in research, development and introduction into its presentations of teaching machine units and programmed texts. This Survey afforded an opportunity for potential consumers to indicate their receptivity to these techniques, and their opinions on how they might best be used.

Results indicate that there is resistance to both of these methods, with greater resistance expressed toward teaching machines (31% indicated that this technique was not useful or did not reply) than to programmed texts (19% saw programmed texts as not useful or did not reply).

Respondents' preferences for when to use techniques were evenly distributed over three possibilities — before, during or after a seminar. There was, however, a slight difference expressed in the sequence in which the two techniques might ideally be used. Respondents felt that teaching machines can best be employed as a post-
seminar review, and that a programmed text can be employed more appropriately in pre-seminar preparation. In cross-tabulating disciplines, it was found that the range of resistance to teaching machines varied from a low of 12% for nutritionists to a high of 46% for social workers. The median was 29%, represented by environmentalists. Physicians, nurses, health investigators, and laboratory personnel were more resistant to the technique than were statisticians, educators, and non-administrators. Respondents were less resistant to programmed texts. Those indicating they regarded the technique as not useful ranged from 6% of nutritionists to 31% of social workers. The median was 18%, as represented by nurses and statisticians. Educators were the only group to maintain a consistent percentage of resistance against both techniques — 25% in each case (see Table XXIV).

Age did not appear to be a factor in determining responses to either technique, except that individuals 65 and over were more resistant to the programmed text than were any other age groupings (35% as opposed to approximately 20% for other age groupings). There is no difference with regard to teaching machines.

Individuals with a high school education indicated the greatest resistance to both techniques, although there is a distinct possibility that they may not have understood them. Forty-three percent (43%) did not answer the question on teaching machines, and 33% did not answer the question on programmed texts. Respondents in other educational-level categories had a response rate of 85% or more on both of these questions.

A cross-tabulation for other factors did not show any significant variances, with the possible exception that staff personnel were more accepting than heads of agencies (82% to 64% respectively for teaching machines, 80% to 76% respectively for programmed texts).

TABLE XXIV

<table>
<thead>
<tr>
<th></th>
<th>TEACHING MACHINES</th>
<th>PROGRAMMED TEXTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Pre-Seminar Preparation</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>As Supplement During Seminar</td>
<td>23%</td>
<td>27%</td>
</tr>
<tr>
<td>As Post-Seminar Review</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td>Not Useful</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>No Answer</td>
<td>8%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Single-Discipline vs. Multi-Disciplinary Seminars

Respondents were asked to indicate their preference for seminars geared to single or multi-disciplinary groups. Forty-three (43%) favored the latter, 37% the former, and 18% showed no preference. CEPH participants preferred multi-disciplinary to single-discipline seminars by a margin of 55% to 27%, whereas non-participants in the Program reversed the preference — 41% to 38% in favor of single-discipline groupings.

Among the various professional fields, laboratory personnel favored single to multi-disciplinary seminars by a margin of 59% to 21%; sanitarians by a margin of 44% to 38%; and dentists by a margin of 54% to 46%. These were the only groups to indicate a preference for courses restricted to their own field. All other professional groups showed a preference for multi-disciplinary seminars, although approximately 30% of the respondents in each discipline preferred seminars designed for their own discipline.

In comparing educational attainment with this response, we find that those who have a high school education showed a preference for single-discipline seminars over multi-disciplinary seminars by a margin of 50% to 21%. So, also, did those who have registered sanitary certification, but no degree — 52% to 31%, respectively.
Participation In The Program of Continuing Education In Public Health

In this section of the questionnaire, an attempt was made to determine how much contact, if any, individual respondents had had with the Program of Continuing Education in Public Health. In addition, information was sought on the contact they might have had with other programs of continuing education. Respondents were asked to express the chief reasons for which they were prevented from attending Continuing Education in Public Health offerings, and the primary reasons for which, in their opinion, more people do not attend courses given by the Program.

Twenty-nine percent (29%) of respondents indicated they had participated in courses of the Program of Continuing Education in Public Health. The percentage was higher (36%) for those outside of California than for Californians (19%). The latter, however, have had relatively fewer opportunities to attend CEPH offerings because fewer courses have been offered within the state in relation to the total eligible population. There is also a possibility that the opportunities for obtaining continuing education from other sources are much greater within the metropolitan areas of California than in the rest of the Western States. However, this last hypothesis needs further study.

The following is the percentage of participation in CEPH offerings by discipline:

- Physicians: 44%
- Non-medical Administrators: 38%
- Educators: 37%
- Dentists: 27%
- Environmentalists: 27%
- Nurses: 27%
- Social Workers: 24%
- Nutritionists: 17%
- Laboratory Personnel: 13%
- Health Investigators: 10%
- Statisticians: 7%

Some of the factors which seem to influence participation in the Program — or at least the opportunity to participate in the Program — are as follows: longevity in the field of public health (43% of those having 20 or more years in public health indicated they had participated in the Program, as opposed to 11% of those having less than two years in the health field); position with the agency (50% of the heads of agencies have participated in the Program, whereas only 17% of staff members have done so); and possession of a public health degree (53% of those holding an M.P.H. degree have participated in the Program, as against 23% of the respondents not having public health degrees).

In reply to the question, "When did you last attend a seminar presented by the Program of Continuing Education in Public Health?" the highest percentage, 44% had participated during 1966. Thirty-one percent (31%) had last participated in 1967, and 12% in 1965.

Respondents were asked to indicate the number of courses they had attended during the last five years. Thirty-three percent (33%) had attended one course, 28% had attended two courses, 15% three courses, 16% four to six courses, 3% seven to nine courses, and 2% ten or more courses. These data indicate that the Program is reaching a reasonably broad range of individuals, rather than a narrow base of professional seminar attendees. Furthermore, the Program has offered several courses of a serial nature.

There is a direct relationship between the frequency of attendance and one's position within the agency. Forty-six percent (46%) of heads of agencies have attended three or more seminars as opposed to 44% of deputy heads, 30% of supervisors, and 27% of staff members. A possible explanation is that the Administration Series, which would attract persons in higher administrative positions, consisted of four separate seminars; several of the other courses — e.g., Public Health Law, Medical Care Organization — also would be more attractive to persons with administrative responsibilities.

Respondents who had not attended courses offered by the Program were asked to check the chief reason, or reasons, which prevented their attendance. Lack of notification of courses was the principal one given. This is undoubtedly true, since the primary outlet for announcement of courses is mailings by the state public health associations, and a majority of individuals do not belong to their state associations.

Finally, all respondents were asked what they thought were the primary reasons for which more people did not attend courses presented by the Program of Continuing Education in Public Health. They were asked to indicate that which they felt to be most important, and that next most important. The reason checked with greatest frequency was that employers feel they can't afford to give time off. This was followed, in order, by lack of notification, heavy workloads, and lack of recognition for employee participation by the employing agency.
Implications for Planning and Further Study

Based on a preliminary analysis of the results of this study, the Faculty Advisory Committee has approved development of the following courses:

* Advanced Series in Comprehensive Health Planning
* Advanced Course on Planning for Comprehensive Health Planning
* Advanced Series on Environmental Health
* Consultation: How To Use It; How To Give It
* Epidemiology
* Community Organization
* Program Evaluation
* Course(s) Dealing with Problems of Infants and Children

Further study by the appropriate content subcommittee of the Faculty Advisory Committee will be undertaken in the Fall of 1968.

State Continuing Education Committees have based their course scheduling for 1968-69 on the preliminary results of this study.

Both advisory bodies to the Program will continue to study these findings and make recommendations to the Program for action and direction.

Based on the widespread acceptance of using TV and video tapes as a supplement to continuing education courses, the Program will intensify efforts in developing opportunities for using these methods.

Before investing additional funds and staff time in development of programmed instruction methods, further study will be undertaken to determine, as objectively as possible, whether there is real resistance on the part of health professionals to these promising education methods. This apparent resistance may relate to the interest and need for process and problem centered courses.

Methods for recruitment of participants will have to be re-evaluated by each state continuing education committee. It is apparent that reliance on association membership mailings is not effective since the majority of professionals do not belong to their state associations. Furthermore, the most cited reason for non-attendance was lack of notification. An even more basic reason is that with the broadening of the scope of public health, we will want to involve others in course planning and participation. For example, social planning, welfare, mental health agencies.

Because of the expressed need and demand, selected courses (e.g. Administration Series, Communication, Family Planning) will be repeated in the states or offered on a regional basis.

The policy jointly determined by the Faculty Advisory Committee and the State Continuing Education Committees that courses should be designed for multi-discipline audiences, will be re-evaluated since a significant percentage (30%) of respondents in all disciplines and at all organizational levels indicated a preference for single discipline courses.

In the selection of course topics for development and the recruitment of students, greater attention must be paid to the levels within the organization of the participants to whom the course is to be directed. It is possible that parallel curricula should be developed; one for staff level personnel, another for management level personnel.

The Program will increase its efforts to build faculty resources within the participating states. In this way, it is hoped, the expressed wish for circuit-riding faculty within the state can be met in a more meaningful way.

The Program will undertake to broaden this study to include individuals in organizations other than health departments and voluntary health agencies.

Follow-on studies are being planned which will attempt to identify those motivational factors, both individual and organizational, which determine whether or not a person participates in continuing education.
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Monograph No. 1: The Voluntary Health Agency—Meeting Community Needs (out of print)

Monograph No. 2: Cardiovascular Diseases

Monograph No. 3: The Behavioral Sciences and Public Health

Monograph No. 4: The Voluntary Health Agency—Getting Community Action

Monograph No. 5: Stroke and Its Rehabilitation

Monograph No. 6: Health Program Implementation Through PERT

CONTINUING EDUCATION IN PUBLIC HEALTH: THE EXPERIENCE OF THE WESTERN STATES, 1959-1966

COURSE CATALOG

FIELD FACULTY: A Roster

PARTNERSHIP IN LEARNING

POLICY AND PROCEDURES GUIDE FOR FACULTY ADVISORY COMMITTEE AND CONTINUING EDUCATION COMMITTEE CHAIRMAN

PROGRAMMED TEXTS:

An Introduction to Title 18—Federal Health Insurance for the Aged
A Hospital’s Role in the Community
Health Insurance
Epidemiology

SELECTED CASES IN PUBLIC HEALTH LAW

Cover Design: John Smick
A BIBLIOGRAPHY ON POLICE AND COMMUNITY RELATIONS

SUPPLEMENT I

Compiled by

MARTIN G. MILLER
Assistant Director of the Center

May, 1967
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SUPPLEMENT II

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May, 1968
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