

DEPARTMENT OF EPIDEMIOLOGY

ANNUAL REPORT

1982-1983

I. DEPARTMENT ORGANIZATION AND ADMINISTRATION.

The Department of Epidemiology is comprised of a multidisciplinary faculty offering professional training in six primary program areas: Cardiovascular Disease Epidemiology, Cancer Epidemiology, Environmental/Occupational Epidemiology, Health Services Research, Population Epidemiology and Psychosocial Epidemiology. Responsibility for coordination of each program area has been delegated to a Program Director or Co-Directors who specialize in the specific area. The Department's teaching programs are built upon a firm foundation of research activities. The Department is administered by the Chairperson, assisted by the following committees and assemblies:

ACADEMICS

The Admissions Committee is made up of directors of programs within the department, or their representatives. The Admissions Committee screens all applications and evaluates the strengths and weaknesses of each, ranking the applicants who are acceptable in order of priority. The Committee submits its recommendation to the Department Chairperson, who makes the final recommendation to the Graduate School.

The Graduate Studies Committee (GSC) concerns itself with the broad issues of curriculum, focusing on the insufficiencies in current course offerings, and making recommendations for the development and implementation of courses designed to meet those needs. In addition, as issues arise from the general faculty concerning academic policy or procedures, the GSC is charged with studying the issue and reporting back to the full faculty with recommendations for future policy.

The Full Faculty serve as a Promotions Committee to consider the promotion of students who are completing their masters work and wish to continue into the doctoral degree program. Student petitions to continue into the doctoral degree program are presented by the advisor. The advisor also provides a summary of the student's work so far in our program, and a recommendation regarding the student's potential and suitability for doctoral work. The Promotions Committee formally votes on the recommended action, and submits that decision to the Department Chairperson for implementation.

The Doctoral Qualifying Examination Committee and the Masters Comprehensive Examination Committee are responsible for developing and administering the two major examinations for the Doctoral and Masters programs. The Chairmen of the committees rotate on an annual basis and are assisted by the Registrar and the department's Administrative Assistant. Additional input is provided by the Graduate Studies Committee and the Full Faculty.

GENERAL ADMINISTRATION

The Full Faculty meet regularly to discuss ongoing and proposed research projects, and to discuss academic and administrative issues. The meetings are generally open to students.

The Seminar Committee is chaired by a faculty member on an annual rotation basis. The Committee Chairman receives suggestions for speakers from all faculty and students, invites the speakers, and organizes the seminar schedule for the fall and spring semesters. Seminar activities are evaluated at the end of each semester by the entire faculty with participation from students.

The Department Chairperson convenes a monthly Management Meeting to review support services and staffing for the department, and to discuss future needs and plans. The meeting is attended by the department's administrative staff, and representatives from the research and secretarial staffs.

Support Staff

(as of July 1, 1983)

| | |
|-----------------|-----------------------------|
| Joyce Allen | Registrar |
| Edward Bachmann | Dir., Data Management Unit |
| Carol Beam | Assistant to the Chair. |
| Sandra Graves | Secretary |
| Sue Hartnett | Social Research Assistant |
| Joan Healy | Social Research Assistant |
| Jo Heiss | Research Associate |
| Terry Hudgins | Computer Programmer |
| Phyllis Johnson | Administrative Secretary |
| Marilyn Knowles | Social Research Assistant |
| Violet Krall | Fiscal Manager |
| Marti McLanahan | Data Processing Assistant |
| Lesa McPherson | Secretary |
| Veda Manley | Data Processing Coordinator |
| Sally Muller | Computer Programmer |
| Beth Ragan | Social Research Assistant |
| Diane Ramsey | Social Research Assistant |
| Jinny Reid | Sec'y to the Chairperson |
| Vic Rhodes | Computer Programmer |
| Betsy Seagroves | Secretary |
| Edward Siff | Social Research Assistant |
| Joanna Smith | Research Assistant |
| Patricia Taylor | Secretary |
| Madeline Walker | Secretary |
| Debbi Windham | Accounting Technician |
| Susanne Wolf | Research Associate |
| Sally Zimney | Secretary |

Employment Terminations

| | |
|---------------|-------------------|
| Jeanne Warner | Soc. Res. Assist. |
| Ann Sheldon | Clerk Typist |

In conjunction with the transfer of the Environmental Protection Agency Service Contract to the Department of Biostatistics, the following staff and SPA positions were transferred to the Department of Biostatistics:

| | |
|-----------------|--------------------|
| Amelia Burke | Clerk-Typist |
| Donna Harto | Clerk-Typist |
| Lynne Newlin | Soc. Res. Assist. |
| Cass Parrish | Soc. Res. Assist. |
| Kathlene Seiple | Research Assistant |
| Darlene Watts | Secretary |

II. INSTRUCTIONAL PROGRAMS

A. Courses and Curricula

1. Major Changes During the Year:

A separate section of EPID 160 "Principals of Epideimology" was formed for undergraduates and is taught in the Spring semester.

A new course, EPID 270, "Behavioral Issues in Cardiovascular Disease Epidemiology," is now being offered.

2. New Programs being Planned or Deletions made, including Reasons for Adding or Dropping Program.

A recommendation by the Graduate Studies Committee was approved to develop and offer a Student Teaching Effectiveness Component to EPID 257 "Teaching Internship in Epidemiology". The focus is on student faculty development, particularly the capacity to be teaching scholars. The first offering will be in Fall 1983.

An advanced course is being planned to provide a systematic review of issues in the conceptualization, design and data collection and anaysis of clinically oriented epidemiologic research.

3. Participation in Interdepartmental or Inter-institutional Programs.

Within the School of Public Health, the Department of Epidemiology is involved extensively with the Occupational Health Studies Group, the Lipid Research Clinics Program, and the Carolina Population Center. In addition, Dr. Sherman James participated on the Dean's Ad Hoc Committee on Health Promotion and Disease Prevention. Many of our research programs require the participation of a multidisciplinary faculty, some of whom are drawn from within the School. In addition,

our faculty are called upon to lecture in courses offered through other School of Public Health Departments, including an Off-Campus Masters program for which we offer an introductory epidemiology course.

The School of Medicine has been a natural associate on a number of research and teaching efforts. Of particular note are our involvement in the Robert Wood Johnson Clinical Scholars Program (Drs. Wagner, Hulka, and others), the Joint MD/MPH Program, and the Family Medicine Postgraduate Fellowship Program, and the Regional Medical Program for which we offer an introductory Epidemiology course. We have participated in teaching programs of the Schools of Arts and Sciences and Nursing.

Centers within the Division of Health Affairs, such as the Health Services Research Center, and the Cancer Research Center, draw upon our faculty to provide epidemiologic expertise required in the conduct of their research. Dr. Barbara Hulka chairs the Epidemiologic Section of the Cancer Research Center and Dr. Edward Wagner serves as Associate Director of the Health Services Research Center. Dr. Omran serves as Director of the WHO Collaborative Center for Epidemiologic Studies in Human Reproduction in association with the Carolina Population Center.

Our faculty have continued to be involved in programs sponsored by other institutions through their participation in short courses, Summer Institutes, and seminar programs. Consultation activities on research programs of other institutions are common. We have increased our association with the Veterans Administration by collaborating on pilot research projects and developing training programs for physicians and health services researchers. We continue to have faculty membership on the Advisory Committee on the Health Services Research Program between the School of Public Health and the Veteran's Administration Health Services Research Program in Durham.

B. Enrollment.

1. Number of Graduate Students by:

| a. <u>Degree</u> | <u>Fall 1982</u> | <u>Spring 1983</u> |
|----------------------------------|------------------|--------------------|
| Dr.P.H. | 1 | 1 |
| Ph.D. | 31 | 31 |
| M.P.H. | 15 | 13 |
| M.S.P.H. | 10 | 10 |
| b. <u>Race-Minority Status</u> | | |
| Black Male | 4 | 4 |
| Black Female | 3 | 3 |
| White Male | 22 | 22 |
| White Female | 20 | 21 |
| Foreign Male | 3 | 2 |
| Foreign Female | 3 | 1 |
| Asian Male | 1 | 1 |
| American Indian Female | 1 | 1 |
| c. <u>In-State Residency</u> | 28 | 29 |
| d. <u>Out-of-State Residency</u> | 23 | 24 |
| e. <u>Foreign Students</u> | 6 | 2 |

2. Number of Degrees Awarded:

| | <u>Ph.D.</u> | <u>M.P.H.</u> | <u>M.S.P.H.</u> |
|---------------|--------------|---------------|-----------------|
| August 1982 | 4 | 0 | 1 |
| December 1982 | 3 | 3 | 1 |
| May 1982 | 2 | 1 | 1 |

3. Comment on the Quality of Students.

The quality of students in the department continues to be excellent. A number of our students are accomplished professionals whose considerable publishing and presentation activities continue along with their studies in Epidemiology. All students have demonstrated their academic and research ability before coming to the Department. GRE quantitative scores are above the 80th percentile for those with advanced degrees and above the 65th percentile for those without.

4. Apparent Trends in Job Placement of Graduates.

Graduates in Epidemiology find varied career opportunities and are in great demand. The areas of Occupational, Cardiovascular Disease, and Cancer Epidemiology appear to be expanding and demand trained epidemiologists specialized in these areas. Generally our graduates have found positions in government, industry and academics, although they are meeting with greater difficulty in finding employment in the federal government.

5. Minority Student Enrollment Efforts.

The Admissions Committee of the Department, in concert with interested faculty members and members of the Minority Student Organization, has made efforts to increase the number of completed applications from qualified minority applicants. Most of the activities at the pre-application stage have been directed toward interested undergraduate, graduate and professional students on the Chapel Hill campus. Inquiries or incomplete applications from qualified minority applicants have been vigorously pursued by letter or by telephone in an effort to complete the application. Individuals approved for admission have been referred to various faculty members and students for personal contact, and the Admissions Committee actively solicited travel funds to support visits by these applicants. We feel that these personal communications from faculty and students have contributed significantly to the progressive increase in both the number and academic credentials of minority members of our student body. In addition, if an applicant was better suited for another department within the School, we brought that individual to the attention of the other department

6. Significant Achievements of Majors.Honors, Etc.:

Goldsmith, David: Associate, American College of Epidemiology; Member, Editorial Board, Journal of Toxicology and Environmental Health.

Moore, Valerie M: Elected to the Order of the Golden Fleece; Presented with the the Distinguished Service Award by the UNC Chapter of Delta Omega.

Strogatz, David S.: Elected to Membership in the Delta Omega.

Grants Awarded For Student Projects:

LaCroix, Andrea: Job Characteristics, Perceived Control and CVD. (Effective 7/1/83).

Logue, Everett (Postdoctoral Fellow): Symptom Reports and Mortality in Paper Workers. (Effective 7/1/83)

Wing, Stephen: (with HA.Tyroler): Isolated Systolic Hypertension and Risk of Death in Evans County.

Publications or Presentations by Students:

Daniels SR, Greenberg RS, and Ibrahim MA: Scientific uncertainties in the studies of salicylate use and Reye syndrome. JAMA 249(10):1311-1316, March 1983.

Daniels SR, Greenberg RS, and Ibrahim MA: Etiologic research in pediatric epidemiology. Pediatrics 102(4): 494-504, April 1983.

Schoenbach VS, Garrison C, Kaplan BH: A Review of the Epidemiology of Adolescent Depression. Accepted for publication in Public Health Reviews, 1983.

Garrison C, Kaplan BH, Schoenbach VS, et al:
The Epidemiology of Family Dynamics and
Depression in a High School Population."
Accepted as a chapter in a forth coming book.

Cole LP, McCann MF, Higgins JE, and Waszak
CS: Effects of breastfeeding on IUD
performance. AJP 73(4): 384-388, 1983.

Goldsmith DF: Human Cropsray Tests.
(letter). New Scientists, 97: 677, 1983.

Goldsmith DF, Berry DK, Leininger CC, Shy CM,
and Johnston DR: Coke Ovens and Community
Cancer Risk: Methodology and Interpretation
of Results from Ecological Cancer Studies."
(abstract), Scandinavian Journal of Work,
Environment & Health. 9: 63, 1983.

Goldsmith DF, Guidotti TL, and Johnston DR:
Does Occupational Exposure to Silica Cause
Lung Cancer? Amer. J. Industrial Med. 3:
423-440, 1982.

Goldsmith DF: Calculating Cancer Latency
from Occupational Case-control Studies"
(abstract), Amer. J. Epid. 115: 582, 1982.

Goldsmith DF: Bias in the Odds Ratio
Illustrated by a Study of Saccharin Use and
Bladder Cancer. Environ. Res. 27: 298-306,
1982.

Goldsmith DF: Coke Ovens and Community
Cancer Risk: Methodology and Interpretation
of Results from Ecologic Cancer Studies.
Presented: Second International Symposium
Epidemiology in Occupational Health,
Montreal, Quebec, Canada, August 23-25, 1982.

Heiss G, Schonfeld G, Johnson JL, Heyden S,
Hames CG, Tyroler HA: Black-White
Differences in Plasma Levels of
apo-lipoproteins: The Evans County Study.
Journal of the American Heart Association,
Submitted, 1983.

Strogatz DS, Earp JAE: The determinants of dropping out of care among hypertensives receiving a behavioral intervention. Medical Care. 21: 1983.

Wagner, EH, Strogatz DS: Hypertension and labeling: alternative explanations in cross-sectional data. Clinical Research. 30: 919A, 1982.

Wagner EH, James SA, Beresford SAA, Strogatz DS, et al.: The Edgecombe County High Blood Pressure Control Program: I. Correlates of uncontrolled hypertension at baseline. In press, AJPH, 1983.

Tyroler HA, Knowles M, Wing S, et al.: IHD risk factors and 20-year mortality in Evans Co. middle-aged black males. Accepted for Publication in Supplement to the American Heart Journal.

Wing, S.: "Hypertension-Related Mortality in North Carolina and the U.S." Paper presented at the 23rd Annual Conference on CVD Epidemiology of the American Heart Association, San Diego, CA, March 1983.

C. Teaching Load of Faculty

Fall Semester 1982

| Instructor | Course Number | Course Title | Total Enrolled | PHQ | HU | EC | AS | GRO | MED | Other | Course Hours |
|--------------|---------------|--|----------------|-----|----|----|----|-----|-----|-------|--------------|
| Becker | EPID 211 | Determin. of Commun. Dis. | 8 | 6 | | 2 | | | | | 2 |
| | EPID 394 | Doc. Dissertation | 1 | 1 | | | | | | | 0 |
| Checkoway | EPID 160 | Principals of Epid. (Sec. 1 w/others) | 181 | 171 | | 4 | | 3 | | 3 | 3 |
| | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 9 |
| Fletcher, R. | EPID 140 | Problems in Epidemiology | 3 | 3 | | | | | | | VAR |
| | EPID 360 | Research in Epidemiology | 1 | 1 | | | | | | | 3 |
| | EPID 160 | Principals of Epid. (Sec. 975) | 20 | | | | | | EGW | 20 | 3 |
| | | | | | | | | | | | |
| Haynes | EPID 360 | Research in Epidemiology (co-Instruc. w/James) | 2 | 2 | | | | | | | VAR |
| | | | | | | | | | | | |
| Heiss | EPID 140 | Problems in Epidemiology | 1 | 1 | | | | | | | 1 |
| | EPID 160 | Principals of Epid. (Sec. 1 w/others) | 181 | 171 | | 4 | | 3 | | 3 | 3 |
| | EPID 256 | Cardiovascular Dis. Epid. | 16 | 16 | | | | | | | 3 |
| | EPID 360 | Research in Epidemiology | 2 | 2 | | | | | | | VAR |
| Hulka | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 0 |
| | EPID 160 | Principals of Epid. (Sec. 1 w/others) | 181 | 171 | | 4 | | 3 | | 3 | 3 |
| | EPID 360 | Research in Epidemiology | 1 | 1 | | | | | | | VAR |
| | EPID 392 | Masters Paper | 1 | 1 | | | | | | | VAR |
| Ibrahim | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | VAR |
| | EPID 160 | Principals of Epid. (Sec. 1 w/others) | 181 | 171 | | 4 | | 3 | | 3 | 3 |
| | EPID 168 | Fundamentals of Epid. (Principal Instructor) | 43 | 39 | | 2 | | 2 | | 3 | 3 |
| | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 0 |
| James | EPID 360 | Research in Epidemiology | 3 | 3 | | | | | | | VAR |
| | EPID 392 | Masters Paper | 1 | 1 | | | | | | | 6 |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | VAR |
| Kaplan | EPID 360 | Research in Epidemiology | 4 | 4 | | | | | | | VAR |
| | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 0 |
| Kleinbaum | EPID 268 | Advanced Methods in Epid | 12 | 12 | | | | | | | 4 |
| | | | | | | | | | | | |

6 =

| | | TOTAL | PHO | HU | EC | AS | GRO | MED | Other | Credit |
|------------|----------|--|-----|-----|----|----|-----|-----|-------|--------|
| | | ENROLLED | | | | | | | | hrs |
| | | 29 | | 29 | | | | | | |
| Love | EPID 160 | Principles of Epidemiology (Section 2) | 1 | 1 | | | | | | 3 |
| | EPID 257 | Teaching Experience in EPID | | | | | | | | 4 |
| Omran | EPID 160 | Principals of Epid. (Sec.1 Princ.Instruc.) | 181 | 171 | 4 | 3 | 3 | 3 | | 3 |
| | EPID 234 | Research Design | 8 | 7 | 1 | | | | 1 | 1 |
| | EPID 251 | Epid. Meth. in Pop. Research | 9 | 6 | | 2 | | 1 | 3 | 3 |
| | EPID 257 | Teaching Experience in Epid. | 6 | 6 | | | | | 4 | 4 |
| | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | 9 | 9 |
| Patrick | EPID 160 | Principals of Epid. (Sec.1 w/others) | 181 | 171 | 4 | 3 | 3 | 3 | | 3 |
| Schoenbach | EPID 168 | Fundamentals of Epid. | 43 | 39 | 2 | 2 | 2 | 2 | | 4 |
| | EPID 257 | Teaching Experience in Epid. | 2 | 2 | | | | | | 4 |
| Sheps | EPID 360 | Reserch in Epidemiology | 1 | 1 | | | | | | 3 |
| Shy | EPID 160 | Principals of Epid. (Sec.1 w/others) | 181 | 171 | 4 | 3 | 3 | 3 | | 3 |
| | EDIP 360 | Research in Epidemiology | 4 | 4 | | | | | | VAR |
| | EPID 394 | Doctoral Dissartation | 3 | 3 | | | | | | VAR |
| Tyroler | EPID 160 | Principals of Epid. (Sec.1 w/others) | 181 | 171 | 4 | 3 | 3 | 3 | | 3 |
| | EPID 256 | Cardiovascular Dis. Epid. | 16 | 16 | 0 | 0 | 0 | 0 | | 3 |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | VAR |
| Wagner | EPID 160 | Principals of Epid. (Sec.1 w/others) | 181 | 171 | 4 | 3 | 3 | 3 | | 3 |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | VAR |
| Williams | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | 3 |

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Spring Semester 1983

| Instructor | Course Number | Course Title | Total | | | | | | | Course Hours | |
|---------------|---------------|--|----------|-----|----|----|----|-----|-----|--------------|-------|
| | | | Enrolled | PHD | HU | EC | AS | GRO | MED | | Other |
| Becker | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 0 |
| | EPID 162 | Env./Occup. Health | 61 | 38 | 4 | 1 | 0 | 6 | 0 | 12 | 3 |
| | EPID 257 | Teaching Experience in Epid. | 1 | 1 | | | | | | | 4 |
| | EPID 361 | Research in Epidemiology | 2 | 1 | | | | | | 1 | VAR |
| Fletcher, R. | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 9 |
| | EPID 141 | Problems in Epidemiology | 2 | 2 | | | | | | | VAR |
| | EPID 361 | Research in Epidemiology | 1 | 1 | | | | | | | 3 |
| | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | VAR |
| Greenberg, B. | EPID 141 | Problems in Epidemiology | 6 | 5 | | | | | 1 | | 3 |
| | EPID 392 | Masters Paper | 2 | 2 | | | | | | | VAR |
| Haynes | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 7 |
| | EPID 266 | Epidemiologic Investigation (Principal Instructor) | 8 | 8 | | | | | | | 3 |
| Heiss | EPID 361 | Research in Epidemiology | 2 | 2 | | | | | | | VAR |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | VAR |
| | EPID 233 | Cancer Epid./Pathogenesis | 23 | 23 | | | 0 | | | 0 | 3 |
| | EPID 361 | Research in Epidemiology | 3 | 3 | | | | | | | VAR |
| Hulka | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | VAR |
| | EPID 368 | Epidemiologic Basis of Community Health Research | 20 | 20 | | | | | | | 2 |
| Ibrahim | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | 9 |
| | EPID 361 | Research in Epidemiology | 3 | 3 | | | | | | | VAR |
| James | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | VAR |
| | EPID 264 | Culture and Health | 21 | 19 | | | | 1 | | 1 | 3 |
| Kaplan | EPID 361 | Research in Epidemiology | 4 | 4 | | | | | | | VAR |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | VAR |
| | EPID 140 | Problems in Epidemiology | 8 | 8 | | | | | | | 4 |
| Kleinbaum | EPID 160 | Principles of Epidemiology (with Shy) | 53 | 3 | 49 | | | 1 | | | 3 |
| | EPID 257 | Teaching Experience in Epid. (with Shy) | 1 | 1 | | | | | | | 4 |

| | | <u>TOTAL ENROLLED</u> | | | | | <u>PHO</u> | <u>HU</u> | <u>EC</u> | <u>AS</u> | <u>GRO</u> | <u>MED</u> | <u>Other</u> | <u>CREDIT HOURS</u> |
|----------------|----------|---|----|----|----|--|------------|-----------|-----------|-----------|------------|------------|--------------|---------------------|
| Magruder-Habib | EPID 240 | Epid. Alcohol Use/Abuse | 5 | 4 | 1 | | | | | | | | 3 | |
| Omran | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | | | VAR | |
| Rudnick | EPID 394 | Doctoral Dissertation | 1 | 1 | | | | | | | | | 0 | |
| Schoenbach | EPID 141 | Problems in Epid (HP/DP) | 11 | 10 | 1 | | | | | | | | VAR | |
| Siscovik | EPID 140 | Problems In Epidemiology | 1 | 1 | | | | | | | | | 6 | |
| Shy | EPID 141 | Problems in Epidemiology | 1 | 1 | | | | | | | | | VAR | |
| | EPID 160 | Principles of Epidemiology | 53 | 3 | 49 | | | | 1 | | | | 3 | |
| | EPID 257 | Teaching Experience in Epid. | 1 | 1 | | | | | | | | | 4 | |
| | EPID 392 | Masters Paper | 2 | 2 | | | | | | | | | VAR | |
| | EPID 394 | Doctoral Dissertation | 5 | 5 | | | | | | | | | VAR | |
| Tyroler | EPID 266 | Epidemiologic Investigation (with others) | 8 | 8 | | | | | | | | | 3 | |
| | EPID 361 | Research in Epidemiology | 2 | 2 | | | | | | | | | VAR | |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | | | VAR | |
| Wagner | EPID 140 | Problems in Epidemiology | 1 | 1 | | | | | | | | | 3 | |
| | EPID 361 | Research in Epidemiology | 1 | 1 | | | | | | | | | 3 | |
| | EPID 394 | Doctoral Dissertation | 2 | 2 | | | | | | | | | VAR | |
| Williams | EPID 258 | Women's Health: Epid. Anal. | 18 | 17 | | | | | 1 | | | | 3 | |

III. Research Programs

A. Research Programs During the Year [including Training Grants]. (Principal Investigator, and co-investigators shown in parenthesis).

CANCER EPIDEMIOLOGY

Breast Cancer and Estrogen Replacement Therapy.

Concern over the possible effect of estrogen replacement therapy on the subsequent development of breast cancer prompted us to compare 199 postmenopausal breast cancer patients with 451 hospital controls and 852 community controls on their prior use of risk for women with a surgical menopause. Among women with a natural menopause, estrogens administered by all routes were associated with breast cancer risks of 1.7 or 1.8. There was no coherent pattern of changing risks with varying durations of use, different daily dosages, years since first use of estrogen or years since most recent use. Excluding women whose usual estrogen was by injection, the risk estimates of oral estrogens were 1.3 (cases compared to community controls) and 1.2 (cases compared to hospital controls). These increases were not statistically significant. Use of injectable estrogens produced a four-fold increase in breast cancer risk among naturally postmenopausal women. (Hulka)

Hormonal and Personal Effects on Estrogen Receptors in Breast Cancer. Since high estrogen receptor protein (ERP) in breast cancer tissue has a favorable effect on patient prognosis, factors influencing ERP levels are the focus of this research. Two hundred forty-six histologically confirmed primary breast cancer patients from three North Carolina hospitals were interviewed and provided with photographic displays of hormonal products. Their tumor tissue was analyzed for ERP by the sucrose density gradient (SDG) assay. Data were analyzed by multiple regression and logistic regression techniques. An association appeared between use of progestin-predominant and intermediate types of oral contraceptives (OCs) and low ERP. Replacement estrogens were unrelated to ERP levels. An effect of menopausal status, independent of age, was not evident, but the number of patients in the relevant age bracket was small. Statistically significant asso-

ciations involved age and race among postmenopausal patients. With black breast cancer patients less than age 70 years as the reference group, the relative odds of having high ERP (greater than 10 fm/mg cytosol protein) was 2.4 times greater among whites less than age 70, 1.6 times greater in blacks aged greater or equal to 70, and 12.8 times higher in whites greater than or equal to 70 years. These differences in ERP may contribute to the black/white differential in breast cancer survival.

(Hulka)

Protection Against Endometrial Carcinoma by Combination Product Oral Contraceptives.

Seventy-nine patients with endometrial carcinoma were compared with 203 control subjects regarding their use of combination-product oral contraceptives (OCs). Overall, 6.3% of patients and 15.3% of control subjects had used these products. The risk of endometrial cancer for users of OCs was less than half the risk for nonusers. Five years or more of use reduced the risk to a third. Recent users were strongly protected, whereas discontinuation resulted in risks returning to those of nonusers. Furthermore, OCs with predominantly progestational effects or intermediate formulations produced greater protection than those with predominantly estrogens. This pattern of results is biologically consistent with a protective effect of combination-product OCs against endometrial carcinoma. (Hulka)

Risk Factors for Cervical Cancer. Despite a long history of research into the epidemiology and biology of cervical carcinoma, a definitive statement about its probable causes still remains elusive. This review recognizes the population based data on high and low risk groups and summarizes the findings from numerous case-control studies which have explored the marital, sexual, and reproductive factors associated with cervical cancer. Although vigorously pursued, an increased risk from oral contraceptives has not been convincingly demonstrated. A variety of venereally transmitted organisms appear to be frequent cohabitants with cervical neoplastic cells. Herpes virus type 2 still remains the prime suspect in the complex pathogenesis of cervical neoplasia. Clinical findings, biological characteristics of the virus, serologi-

cal studies and interactions of host cells and viral products particles continue to stimulate the most intensive investigative efforts. (Hulka)

Training Grant in Cancer Epidemiology. The objective of this training program is to equip health professionals with epidemiologic and quantitative skills, such that upon completion of the program they may assume leadership roles in both cancer research and cancer control programs.

The various types of cancer, their causative factors and the methods used in developing and substantiating new etiologic hypotheses provide the model for study of cancer epidemiology. The focus for this program has three components: 1) To integrate knowledge from epidemiology, clinical practice and the basic sciences about specific types of cancer; 2) To synthesize information on the carcinogenic potential and mechanisms of action of known classes of carcinogens, exogenous and endogenous; 3) to emphasize those methods in epidemiology which are particularly relevant to the study of cancer and other chronic diseases. Students will be provided with this informational base and they will be assisted in developing research skills to formulate meaningful hypotheses and design feasible studies which they themselves can execute. The approach will be to formulate an individualized curriculum for students who have the interest and potential to be innovative thinkers and thorough researchers. The intent is to produce cancer epidemiologists who can assume leadership roles in epidemiologic studies, and provide knowledge, consultative support to multidisciplinary cancer research with a primary focus in areas other than epidemiology. (Hulka, Ibrahim, Shy, Tyroler)

Other Cancer Research listed elsewhere:

Drinking Water Quality and Colon Cancer (Environmental), Epidemiologic Study of Cancer Risks in US Atomic Workers (Occupational), Mortality Study of Works in the Florida Phosphate Industry (Occupational), Skin Effects of Chemical Exposure in Rubber Workers (Occupational).

CARDIOVASCULAR DISEASE EPIDEMIOLOGY

Cardiovascular Epidemiology and Statistics. This research training program provides course work leading to the degree of Doctor of Philosophy in either epidemiology or biostatistics by combining the strong, accredited academic curricula of both Departments with the population and clinical resources required for intensive research training in cardiovascular disease. Programs of study are designed to meet the needs, capabilities and interests of the individual trainees. In addition to offering core and supplemental courses leading to competency in the general disciplines of epidemiology and biostatistics, the Department of Epidemiology has developed a formal, two course sequence in Cardiovascular Disease Epidemiology, which is required for students funded by this grant. The course sequence is designed to elucidate the theoretical and methodological issues relevant to cardiovascular disease epidemiology, and to enable the students to develop research competency in this field. The program will maintain this focus, providing post-doctoral experience in cardiovascular disease research in both departments in addition to Ph.D. level training. Research training will continue to be accomplished through lectures, seminars, and directed research in specific areas crucial to the investigation of cardiovascular disease. Such concerns as genetic analysis, clinical trails, laboratory standardization and quality control, data management systems, field studies, evaluation of nutrition data, and theoretical epidemiologic and biostatistics research continue to be relevant to the program. (Tyroler, Heiss, Ibrahim)

Community Surveillance in the Southeastern United States. The purposes of this project are to monitor trends of incidence of fatal and non-fatal CHD and its relation to changing risk factors, through a system of prospective community surveillance. Such a system will take into account: current levels of cardiovascular disease and coronary heart disease mortality and declines in mortality since 1968; racial, ethnic, and socioeconomic variables; environmental exposures; adequacy of sample sizes for resolving critical questions of trends of incidence and their relation to trends of life styles, risk factors, and treatments; and standardization

of methods of measurement.

Evidence of marked geographic variation in mortality attributed to coronary heart disease and cerebrovascular disease has been noted for more than 30 years in the southeast. The existence of a high mortality zone extending through the coastal plains, and an area of very low cardiovascular disease mortality, namely in the mountainous areas, has been identified. Since 1968, the southeast region of the US has shared in the general decline in cardiovascular disease mortality exhibited by the entire nation. Our analyses suggest that this decline has occurred among all adult age groups, for both men and women, and for whites and blacks. However, there is evidence of differences in the rate of decline among these demographic subgroups, with the greatest percent decline having occurred in the black female and the least in the white female. There also is the suggestive evidence in analysis of trends within subregions of NC that the previously high-rate, coastal plains region, has experienced a lesser percent decline than the previously low-rate, mountain area.

The communities under study in North and South Carolina are biracial in composition, with a large proportion of black residents, and include both rural and urban communities. Two of the communities are located in the highest cardiovascular disease mortality region of the nation, counties in the NC coastal plains with approximately equal numbers of black and white residents, and residents of the Columbia, South Carolina SMSA, with approximately one-quarter black residents. The third community is comprised of residents of North Carolina Appalachian mountain counties, a region of previously low cardiovascular disease mortality risk with predominantly white residents. (Tyroler, Becker, Haynes, Heiss)

Comprehensive Stroke Center Program. A study of hospitalized stroke outcomes in 15 counties of eastern North Carolina, this study is based on the evaluation of outcomes before and after the introduction of a Stroke Team in 20 community hospitals. The North Carolina program is participating with investigators in Oregon and New York in a national stroke study. (Becker)

Effects of Contraceptive Steroids on Blood Pressure. In a study of 990 women attending Family Planning Clinics in SE Georgia, the effect of oral contraceptives on blood pressure is under investigation. Current analyses reveal no increase in diastolic blood pressure among black women who use oral contraceptives as compared to black women who use other non-oral contraceptive forms of birth control. There is a slight increase in the risk of elevated diastolic blood pressure in white women using oral contraceptives, apparent only among white women 22 years of age or older. (Becker)

Evans County Cardiovascular Studies. The Evans County Study is a biracial epidemiologic study of cardiovascular disease in a total community. Initiated in 1960, attempts were made to enroll all of the residents over 40 years of age and a random sample of those between 15 and 39 years of age in a longitudinal study which would span two decades. The study was designed to test an observation made by a primary care physician in his practice, i.e., the rarity of manifestations of coronary heart disease (CHD) in black patients, particularly males, despite markedly elevated blood pressure levels. The major results of this study was the delineation of risk factors for CHD. Numerous publications, dissertations, and theses have resulted from analyses of data derived from this study. Current analyses are being conducted including studies of the relationship of total lipids, lipoprotein cholesterol and lipoprotein apoproteins to twenty year mortality. (Tyroler, Becker, Heiss)

Lipid Research Clinics Program (LRC Program). An international study of the epidemiology of lipoproteins and coronary heart disease involving prevalence, family studies, follow-up mortality studies and a large collaborative coronary prevention trial. Study results to date include population based distributions of lipids and lipoprotein-cholesterol fractions, and the use of ethnicity, education, occupation, and sex-hormone usage on the population levels of these parameters (publications in press). Examination of additional determinants of lipid and lipoprotein levels is currently underway (analysis stage). (Tyroler, Haynes, Heiss)

Pilot Evaluation Studies of High Blood Pressure Control. Household surveys combined with intervention trials are the basis for a study of hypertension and its treatment in a rural community. The household survey, completed in 1980, was designed to determine the prevalence of hypertension in the community, current knowledge, attitudes and beliefs about hypertension, and the hypertension medication practices of the population. Randomized intervention trials of moderate and severe hypertensives will be designed to measure efficacy of a variety of modalities which promote adherence to therapeutic regimens. Hypertension control programs in select churches and in low industrial sub-populations have been implemented to test the effectiveness of selected methods of hypertension control in these settings. A second household survey will be conducted in 1983 to assess the impact for the various efforts of hypertension control in the community. (Ibrahim, James, Becker, Tyroler, Wagner, Williams)

Other Cardiovascular Disease Research listed elsewhere:

Psychosocial Factors Related to the Risk and Control of High Blood Pressure Among Black Men (Psychosocial), Type A Behavior and Atherosclerosis in Men and Women (Psychosocial). Type A Behavior, Employment Status and Coronary Heart Disease in Women (Psychosocial).

ENVIRONMENTAL EPIDEMIOLOGY

Assessment of Pollutant Exposure on Urban Populations: This study was administered through an Intergovernmental Personnel Act Agreement with the Environmental Protection Agency and terminated in January 1983. The research was directed at the overall statistical methodology program of collecting and analyzing data related to pollutant exposure assessment on urban populations. Of major concern was the development and application of design and analysis methods for carbon monoxide data collected with personal exposure monitors by population subgroups while in defined microenvironments. (Love)

CHES Studies. CHES, an acronym for the Community Health and Environmental Surveillance System, is a national program which relates community health to changing environmental quality. The program sought to evaluate existing environmental standards, to obtain health data for new standards, and to document health benefits of air pollution control. This program ended in September of 1982. Health indicators studied include pulmonary function in school children, lower respiratory disease in children, acute respiratory disease incidence in families and chronic respiratory disease prevalence in adults. Analyses have been completed and manuscripts reporting the results have been submitted. (Shy, Love)

Drinking Water Quality and Colon Cancer. We are investigating the relationship of drinking water quality with cancer of the colon in North Carolina using the case-control approach. A matched series of living colon cancer cases and hospital controls is being compared for differences in quality of their drinking water and other environmental factors. A subsidy will determine whether past diet is a confounding factor. Sample size and methodology have been chosen to detect small differences in risk, and water quality indices have been constructed for periods 20 and 30 years in the past to account for the issue of latency. These indices, which are based on source, treatment, and prior use characteristics, provide a basis for establishing a gradient of carcinogenic exposure. With this information, estimates of risk for each exposure level will be obtained and comparisons between these will be made. Using this rigorous approach, it will be possible to provide meaningful data on the importance of water borne carcinogens in the etiology of a leading cancer site. 750 cases and controls have been interviewed and more than 100 public water supply agencies in North Carolina were contacted. This study was completed in 1983; publications are being prepared. (Shy)

Environmental Epidemiology Training. This program's objective is to train doctoral level epidemiologists, motivated and competent to carry out research in environmental problems. The philosophy of the training program is to educate scientists sophisticated in the principles and perspectives of epidemiology and biostatistics, well trained in

environmental sciences and biology, and with knowledge and sensitive awareness of the contribution of the behavioral sciences. The program provides the capability to initiate meaningful epidemiologic inquiries. Working in a collaborative mode with the laboratory scientist, the trainee will also be capable of recommending the necessary laboratory experiments which should be conducted to refine or refute hypotheses. Ultimately, the interaction between the laboratory and human population studies is carried out by testing of hypotheses derived from each of the disciplines. (Tyroler, Ibrahim, Shy)

Retrospective and Prospective Cohort Studies of Two Communities Exposed to Aerial Spraying of Herbicides: Investigation of Possible Health Effects. The aim of this study is to determine whether a community exposed to aerial spraying experienced unusual health effects after the spraying and to document the magnitude of these effects, if any. Questionnaires will be administered to 180 study subjects, half of whom were exposed to aerial spraying. Results will be analyzed to evaluate the feasibility of such studies on a larger scale. (Shy).

Screening, Recruitment, and Provision of Human Subjects for Physiological and Behavioral Studies. 1982-83 was the last year of a contract with the The Department of Epidemiology and the Clinical Studies Division, Health Effects Research Laboratory of the Environmental Protection Agency to establish and operate a subject recruitment service, to recruit, screen, pretest, schedule, prepare, and reimburse human subjects to participate in physiological and neurobehavioral research conducted by the EPA Laboratory at the campus facility. The Project and associated staff have been transferred to the Department of Biostatistics.

HEALTH SERVICES RESEARCH

National Evaluation of Rural Primary Health Care Programs. Faculty members in the Department of Epidemiology, in conjunction with the UNC Health Services Research Center, are conducting a national evaluation of different models of rural primary care delivery. The study, which is supported by the Robert Wood Johnson Foundation, is tied to household survey research being conducted by the Department of Health, Education, and Welfare. Information helpful in health policy formation is being developed by establishing relationships between the characteristics of services in each type of model and the degree of the model's success in meeting specific social and health goals. The study is examining such outcome variables as service cost, service accessibility, consumer perceptions of care and practice stability, as well as several health indicators. (Sheps, Wagner)

Incidence of Severe Trauma and Burns in North Carolina. The North Carolina Trauma and Burn Study is a record review of current severe injury in the State. All trauma and burn patients entering the Emergency Department of 24 selected hospitals Champion Trauma Scores of 15 or less are eligible for the Study, including deaths. The 12 major hospitals (Level I and II) are in the Study plus a random selection of community hospitals (Level II-III and III) that have 24-hour emergency service, stratified by Health Service Areas in order to represent the entire state.

A two-page questionnaire will be completed on each eligible patient, providing demographic and descriptive information. For burns, an additional one-page description of the percent of the body involved in second and third degree burns will be completed. At the time of discharge, or one-month from admission, whichever comes first, three questions will be answered: an estimate of the disability, place of disposition and presence of complications with risk of life and/or risk of prolonged hospitalization. The physician who cared for the patient will be asked one question regarding potential use of air transport.

The Study will cover 6 months or approximately 2000 cases of trauma in all, with approximately 300-400 cases in each Health Service Area. (Becker)

OCCUPATIONAL EPIDEMIOLOGY

Cooperative Health Hazard Evaluation Program. The Occupational Safety and Health Act of 1970 places on the National Institute for Occupational Safety and Health (NIOSH) the responsibility to conduct health hazard evaluations upon valid request by an employer and/or employees. This is the third year of a three-years demonstration program of health hazard evaluations performed by the Occupational Health Studies group (OHSG) of the School of Public Health. In the first year, health hazard evaluations involving a heat set fabric molding operation, a printing process, an aircraft fuel cell manufacturing operation, a university office building, and an analytic chemistry laboratory, have been assigned to the UNC Research group by NIOSH. Some eight to ten additional assignments of a similar nature are expected in the coming year. An evaluation of the three-year program by the University and NIOSH will be done in the concluding months of the third year (Checkoway, Shy).

Epidemiology Study of Cancer Risks in US Atomic Workers. The main objective of this study is to identify the long term effects of low-dose occupational radiation exposures to determine whether occupational radiation exposure standards have allowed the accumulation of detrimental effects of radiation. Sponsored by the US Department of Energy, this study is being conducted in collaboration with the Oak Ridge Associated Universities (Oak Ridge, Tennessee) with other participating faculty from the Departments of Biostatistics and Environmental Sciences and Engineering. This research design involves mortality studies of large cohorts of workers employed in nuclear facilities and also case-control studies designed to determine the effect of confounding variables, including sources of medical radiation and chemical carcinogens. (Shy, Tyroler, Checkoway)

Mortality Study of Radiation-Exposed Workers. Two sub-projects (see above) underway are a mortality study of workers from the Oak Ridge National Laboratory (ORNL) and a case-control study of hematologic malignancies among workers at several nuclear facilities in Oak Ridge, TN. Preliminary results from the ORNL study indicate modest mortality excesses of leukemia, prostate cancer, and Hodgkin's disease; however, none was specifically

related to radiation exposure. Analysis are being pursued further. The case-control study has only recently begun, and no results are yet available. (Checkoway).

Mortality Study of Workers in the Florida Phosphate Industry. This is a retrospective cohort mortality study of approximately 25,000 employees in the phosphate industry in Florida. This industry manufactures fertilizers and component materials such as phosphoric acid. The original concern in the industry was an apparent excess of lung cancer mortality, presented to be related to ionizing radiation exposure.

The mortality patterns of industry workers will be compared with those of the US and Florida populations for the years 1950-78. Excesses from cause-specific mortality will be examined in relation to work experience and estimated exposures to chemicals and ionizing radiation. Preliminary findings show roughly 50% mortality excesses from lung cancer and emphysema. Analysis are being continued. (Checkoway, Shy).

Respiratory Disease in the Furniture Industry. This pilot study investigates the relationship between occupational exposure to wood dust and the prevalence of chronic respiratory diseases among male furniture workers. The project employs a cross-sectional study design comparing workers exposed to dust with a control group exposed to finishes and another exposed to neither. It is hypothesized that the exposure to hardwood dusts of less than 5 mu from the sanding operation will be associated with reduced lung function and an increase in respiratory symptoms as measured by a modified MRC questionnaire. Measures of lung impairment will be obtained by analyzing the changes in spirometry readings over a work shift. Baseline pulmonary function among workers exposed to wood dust will be compared to nonexposed workers, adjusting for age, height, race, smoking, prior employment in hazardous jobs, alcohol use, medical history, atopic status, and hobbies. Environmental samples will be collected in order to quantify individual and area exposures to wood dust and to solvents used in finishings. Stratified, multivariate regression analysis will be employed to control for confounding and to look for interaction. (Shy).

Skin Effects of Chemical Exposure in Rubber Workers. Recent evidence indicates that certain groups of rubber manufacturing workers are at risk for squamous cell skin cancer compared to the industry as a whole. It is known that raw materials containing carcinogenic polycyclic aromatic hydrocarbons (PAH's) are used in rubber manufacturing. These include oils, carbon black, waxes, and solvents. A case-control study is underway, drawing on data from two rubber companies to look for an association between squamous cell carcinoma and exposure to PAH's. The cases are 68 male rubber workers who were located from the tumor registries of the Akron, Ohio hospitals. There are two control series drawn from cohorts of rubber workers that have been developed by the OHSU. A first series of four controls are matched on race, sex, and age. A second series of four controls are matched on race, sex, age, and time in the industry. Identification of jobs with PAH exposure is made by means of an industrial hygiene survey and company records. This information will be linked to individual workers by means of their personnel files. Each employee will receive a rating of his PAH exposure. Data analysis will consider both the level of exposure and the number of years of exposure. Additional analysis will look for an association between: 1) skin cancer and length of employment in the industry using the first control series only; and 2) skin cancer and work areas where PAH's cannot be implicated. If such associations are found, attempts will be made to suggest causal exposures. (Hulka).

POPULATION EPIDEMIOLOGY

Population Training Program, WHO Colaborating Center. Supervision of two WHO sponsored physicians who were at the School of Public Health for a 6 month training, taking courses in Epidemiology, Population and Development.

Relative Merits of Family Planning and Development in Reducing Fertility. In this research project, the contribution of development and family planning to the direct and immediate reduction of fertility is assessed. A statistical analysis of demographic and social data being collected in 15 countries throughout the world will test the significance of the interaction between mortality, fertility, socio-economic development indicators, and family planning. (Omran).

An Epidemiologic Case for Family Planning in Africa. Using African demographic and health parameters, this study is examining the health risks associated with unplanned fertility, teenage pregnancy, pregnancy after 35, short birth intervals, and multiparity. The project will clarify the basis for a health rationale in favor of family planning in both Moslem and Christian countries (Omran).

Taiwan: Family Planning and Health. This project will emphasize the impact of family composition on the intelligence of children. (Omran).

Epidemiologic Transition: North Carolina, the U.S. and Several Foreign Countries. Population dynamics and health factors in various communities were described and analyzed in this study. Data collected on infant mortality, life expectancy, fertility, mortality, and causes of death in populations were used to identify communities as either classical, accelerated, or delayed models of epidemiologic transition. The classical model has been found to be representative of the West, the accelerated model is typically observed in Japan and Eastern Europe, and the delayed model encompasses most of the lesser developed countries. (Omran).

PSYCHOSOCIAL EPIDEMIOLOGY

Social and Community Ties as Predictors of Longevity. This project seeks to replicate and extend Berkman and Syme's observation that social and community ties were associated with reduced mortality among residents of Alameda County, California. Such ties may be particularly important for the elderly, who are simultaneously at greater risk of major illness and of loss of social ties.

We are analyzing data collected in the Evans County Cardiovascular and Cerebrovascular Epidemiologic Study, a major investigation conducted by the Department of Epidemiology in collaboration with Dr. Curtis Hames of Evans County, GA. This continuing investigation has been the source of many publications during over 20 years. Vital status follow-up has continued since the last re-examination of the cohort, in 1967. Our analysis will employ measures of marital status, friends and relatives, and church activities obtained in a sociological questionnaire administered in the 1967 examination. We will use survivorship analysis methods to examine the relationship between a social network index and mortality. The index will be constructed to replicate, as nearly as possible, that created by Berkman and Syme. We will also control the analysis for major risk factors, including systolic blood pressure, cigarette smoking, serum cholesterol, presence of clinical cardiovascular disease or diabetes, overweight, physical exercise, and social status. (Schoenbach, Kaplan, Kleinbaum).

Psychosocial Factors Related to the Risk and Control of High Blood Pressure Among Black Men. This is a study of the influence of psychosocial factors on mean blood pressure levels (and on hypertension related health behaviors) on a probability sample of 132 black men (ages 17-60 residing in a rural, poor, eastern North Carolina town. Data collection was preceded by an eight week participant-observation study of men in the area. The community survey was conducted from November 1980 to February 1981. Several papers based on this work have been submitted for publication; one is "in press," and others are being written. The central focus of this work is the contribution that "John Henryism" (a measure of perceived control

over the environment) makes to 1) predicting mean blood pressures of black men, and 2) explaining differences among them in hypertension-related health behaviors. This research was made possible by a grant from the Robert Wood Johnson Foundation and an NHBLI Research Career Development Award (1982-87). Future studies of John Henryism and risk of cardiovascular disease among white, female, and non-working class black populations are underway. (James).

Type A Behavior and Atherosclerosis in Men and Women. Previous research from the Framingham Heart Study has demonstrated an increased risk of coronary heart disease among men and women exhibiting Type A behavior, as measured by a short ten-item questionnaire on time urgency and competitiveness. The Framingham Type A Behavior was most strongly associated with coronary diagnoses in which angina pectoris symptoms were present. This research project is designed to determine whether or not these associations reflect actual coronary atherosclerosis in the presence of anginal pain. Since 1978, approximately 300 women and 700 men who underwent angiography at the Duke University Hospital were administered the Framingham Type A scale along with several other psychosocial questionnaires. The association of the Framingham scale with the severity of arteriographically documented atherosclerosis will be examined in both men and women employed in a variety of occupational settings. In addition, the validity of the Framingham questionnaire for assessing Type A behavior as compared to the Friedman-Roseman Structured Interview will be examined, along with its potential uses in clinical practice and research. (Haynes).

Type A Behavior, Employment Status, and Coronary-Heart Disease in Women. The objective of this research is to determine the relationship of employment status and employment-related behaviors, such as Type A behavior to the development of coronary heart disease (CHD) in women residing in the southeastern US. The effect of employment, particularly employment in white-collar and clerical jobs, will be examined in two prospective studies. Extensive sociological data collected on 1121 women in the Evans County Cardiovascular Study will be used to relate employment status to 15-year mortality rates from CHD. In addition, CHD incidence and mortality rates between 1975-1980 will be computed

for 340,000 women residing in three communities in North and South Carolina, as part of a national pilot study for community surveillance of cardiovascular disease. The validity of using questionnaire and interview methods in assessing Type A behavior in women will be examined using voice analysis of interviews given to Framingham cohort women and to women in the Duke Angiography study. The relationship of various measures of Type A behavior to angiographically diagnosed coronary disease will then be examined among women in the Duke study, according to occupational status. (Haynes).

The Social Psychological Aspects of a Controlled Clinical Trial to see the Mortality/Morbidity Effectiveness of Behavior Modification on Type A Behavior in Post-MI Patients. In collaboration with the Harold Brunn Institute of Cardiology, Mt. Zion Hospital, San Francisco, CA. A group at Stanford University is also involved. (Kaplan).

OTHER RESEARCH PROGRAMS

Clinical Evaluation of Licensed Multiple Puncture Devices for the Administration of Tuberculin. Under a subcontract with the University of Kentucky, six devices for the delivery of tuberculin skin tests are being compared to the standard Mantoux test in populations in four sites: North Dakota, Kentucky, and Texas. Field work is complete and analysis is in progress. (Becker).

Trial Assessing Chronotherapeutic Insulin Schedules. This study seeks to improve intraday blood glucose variation. The rationale is based on the previous knowledge that Type I diabetics exhibit a rhythm in blood glucose characterized by a rise in blood glucose level that becomes evident from about 5:00 to 8:00 a.m. and continues after breakfast until about 9:00 to 10:00 am. This period of glucose rise is also characterized by a diminished insulin sensitivity, as demonstrated by studies with the artificial pancreas. If more insulin can be provided during this period of diminished insulin sensitivity, the rise in glucose may be attenuated or even avoided, and consequently, the post-breakfast blood glucose peak may also be decreased. As this postprandial peak has been

consistently reported to be the daily blood glucose maximum, range (maximum minus minimum blood glucose), a measure of intraday diabetic instability, may be expected to be attenuated. The main hypotheses to be tested are: 1) Treatments will attenuate the fasting ascending glucose excursion (FAGE); 2) Treatments will decrease the post-breakfast blood glucose peak; and 3) treatments will minimize range of glycemic excursions. (Schmidt, Heiss, Tyroler).

B. Research and Training Funds Received during the Year.

Abnormal Methionine Metabolism as a Risk Factor in Coronary Artery Disease. American Heart Association; 12-30-83 (Tyroler, Freedman)*.

Cancer Epidemiology Training. National Cancer Institute; 08-31-84 (Hulka).

Cancer Risk Among Atomic Workers. Oak Ridge Associated Universities; 09-30-84 (Shy).

Cardiovascular Epidemiology and Statistics. National Heart, Lung and Blood Institute; 06-30-84 (Tyroler).

Community Surveillance in the Southeastern United States. National Heart, Lung and Blood Institute; 02-28-84 (Tyroler).

Drinking Water Quality and Colong Cancer. National Institute for Environmental Health Sciences; 01-31-83 (Shy).

Environmental Epidemiology. National Institute for Environmental Health Sciences; 06-30-83 (Tyroler).

Evaluation of Intrauterine Exposures and Gastroschisis Occurrence. University Research Council; 11-10-83. (Ibrahim, Greenberg)*.

Family Formation and Family Health. World Health Organization; [on-going] (Omran).

Follow-up Study of Hypertensives in a Rural Community. NIH Division of Research Resources; 11-30-81 (Wagner).

Incidence and Severity of Trauma and Burns in North Carolina. NC Dept. of Human Resources; 9-30-83; (Becker).

Isolated Systolic Hypertension and Risk of Death in Evans County, Am. Heart Assoc.- NC Affiliate; 6-30-83; (Tyroler, Wing)*.

Pilot Evaluation Studies of High Blood Pressure Control. National Heart, Lung and Blood Institute; 05-31-84 (Ibrahim).

Relationship of Plasma Micronutrients to Sputum Cytologic Abnormalities, University Research Council; 3-31-83 (Schoenbach).

Respiratory Disease in the Furniture Industry. Institute of Occupational Safety and Health; (Shy, Goldsmith)*.

Social and Community Ties as Predictors of Longevity; National Institute of Aging; 09-28-83 (Schoenbach).

Social/Work Roles and Health Indicators in Women. University Faculty Research Grant/University Research Council; 11-10-83; (Williams).

Trial Assessing Chronotherapeutic Insulin Schedules. National Institute of Arthritis, Metabolism and Digestive Diseases; 08-31-83 (Schmidt)*.

Type A Behavior and Atherosclerosis in Men and Women; Amer. Heart Assoc.; 6-30-84 (Haynes).

*Student research grants for doctoral work).

C. Notable Publications of Faculty.

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Hulka BS: Noncompliance Effects on the Design and Analysis of Clinical Trials. In Advances in Diabetes Epidemiology, Proceedings of the International Symposium on the Advances in Diabetes Epidemiology, Abbaye de Fontevraud, France, Eveline Eschwege (Ed), Elsevier Biomedical Press B.V., 1982. pp. 271-278.

Hulka BS: Oral Contraceptives, The Good News. (Editorial). Journal of the American Medical Association 249(12): 1624-1625, 1983.

Fowler WC, Cutchin LM, Crocker DL, Hall JB, Begun JW, Freeman AC, Hulka BS, Kaluzny AD, O'Keefe SP, Symons MJ, Lee YY: Cancer Control and Community Physicians in North Carolina. North Carolina Medical Journal 44(6):357-61, 1983.

Hulka BS: Estrogens and Endometrial Cancer. In Proceedings of Symposium on the Changing Risk of Disease in Women: An Epidemiologic Approach, Lexington Books. In press. 1983.

Hulka BS: Diet and Breast Cancer. In Proceedings of the 1982 Public Health Nutrition Update. Dietary Excesses and Health/Disease Implications. Health Sciences Consortium. In press, 1983.

Michel A. Ibrahim

Ibrahim MA: In support of jogging. Editorial. Am J Pub Health 73(2):136-137, 1983.

Ibrahim MA: Epidemiology: Application in health services. J of Health Adm Educ I-I, 37-69, 1983.

Daniels SR, Greenberg RS, and Ibrahim MA: Scientific uncertainties in the studies of salicylate use and Reye syndrome. JAMA 249(10):1311-1316, March 1983.

Daniels SR, Greenberg RS, and Ibrahim MA: Etiologic research in pediatric epidemiology. Pediatrics 102(4): 494-504, April 1983.

Sherman A. James

Parkerson GR, Gehlbach SH, Wagner EH, James SA, Clapp NE and Muhlbaier LH: The Duke-UNC health profile: An adult health status instrument for primary care. Medical Care 19(8):806-828, 1981.

Boyce WT, Jensen EW, James SA, Peacock JL: The family routines inventory: Theoretical origins. Social Science and Medicine 17(4):193-200, 1983.

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Broadhead WE, Kaplan BH, James SA, Wagner EH, et al. The epidemiologic evidence for relationship between social support and health. Am J of Epid 117(5):521-537, 1983.

James SA, Hartnett SA, Kalsbeek W: John Henryism and blood pressure differences among Black men. J of Behav Med (In press).

James SA: Coronary heart disease in Black Americans: Suggestions for research on social status, social mobility, and Type A Behavior. Am. Heart J (In press).

Wagner EH, James SA, Beresford SAA, Strogatz D, et al: The Edgecombe County high blood pressure control program: I. Coorelates of uncontrolled hypertension at baseline. Am J of Public Health (In press).

Berton H. Kaplan

Blazer DG: Kaplan BH: The Assessment of Social Support in an Elderly Community Population. The Amer. J. Social Psychiatry. 3: 29-36, Winter 1983.

Broadhead WE, Kaplan BH, James SA, Wagner EH, Schoenbach VJ, Grimson R, Heyden S, Tibblin G, Gehlbach S: The Epidemiologic Evidence for a Relationship Between Social Support and Health. Am. J. Epid. 117(5):521-537, 1983.

Margolis L, McLeroy K, Runyon C, and Kaplan BH: The Social Ecology of Type A Behavior. Accepted for Publication, J. Behavioral Medicine 1983.

Schoenbach VS, Garrison C, Kaplan BH: A Review of the Epidemiology of Adolescent Depression. Accepted for publication in Public Health Reviews, 1983.

Garrison C, Kaplan BH, Schoenbach VS, et al: The Epidemiology of Family Dynamics and Depression in a High School Population." Accepted as a chapter in a forth coming book.

Kaplan BH, Blazer DG: Psychiatric Epidemiology, A Review in Psychiatry and the Behavioral Sciences, D Hamburg, J Barkus and P Berger, (Eds), Oxford University Press. In press.

David G. Kleinbaum

(see Dept. of Biostatistics)

Abdel R. Omran

Omran AR: "Interrelations Between Maternal and Neonatal Health and Family Planning: Conceptualization of the Theme." In: Primary Maternal and Neonatal Health Care: A Global Concern. Fd Mundo, EI Cuyegkeng, and DM Aviolo (Eds), pp. 1-20, New York: Plenum Publishing Corporation, 1983.

Victor J. Schoenbach

Shoenbach VJ, Kaplan BH, Grimson RC, Wagner EH: Use of a symptom scale to study the prevalence of a depressive syndrome in young adolescents. Am J of Epid 116:791-800, 1982.

Schoenbach VJ, Kaplan BH, Wagner EH, Grimson RC, Miller FT: Self-reported depressive symptoms in young adolescents. Am J. of Pub. Health (In press) 1983.

Schoenbach VJ, Wagner EH, Karon JM: The use of Epidemiologic data for personal risk assessment in health hazard/health risk appraisal programs. J Chronic Dis (In press).

Schoenbach VJ, Garrison CZ, Kaplan BH: Epidemiology of adolescent depression. Submitted to Public Health Review.

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Cecil G. Sheps

Sheps CG, Lewis IJ, and Lukashok H: The academic medical center in New York City. United Hospital Fund, 1982.

Wilson G, Sheps CG, and Oliver TR: Effects of hospital revenue bands on hospital planning and operations. NEJM 307(23):1426, December 2, 1982.

Sheps CG, Wagner EH, Schonfeld WH, et al: An evaluation of subsidized rural primary care programs: I: A typology of practice organizations. A J Pub Health 73(1)pp, January 1983.

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Carl M. Shy

Winn DM, Blot WJ, Shy CM, Fraumeni JF, Jr: Occupation and oral cancer among women in the South. Am J Indus Med 3:161-167, 1982.

Herman A. Tyroler

Tyroler HA, Barrett-Conner E, Criqui MH, Williams OD: Correlates of high blood pressure in the US lipid research clinics populations. NIH Publication #82-2015, September 1982.

Rifkind BM, Heiss G, Tyroler HA, and Williams OD: The epidemiology of high density lipoproteins-the Lipid Research Clinics Program Prevalence Study. Proceedings of the 4th International Meeting on Atherosclerosis, Bologna, Italy, November 23-25, 1981: Clinical Evaluation and Therapy, eds. S. Lenzi and GC Descovich. MTP Press Limited, International Medical Publishers, Boston, Mass. 1982.

Wing S, Aubert RE, Hansen JP, Hames CG, Slome C and Tyroler HA: Isolated systolic hypertension in Evans County--I. Prevalence and screening considerations. J Chron Dis, 35:735-742, 1982.

Smith EO, Curb JD, Hardy RJ, Hawkins CM and Tyroler HA: Clinic attendance in the hypertension detection and follow-up program. Hypertension 4(5), September-October 1982.

Delzell E, Andjelkovich D, and Tyroler HA: A case-control study of employment experience and lung cancer risk among rubber workers. Am J of Industrial Medicine 3:393-404, 1982.

US-USSR Steering Committee for Problem Area 1 (HA Tyroler, Presenter): The correlates of HDL cholesterol: The US study. USA-USSR First Lipoprotein Symposium, Leningrad, USSR; May 26-27, 1981, DHEW NIH #83-1966, Nov. 1982.

Davis CE, Knowles M, Kark J, Heyden S, Hames CG and Tyroler HA: Serum cholesterol levels and cancer mortality: Evans County twenty-year follow-up study. American Oil Chemist Society, Dec. 6-11, 1981, Chicago, Ill. (in press).

Tyroler HA, Knowles MG, Davis CE, Kark J, Peleg I, Heyden S and Hames CG: Serum cholesterol and cancer mortality in white males: social class effects, Evans County twenty-year follow-up study. 6th International Symposium on Atherosclerosis, June 4-18, 1982, West Berlin (in press).

Hypertension Detection and Follow-Up Program Cooperative Group: Race, education and five-year mortality in HDFP Stratum I referred care males. Third WHO/ISH Conference on Mild Hypertension, September 27-October 2, 1982, Burgenstock, Switzerland (in press).

US-USSR Steering Committee for Cardiovascular Area I: Pathogenesis of Atherosclerosis: USSR and US nutrient intake, plasma lipids, lipoproteins and nutrients in men aged 40-59 sampled from Lipid Research Clinics (LRC) populations. AH 55th Scientific Session, November 18, 1982, Dallas, Texas (in press).

Bush TL, Cowan LD, Barrett-Connor E, Criqui MH, Karon JM, Wallace RB, Rifkind BM, and Tyroler HA: Estrogen use and all-cause mortality preliminary results from the Lipid Research Clinics Program follow-up study. JAMA 249(7), Feb. 18, 1983.

Memorandum from a WHO/ISH meeting: Guidelines for the treatment of mild hypertension. Third WHO/ISH Conference on Mild Hypertension, Sept. 27-29, 1982, Burgenstock, Switzerland. Bulletin of the World Health Organization, 61(1):53-56, 1983.

Edward H. Wagner

Fletcher RH, Fletcher SW, Wagner EH: Clinical Epidemiology-the Essentials. Baltimore: Williams & Wilkins, 1982.

Zwick DL, Bobzien WF, Wagner EH: Triage nurse decisions: a prospective study. J Emerg Nursing 8(3):132-138, 1982.

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Sheps CB, Wagner EH, Schoenfeld WH, DeFriesse GH, Bachar M, Brooks EF, Gillings DB, Guild PA, Konrad TR, McLaughlin CP, Ricketts TC, Seipp C, Stein JS: An evaluation of subsidized rural primary care programs: I. A typology of practice organizations. Am J Publ Health 73(1):38-49, 1983.

Ricketts TC, Konrad TR, Wagner EH: An evaluation of subsidized rural primary care programs: II. The environmental contexts. Am J Publ Health 73(4):406-413, 1983.

Schoenbach VJ, Kaplan BH, Wagner EH, Grimson RC, Miller FT: Self-reported depressive symptoms in young adolescents. Am J Publ Health (in press).

Broadhead WE, Kaplan BH, James SA, Wagner EH, Schoenbach VJ, Grimson R, Heyden S, Tibblin G, Gehlbach SH: The epidemiologic evidence for a relationship between social support and health. Am J Epid 117(5):521-537, 1983.

Schoenbach, VJ, Wagner EH, Karon JM: The use of epidemiologic data for personal risk assessment in health hazard/health risk appraisal programs. J Chron Dis (in press).

Timothy C. Wilcosky

Wilcosky TC, Tyroler HA: Mortality from heart disease in workers exposed to solvents. J Occup Med (Accepted for publication).

Checkoway H, Wilcosky TC, Wolf P, Tyroler HA: An evaluation of the associations of leukemia and rubber industry solvent exposures. Am J Indus Hygiene (Accepted for publication).

Wilcosky TC, Kwiterovich PO, Glueck CJ, et al: Dyslipoproteinemia in Black participants in the LRC population survey. (Under Program Office review).

Carolyn A. Williams

Williams CA: "Ethics in Health Policy and Policy Making for Ethics: A Perspective." In Proceedings of the National Invitational Conference Encounter with Ethics: Dilemmas and Directions for Nursing. Chicago, Ill. The John L. and Helen Kellogg National Center for Excellence in Nursing and Rush-Presbyterian-St. Lukes Medical Center, 1982, pp. 163-178.

Williams CA: Books of the Year: Nursing Research. Amer. J. of Nursing, 83: 94-95, 1983.

Williams CA: "Community Health Nursing in Transition: Population Focused Nursing Versus Clinical Nursing in Community Settings." In Community Health Nursing: Processes and Practices for Promoting Health. J Lancaster and M Stanhope, Eds., St. Louis, Missouri: CV Mosby Co., In press.

Williams CA: Community Health Nursing and Policy-Making: A Perspective. Nursing Outlook, In press 1983.

Williams CA, Beresford SA, Strogatz DS, James SA, Wagner EH, and Ibrahim MA: The Edgecombe County High Blood Pressure Control Program: Psychosocial Factors and Hypertension Treatment and Control Status. Abstract, in A Decade of Progress: The Challenge Ahead. National Conference on High Blood Pressure Control, 1983. Published by the National High Blood Pressure Education Program Coordinating Committee, Washington, DC, p. 60.

Wagner EH, James SA, Beresford SAA, Strogatz DS, Grimson RC, Kleinbaum DG, Williams CA, Cutchin LM, and Ibrahim MA: The Edgecombe County High Blood Pressure Control Program: I. Correlates of Uncontrolled Hypertension at Baseline." American Journal of Public Health, In press 1983.

Williams CA: Book Review of Gehlbach, SH. Interpreting the Medical Literature, 1982 in Research in Nursing and Health, in press, 1983.

D. Papers presented by faculty.

Harvey Checkoway

Checkoway H, Mathrew RM, Wolf SH, et al: Mortality among workers at the Oak Ridge National Laboratory. Presented at the Health Physics Society Midyear Topical Meeting. Albuquerque, NM, January, 1983.

Wilcosky T, Checkoway H: Computerized synthesis of routinely collected chemical data in an epidemiologic study of leukemia in the rubber industry. Presented at the American Industrial Hygiene Conference, Philadelphia, PA, May 1983.

Checkoway H, Hickey JLS, Kupper LL: Evaluating the influence of clearance rates and changes in exposure intensity over time on dose-effect relationships in occupational epidemiology. Presented at the American Industrial Hygiene Conference, Philadelphia, PA, May 1983.

Rice CR, Harris RL, Checkoway H, et al: Exposure reconstruction and case-control study of silicosis in North Carolina. Presented at the American Industrial Hygiene Conference, Philadelphia, PA, May 1983.

Tankersley WG, Checkoway H: Procedures for assignment of chemical exposure indices for use in epidemiology studies. Presented at the American Industrial Hygiene Conference, Philadelphia, PA, May 1983.

Wilcosky TC, Checkoway H, Marshall EG: Cancer mortality and solvent exposures in the rubber industry. Presented at the Annual Meeting of the Society for Epidemiologic Research, Winnipeg, Canada, June, 1983.

Bruce Duncan

Duncan BB: Advantages and use of non-enzymatically glycosylated proteins in clinical and epidemiologic studies. Southern Sugar Club (a regional diabetes association). Kiawah Island, SC, February 25, 1983.

Duncan BB. The association of dyslipoproteinemia with symptoms and signs of peripheral arterial disease. The LRC Prevalence Study. American College of Cardiology, New Orleans, LA, March 23, 1983.

Suzanne G. Haynes

Haynes SG: "Women, Work, and Coronary Heart Disease" Fourth Annual Great Lakes Conference on High Blood Pressure Control. Chicago, Ill, October 6-8, 1982

Haynes SG: "Women and Cardiovascular Disease." Southeastern Regional Conference on High Blood Pressure. "Focus on Cardiovascular Disease Risk Reduction." Lexington, KY, October 11-13, 1982.

Haynes SG: "Women, Work and Cardiovascular Disease" American Heart Association, Greater Los Angeles Affiliate, Los Angeles, CA, April 6, 1983.

Haynes SG: "Women, Work and Cardiovascular Disease". Women in Medicine: Third Regional Conference. Rockefeller Univ. New York City, April 8-10, 1983.

Haynes SG: "Women, Work, and Coronary Heart Diseases - Results from the Framingham Heart Study. American Heart Association, North Carolina Affiliate, Board of Directors Meeting, Chapel Hill, NC January 19, 1983.

Gerardo Heiss

Wallace RB, Hunninghake D, Chambless LW, Heiss G, Johnson NJ, Wahl P, Barrett-Connor E: A screening survey of dyslipoproteinemias associated with prescription drug use: The Lipid Research Clinics Program. Presented at the 110th Annual Meeting of the American Public Health Association, Montreal, Quebec, November 1982.

Cooper Gr, Heiss G, Green M, Williams OD, Tyroler HA, Rifkind BM: Distribution of HDL cholesterol/total cholesterol ratio values in populations observed by the Lipid Research Clinics. Presented at the Meeting of the American Association for Clinical Chemistry, Anaheim, California, August 11, 1982.

Green M, Heiss G, Rifkind BM, Tyroler HA: Age-related changes in lipoprotein ratios in blacks and whites aged 5-19 years: The Lipid Research Clinics Program Prevalence Study. Presented at the International Symposium on Coronary Arteries in Infants and Children, Tel Aviv, Israel, October, 1982.

Tyroler HA, Wing S, Logue E, Knowles M, Davis CE, Heiss G, Heyden S, Hames CG: Twenty-year total and CHD mortality in the Evans County Study. Presented at the 23rd Annual Conference on Cardiovascular Disease Epidemiology, AHA, San Diego, California, March 1983.

Heiss G, Schonfeld G, Johnson JL, Heyden S, Hames CG, Tyroler HA. Black-white differences in plasma levels of apolipoproteins: The Evans County Study. Presented at the 23rd Annual Conference on Cardiovascular Disease Epidemiology, American Heart Association, San Diego, California, March 1983.

Barbara S. Hulka

"Risk/Benefit Ratios of Estrogen Replacement Therapy" at Reproductive Endocrinology Conference, UNC Department of Obstetrics and Gynecology, 9/22/82.

"Clinical Update - The Use and Abuse of Estrogens: The Epidemiologic Prospective," District I Meeting of American College of Obstetricians and Gynecologists, Dixville Notch, New Hampshire, 11/11/82.

"Diet and Breast Cancer" at Malignant Disease Symposium, Department of Nutrition, School of Public Health, Chapel Hill, 10/22-22/82.

"Prevention and Recognition of Toxic Shock Syndrome," Duke University, 1/26/83.

"Toxic Shock Syndrome," Meredith College, Raleigh, 4/21/83.

"Changing Patterns of Cancer Incidence and Mortality" Symposium on Changing Patterns of Disease at American Association for the Advancement of Science meeting, Detroit, Michigan, 5/26-31/83.

Michel A. Ibrahim

Ibrahim MA: "A commentary on cardiovascular diseases." American College of Epidemiology Annual Meeting, Chicago, IL, September 30, 1982.

Ibrahim MA: "Public health in the 1980s: service and science." Annual Delta Omega Distinguished Lecture Series, UNC-SPH, November 4, 1982.

Ibrahim MA: "The epidemiologic basis for health promotion." The First International Symposium on Public Health in Asia and the Pacific Basin. Honolulu, HI, March 7, 1983.

Sherman A. James

James SA: Coronary heart disease in Black populations: Type A behavior and other psychosocial factors. Presented at the Symposium on CHD in Black Populations, sponsored by the Council of Epidemiology, American Health Association, San Diego, California, March 5, 1983.

James SA, Wagner EH, Beresford SAA, Strogatz D, et al: The Edgecombe County high blood pressure control program: II. Barriers to the use of medical care. Presented at the National Conference on High Blood Pressure Control. Washington, DC, April 21, 1983.

Williams CA, James SA, Beresford SAA, Strogatz D, et al: The Edgecombe County High Blood Pressure Control Program: Psychocial factors and hypertension treatment and control status. Presented at the National Conference on High Blood Pressure Control, Washington, DC, April 21, 1983.

Beresford SAA, James SA, Lewis GE, Strogatz D, et al: The Edgecombe County high blood pressure control program: High blood pressure control in industry. Presented at the National Conference on High Blood Pressure Control, Washington, DC, April 21, 1983.

David G. Kleinbaum
(see Dept. of Biostatistics)

Abdel R. Omran

"The Impact of Family Formation Patterns and Family Planning on Health: Assessment of Positive and Negative Effects." Paper presented to the WHO Steering Committee of the Task Force on Service and Psychosocial Research in Family Planning, 13-16, Dec. 1982, Trivandrum, India.

"The Epidemiologic Transition Theory: A Preliminary Update." Paper presented at the International Seminar on Medical Demography Research to Appraise National Family Planning Programs, September 27-29, 1982, Mexico City, Mexico.

"Service and Psychosocial Research in Family Planning: Methodologic Issues and Constraints." Paper presented at the International Symposium on Research of the Regulation of Human Fertility, February 7-9, 1983, Stockholm, Sweden.

Victor J. Schoenbach

N.C. Society for Public Health Education:
"Health Hazard Appraisal Instruments: Pros and
Cons", 1982.

Carl M. Shy

Shy CM: Air Pollution and Lung Cancer.
Presented at International Update on Lung Cancer
Conference, New Orleans, LA, March 2-4, 1983.

Shy CM: Epidemiologic approaches to the study of
occupational cancers. Presented at the Seminar
on Occupational Epidemiology, American
Occupational Medical Association Annual Meeting,
Washington, DC, April 25, 1983.

Herman A. Tyroler

US-USSR Steering Committee for Problem Area 1
(HA Tyroler, Presenter). The coorelates of HDL
cholesterol: The US study. USA-USSR First
Lipoprotein Symposium, Leningrad, USSR, May
26-27, 1981, DHEW NIH #83-1966, Nov. 1982.

Edward H. Wagner

Wagner EH, Strogatz DS: Hypertension and
labelling: alternative explanations in
cross-sectional data. Presented at Society for
Research and Education in Primary Care Internal
Medicine, New Orleans, January 1983.

Timothy C. Wilcosky

Wilcosky TC, Checkoway H: Computerized
synthesis of routinely collected chemical data
in an epidemiologic study of leukemia in the
rubber industry. Annual meeting of the American
Industrial Hygiene Association, Philadelphia,
PA, May 22-27, 1983.

Wilcosky TC, Checkoway Y, Marshall E: Cancer mortality and solvent exposures in the rubber industry. Annual meeting of the Society for Epidemiologic Research, Winnipeg, Manitoba, Canada, June 15-17, 1983.

Carolyn A. Williams

Williams CA: "Care Delivery Research Nursing, and the 1980's: A Decisive Decade." Key-note speech, Sigma Theta Tau, Fall Research Symposium, Vanderbilt University, Nashville Tenn. September 30, 1982.

E. Special Items of Equipment Obtained during the Year.

2 Digital VT100 Computer Terminals for SPH VAX Access.

IV. PUBLIC SERVICE

List of Activities by Faculty Member:

Caroline Becker

Departmental Activities:

Grader, Masters Comprehensive Examination

School of Public Health Activities:

Member, Administrative Board of the School of Public Health, September 1982-August 1983.

President, Delta Omega (Public Health honorary society).

Greater University Activities:

Member, AAUP Committee for Women, 1982-

Elected Secretary-Treasurer, Elisha Mitchell Scientific Society, April 1979-1983.

State Activities:

Participant, NC 2000

Treasurer, American Heart Association, NC affiliate.

Lecturer in Neurology, Bowman-Gray School of Medicine,

Consultant, American Heart Association, North Carolina Affiliate, in various research projects and standing committees.

President, Board of Home Health Agency of Chapel Hill, NC, 1982-1984.

National Activities:

Member, Johns Hopkins University National Alumni Schools Committee, 1979- .

Coordinator, Joint Center for Disease

Control/Association of Schools of Public

Health Epidemic Field Investigations, 1980- .

National Secretary-Treasurer, Delta Omega Society, 1981- .

Harvey Checkoway**Departmental Activities:**

Member, Admissions Committee.
 Interim Chairman, Doctoral Qualifying
 Examination Committee.
 Grader, Qualifying Examination Committee.
 Instructor, EPID 162.
 Teaching Participation, EPID 160, EPID 256, EPID
 233, EPID 276.
 Serve as member of 8-10 doctoral dissertation
 committees.

National Activities:

Served as site visit member for NIH Review of a
 proposed investigation of AIDS to be conducted
 in New York City.

Bruce Duncan**School of Public Health Activities:**

Participated as speaker and panalist in
 Nutrition Department's Continuing Medical
 Education Course on obesity.

Lars-Goran Ekelund**State Activities:**

Lecture at Duke Univ. on Cardiac Rehabilitation
 for Physical Therapy.
 Lecture in Wilmington, Postgraduate Course for
 Physical Therapists: Physical Training after
 MI.

Suzanne G. Haynes**Departmental Activities:**

Grader, Doctoral Qualifying Examination.

School of Public Health Activities:

Search Committee Member, Chairman of the Dept.
 of Epid.
 Search Committee member HPAA Aging Program
 Faculty.

Greater University Activities:

AAUP Status on Women Committee Member.

National Activities:

Executive Committee Member and Fellow, American Heart Association Council on Epidemiology.
 Fellow, Academy of Behavioral Medicine.
 Fellow, American College of Epidemiology (Ad Hoc Reviewer for nominations committees).
 Reviewer, Behavioral Medicine Abstracts.
 Executive Committee, Society for Epidemiologic Research, Nationally elected, 1983-1986.
 Advisory Committee, Cadiometrical Scientist Training Grant, Medical University of South Carolina, 1983.
 Faculty Member, New England Epidemiology Institute, Summer 1982, 1983.

Gerardo Heiss**Departmental Activities:**

Chairman, Doctoral Qualifying Examination Committee (Fall 1982).
 Member, Graduate Studies Committee.

National Activities:

Member, Data Review Board of the Ultrasound B-Scan Assessment Program, NIH Devices and Technology Branch.
 Member, Lipid Research Clinics Program Committees: Prevalence Study Executive Committee, Epidemiology Committee, Cardiovascular Liason Group.

International Activities:

Member, Lipid Research Cilnics Jerusalem Steering Committee.
 On-Site Collaborative Analysis at the Jerusalem Lipid Research Clinic, Hadassah University Hospital, Ein Kerum, Jerusalem, Israel.
 3/15/83-6/14/83.

Barbara S. Hulka**Departmental Activities:**

Participant, Epidemiology Conference on Selenium in Health & Disease, Evans Co. Project
 5/19/83.

National Activities:

Attended Estrogen Workshop Planning Group Meetings on 12/22/82 and 4/4/83 for NHLBI, NIH.

Member, Health Services Research & Development Scientific Review and Evaluation Board of Veterans' Administration.

Site Visit at University of Alabama, Birmingham 1/31-2/2/83 for Council on Education for Public Health.

Member, Advisory Board for 12th Edition of Public Health and Preventive Medicine.

Chairman, Epidemiology and Disease Control Study Section of the National Institutes of Health.

Member of the Board of Scientific Councilors to the National Cancer Institute, Division of Resources, Centers and Community Activities.

Member, National Academy of Sciences Committee on Epidemiology and Veterans Follow-up Studies.

Reviewer, Cancer Control and Research Programs of the National Cancer Institute.

Member, Health Services Research, editorial board.

Member, Advisory Committee, Environmental Trends Initiative of the Hospital Research and Educational Trust.

Michel A. Ibrahim**School of Public Health Activities:**

Member, Occupational Health Studies Group Policy Board.

Greater University Activities:

Member, UNC Health Services Research Center Policy Board.

State Activities:

Member, Board of Directors, American Heart Association, North Carolina Affiliate.

Chairman, Medical and Community Program Committee, American Heart Association, North Carolina Affiliate, 1981- .

President, American Heart Association, NC affiliate, May 1983- .

National Activities:

Member, Aging Review Study Section, National Institute on Aging, July 1983-
 Consultant, National Cancer Institute
 Consultant, National Institute on Aging.
 Consultant, National Heart, Lung and Blood Institute.
 Consultant, National Institute of Child Health and Human Development.
 Consultant, National Institute on Alcohol Abuse and Alcoholism.
 Chairman, Policy Committee for the Five Hypertension Demonstration Projects, NHLBI, 1981- .
 Editorial Consultant, Journal of Chronic Diseases.
 Chairman, Editorial Board, Am. J. of Public Health.
 Member, Editorial Advisory Board, Family Medicine Review.
 Member, American College of Epidemiology Board of Directors.

International Activities:

Member, U.S.-Egypt Joint Working Group on Health Cooperation, DHEW Development of Health Services Subcommittee.
 Consultant, WHO, Ben Gurion University, Beer Sheva, Israel.
 Member, International Epidemiological Association.

Sherman A. James**Departmental Activities:**

Chairman, Graduate Studies Committee.

School of Public Health Activities:

Member, Search Committee for Chair for Epidemiology
 Member, Dean's Ad Hoc Committee on Health Promotion and Disease Prevention.

National Activities:

Member, Editorial Board, Medical Care.
Member, Epidemiology Study Section, NIMH.
Member, Planning Committee for the NHLBI Working
Conference on CV Disease Risk Factors in
Blacks.
Consulting Editor, Behavioral Medicine
Abstracts.

International Activities:

Fellow, First Advanced Seminar in Cardiovascular
Disease Epidemiology, Helsinki, Finland.

Berton H. Kaplan**Departmental Activities:**

Member, Graduate Studies Committee.
Grader, Doctoral Qualifying Examination.

Greater University Activities:

Chairman, University Committee on Established
Lectures, 1983-84..
Presented a lecture in a course entitled
"Introduction to Medicine" sponsored by the
Department of Medicine.

National Activities:

Grants Advisor to the William T. Grant
Foundation.
Editorial Board, Journal of Human Stress,
Journal of Behavioral Medicine, Family
Medicine Review.
Reviewer, American J. of Epid., and Social
Forces.
Member, Institute of Medicine Study Group on the
Health Consequences of Bereavement.
Member of the Psychosocial Advisory Group to the
American Cancer Society.
Member, Advisory Committee on Health Services
Research Program Between the School of Public
Health and the Veterans' Administration Health
Services Research Program in Durham.

David G. Kleinbaum**Short Courses:**

(see Dept. of Biostatistics)

Departmental Activities:

(see Dept. of Biostatistics)

National Activities:

(see Dept. of Biostatistics)

International Activities:

(see Dept. of Biostatistics)

Abdel R. Omran**Departmental Activities:**

Director, Population Training Program.

School of Public Health Activities:

Member, International Health Committee.

Member, Subcommittee of the Graduate Studies Committee.

Greater University Activities:

Fellow, Carolina Population Center.

Member, Population Policy Board of the Population Center.

Member, Training Program Committee, Carolina Population Center.

State Activities:

Participation with NC State University in supervising doctoral students.

International Activities:

Director, HWO Collaborative Center for Epidemiologic Studies in Human Reproduction.

Consultant, World Bank, UNFPA, IFRP, WHO.

Member, Scientific Committee, IFRP.

Member, Scientific Council, International Association for Maternal and Neonatal Health (IAMANEH).

Secretary General, Muslim Scholars Congress on Population, Health and Development.

Professor, WHO-sponsored international course on methodology of serve research, Geneva, Switzerland.

Clinical Epidemiology course given to Physicians, State of Kuwait.

Victor J. Schoenbach**Departmental Activities:**

Member, Graduate Studies Committee.
 Chairman, Master Comprehensive Examination
 Committee.

Greater University Activities:

Member, Editorial Board, BASELINE (Quarterly
 publication of UNC Health Services Research
 Center).

National Activities:

Member, Standing Review Committee, Health
 Services Research and Development Field
 Program, Veterans Administration Medical
 Center, Durham, NC.
 Consultant, Health Promotion/Disease Prevention
 Program, W.K. Kellogg Foundation (Through
 Health Services Research Center)..

Cecil G. Sheps**Carl M. Shy****Short Courses:**

Occupational Epidemiology. Presented at the New
 England Epidemiology Institute, Amherst,
 Mass., August 1-19, 1983.

Departmental Activities:

Member, Admissions Committee.
 Chairman, Seminar Series Committee.
 Grader, Doctoral Qualifying Examination.
 Department Equal Employment Opportunity Officer.

School of Public Health Activities:

Member, Biomedical Sciences Research Support
 Grant Committee.

National Activities:

Member, Board of Scientific Counselors, Division
 of Cancer Cause and Prevention, National
 Cancer Institute.
 Member, Clinic Hazards Advisory Panel on
 Asbestos, Consumer Product Safety Commission.
 Chairman, Site Visit Committee to the
 Environmental Epidemiology Branch, National
 Cancer Institute.

Herman A. Tyroler**Short Courses:**

Minnesota Summer Institute, Cardiovascular
Disease Epidemiology.
New York University, Epidemiology of Ischemic
Heart Disease.

Departmental Activities:

Member, Admissions Committee.
Grader, Doctoral Qualifying Examination.

School of Public Health Activities:

Member, Occupational Safety and Health Education
Resource Center Planning and Executive
Committee.

State Activities:

Member, High Blood Pressure Committee, North
Carolina Heart Association.
North Carolina 2000, Commission on the Future of
North Carolina.

National Activities:

National Academy of Science; Member, Institute
of Medicine; Member, Committee on Planning
Study for an Ongoing Study of Costs of
Environment-Related Health Effects.
Consultant, National Heart, Lung, and Blood
Institute, Department of HHS for Lipid
Research Clinics Program, Hypertension
Detection and Follow-up Program, Multiple Risk
Factors Intervention Trials.
Vice-Chairman, American Heart Association,
Council on Epidemiology.

International Activities:

Steering Committee Member, Arteriosclerosis:
US-USSR, US-Israel, US-Poland, US-Germany.
Consultant, World Health Organization-
International Agency on Research of Cancer.

Edward H. Wagner**Short Courses:**

Clinical Epidemiology--Ministry of Health,
Kuwait.

Departmental Activities:

Member, Search Committee for Chairperson
Member, Health Promotion and Disease Prevention
Committee.
Chairman, Admissions Committee.
Grader, Doctoral Qualifying Examination.

School of Public Health Activities:

Chairman, Secretary's Award for Innovations in
Health Promotion and Disease Prevention
Selection Committee.

Greater University Activities:

Member, Curriculum Task Force on the Transition,
School of Medicine 1981-.

National Activities:

Member, Special Ad Hoc Review Committee:
National Center for Child Health and Human
Development.

Reviewer, VA Health Services Research and
Development Services.

Member, Data Monitoring Committee, National
Institutes of Health, Chronic Ambulatory
Peritoneal Dialysis Patient Registry.

Consultant, Health Care Plan for Western New
York: Health Promotion Activities.

Carolyn A. Williams**Departmental Activities:**

Member, Admissions Committee.

School of Public Health Activities:

Traineeship Committee, SPH.

Committee to Review, Chairman of Environmental
Sciences & Engineering.

National Activities:

President-Elect, Member, Governing Council,
American Academy of Nursing (1981-1983).

Member, Advisory Committee of the Medical
Practice Research and Development Program, the
Robert Wood Johnson Foundation, 1983.

Member, Publications Board, American Public
Health Association 1977-1984.

Member, (March 2-4, 1983), Ad Hoc Nursing
Research Review Group, Bureau of Health
Professions, Health Resources and Service
Administration, Dept. of Health and Human
Services, Washington, DC.

V. FACULTY

A. List of Faculty [* indicates primary of multiple academic apts.]

1. Full-Time Faculty

Caroline Becker
 Associate Professor
 Harvey Checkoway
 Research Assistant Professor
 John T. Fulton
 Professor Emeritus
 Suzanne G. Haynes
 Research Assistant Professor
 Gerardo Heiss
 Research Associate Professor
 Barbara S. Hulka
 *Professor & Acting Chairperson, EPID
 Clinical Assoc. Prof., Family Medicine
 Michel A. Ibrahim
 DEAN, School of Public Health
 *Professor, Epid.
 Professor, Soc. & Admin.Med.
 Sherman A. James
 *Associate Professor, Epid.
 Clinical Associate Prof., Psychology.
 Berton H. Kaplan
 Professor
 David G. Kleinbaum
 Professor of Biostatistics
 Abdel R. Omran
 Professor
 Victor J. Schoenbach
 Research Assistant Professor
 Cecil G. Sheps
 Professor, Epid.
 *Professor, Soc. & Admin.Med.
 Carl M. Shy
 *Professor, Epid.
 Professor, Envir.Sci.& Engineer.
 Clinical Professor, Fam.Med.
 Herman A. Tyroler
 Alumni Distinguished Professor
 Edward H. Wagner
 Associate Professor, Epid.,
 *Associate Professor, Medicine
 Carolyn A. Williams
 *Associate Professor, Epid.
 Associate Professor, Nursing

2. Part-Time Faculty

Gory (Bud) J. Love
Research Associate Professor

3. Visiting Faculty

Bruce B. Duncan
Visiting Assistant Professor
Lars-Goran Ekelund
Visiting Professor
Timothy C. Wilcosky
Visiting Assistant Professor

4. Adjunct and Fixed-Term Joint Appointments

Dragana Andjelkovich
Adjunct Associate Professor, Epid.
Shirley A. Beresford
Adjunct Assistant Professor
Joan Cornoni-Huntley
Adjunct Associate Professor
Lawrence M. Cutchin
Clinical Associate Professor, Epid.
Clin. Assoc. Prof., Med. & Fam. Med.
*Adjunct Assoc. Prof., Soc. & Admin. Med.
Gordon H. DeFriese
Clinical Professor, Epid.
*Professor, Social & Admin. Med.
Robert H. Fletcher
Clinical Associate Professor, Epid.
*Associate Professor, Medicine
Suzanne W. Fletcher
Clinical Associate Professor, Epid.
*Associate Professor, Medicine
H. Hugh Fudenberg
Adjunct Professor
Stephen H. Gehlbach
Adjunct Assistant Professor
Seymour Grufferman
Adjunct Associate Professor
Kathrine Magruder Habib
Adjunct Assistant Professor
Curtis G. Hames
Clinical Professor
Carl G. Hayes
Adjunct Associate Professor
Siegfried H. Heyden
Adjunct Professor

Frank J. Hielema
Adjunct Instructor
James E. Higgins
Adjunct Assistant Professor
John Higginson
Research Professor, Epid.
*Research Professor, Pathology
Michael Hogan
Adjunct Assistant Professor
Clarence C. Lushbaugh
Adjunct Professor
J. Newton MacCormack
Adjunct Associate Professor
Eugene S. Mayer
Adjunct Associate Professor, Epid.
*Associate Professor, Fam. Med. & Med.
Director, AHEC
Melinda S. Meade
Adjunct Associate Professor, Epid.
*Associate Professor, Geography
George R. Parkerson
Adjunct Assistant Professor
Donald L. Patrick
Adjunct Associate Professor
*Associate Professor, Soc. & Admin. Med.
Ralph C. Patrick
Associate Professor (Died 1/5/83).
Samuel M. Putnam
Adjunct Assistant Professor, Epid.
*Associate Professor, Med.
Sheldon M. Retchin
Clinical Assistant Professor, Epid.
*Assistant Professor, Med.
Walter J. Rogan
Adjunct Assistant Professor
Seth A. Rudnick
Adjunct Assistant Professor
Robert S. Sandler
Clinical Instructor, Epid.
*Instructor, Med.
David S. Siscovick
Clinical Assistant Professor, Epid.
*Assistant Professor, Med.
Allan H. Smith
*Adjunct Associate Professor
Michael R. Swift
Clinical Professor, Epid.
*Professor, Med.
Allen J. Wilcox
*Adjunct Assistant Professor

B. Changes During the Year.

1. Additions, effective 1982-1983

Shirley A. Beresford Adj. Assist. Prof.
effective 7/1/82.
Bruce B. Duncan Visit. Assist. Prof.
effective 7/1/82-6/30/84.
Lars-Goran Ekelund Visiting Professor
effective 9/15/82-8/31/84.
Seymour Grufferman Adjunct Assoc. Prof.
effective 10/1/82.
Frank J. Hielema Adjunct Instructor
effective 11/1/82.
James E. Higgins Adj. Assist. Prof.
effective 7/1/82.
Donald L. Patrick Adjunct Assoc. Prof.
effective 8/1/82.
Sheldon M. Retchin Clin. Assist. Prof.
effective 8/1/82.
Robert S. Sandler Clin. Instructor.
effective 8/1/82.
Timothy C. Wilcosky Visit. Assist. Prof.
effective 7/1/82-6/30/84.

Additions Approved, 1983-84.

Richard C. Graves
Research Associate Professor, Epid.
*Research Assoc. Professor, Dentistry
effective 8/1/83.
Ramon Velez Adj. Assist. Prof.
effective 7/1/83.

2. Promotions, Effective 1982-1983.

Gordon H. DeFriesse
Clinical Professor
effective 7/15/82.
Michel A. Ibrahim DEAN (& Professor)
effective 9/15/82
David G. Kleinbaum Professor
effective 7/1/82

Promotions, Approved 1983-1984.

| | |
|--|----------------------|
| Robert H. Fletcher effective 7/1/83. | Clinical Professor |
| Suzanne W. Fletcher effective 7/1/83. | Clinical Professor |
| Stephen H. Gehlbach effective 7/1/83. | Adj. Assoc. Prof. |
| Suzanne G. Haynes effective 8/1/83. | Res. Assoc. Prof. |
| Barbara S. Hulka effective 7/1/83. | Prof. & Chairperson |
| George R. Parkerson effective 9/1/83. | Adjunct Assoc. Prof. |
| Samuel M. Putnam effective 7/1/83. | Clin. Assoc. Prof. |
| Robert S. Sandler effective 7/1/83. | Clin. Assist. Prof. |
| Edward H. Wagner effective 7/1/83. | Professor |

3. Leaves:

Gerardo Heiss: Off-Campus Assignment.
Lipid Research Clinic, Jerusalem.
3/15/83-6/14/83.

4. Losses: Retirement, Resignation, Death.

Simon-Tov Halfon, Visiting Scientist
(10/1/81-9/30/82)
Ralph C. Patrick, Associate Professor
Died January 5, 1983

C. Proposed Additions:

- 1 Assistant Professor position in Cancer Epidemiology.
- 1 Assistant Professor position in Clinical Epidemiology.

D. Special Achievements by Faculty -
Honors, Awards, Etc.

Caroline Becker

Bronze Service Recognition Medallion,
American Heart Association, NC affiliate,
May 1983.

Suzanne G. Haynes

Established Investigator of the American -
Heart Association, July 1982-July 1987.
Who's Who of American Women, 13th Ed., 1983.
American Men and Women of Science, 15th
Edition, 1983.

Sherman A. James

Elected to membership in the Academy of
Behavioral Medicine Research (1983).
Awarded NIH Research Career Development Award
(1982-87).

Abdel R. Omran

Who's Who in America.
Who's Who of Intellectuals (England).
Men and Women of Distinction.
Who's Who in the South and Southeast.
American Men and Women of Science.

Cecil G. Sheps

Thomas Jefferson Award, University of North
Carolina at Chapel Hill, 1983.
Doctor of Philosophy, Honoris Causa, Ben
Gurion University of the Negev, May 9,
1983.

Carolyn A. Williams

Received Distinguished Alumni Award from
Texas Woman's University, April 1983.
Who's Who of American Women, 13th Addition
(83-84).

E. Special Assignments of Faculty.

Barbara S. Hulka

Acting Chairperson, Department of
Epidemiology 9/15/82-6/30/83.
Chairperson, Department of Epidemiology
effective 7/1/83.

Michel A. Ibrahim

Appointed Dean of the School of Public
Health, September 15, 1982.

VI. SPECIAL PLANS, PROBLEMS, DEPARTMENTAL DISTINCTIONS,
DEVELOPING TRENDS, AND OTHER MATTERS OF IMPORTANCE.

This year has been one of transition with the appointments of Dr. Michal Ibrahim as Dean of the School of Public Health, effective September 15, 1983, and Dr. Barbara Hulka as Acting Chairperson of Epidemiology through June 30, 1982, and permanent Chairperson effective July 1, 1983. The Department continues to enjoy its national and international reputation as one of the leading institutions in the field of Epidemiology, but we have found, as anticipated, that because of the cutback of federal funding resulting in the lack of funding for new trainees, we are finding it more difficult to recruit students to our program.