

DEPARTMENT OF EPIDEMIOLOGY

ANNUAL REPORT

1980 - 1981

I. DEPARTMENT ORGANIZATION AND ADMINISTRATION

The Department is administered by the Chairman, assisted by the following committees:

Admission Committee, made up of directors of programs within the department, or their representatives. The Admission Committee screens all applicants, evaluates the strengths and weaknesses of each, and ranks applicants who are acceptable in order of priority. The Committee submits recommendation to the Chairman, who makes the final recommendation to the Graduate School for their approval.

The Committee of Full Professors serves in an advisory role to the Chairman regarding policy matters of the department and in decisions concerning faculty appointments and promotions. In addition, the Full Professors provide guidance to other faculty in order to promote development of new research ideas and in securing funds to support the research.

The Recruitment Committee was established in 1978 as the means for complying with the Equal Employment Opportunity and Affirmative Action regulations. The standing committee members include two regular faculty members (one being the Department's Equal Employment Opportunity Officer) and the Assistant to the Chairman. The "Floating" members are those faculty or administrative personnel directly involved in the recruitment process of the particular position.

Seminar Committee, chaired by a faculty member, invites suggestions for speakers from all faculty and students. The chairman of the committee invites these speakers and organizes the seminar schedule for each semester. Seminar activities are evaluated at the end of each semester by the entire faculty with participation from students.

General Faculty Meetings provide the entire departmental faculty with the opportunity to discuss curriculum, research, and other matters of importance. These meetings are scheduled monthly and are open to all students in the department. In addition, the faculty meets once a year for at least one day, away from the University premises, to discuss major issues pertaining to the department's future, organization, and goals.

The Administrative Staff meets weekly with the Chairman to review support services and staffing for the department, and to discuss future plans. The Administrative Staff consists of the Registrar, the Computer Services Manager, the Fiscal Manager, and the Assistant responsible for personnel and facilities.

II. INSTRUCTIONAL PROGRAMS

A. Courses and Curricula

1. Major Changes During the Year.

EPID 240: EPIDEMIOLOGY OF ALCOHOL USE AND ABUSE (3). Prerequisites, EPID 160 or equivalent. Course examines patterns of alcohol use and abuse nationally, internationally, and ethnically. Problems of definition, measurement and methodology are also considered and implications for health. Spring. Magruder-Habib.

EPID 168: FUNDAMENTALS OF EPIDEMIOLOGY (3). Pre- or Co-requisites, BIOS 105 or higher level BIOS course and biomedical background. Permission of instructor required. An introductory course in epidemiologic principles and methods with emphasis on topical issues and advanced research design and analysis. An alternate to EPID 160 for satisfying the School of Public Health core requirements. Ibrahim, Schoenbach, Faculty.

2. New Programs Being Planned or Deletions Made, Including Reasons for Adding or Dropping Programs.

Dr. Barbara Hulka was successful in obtaining a 5-year training grant in Cancer Epidemiology which has provided adequate support for a formal program for our faculty and students pursuing this area of interest. 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; and 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 information base and they will be assisted in developing research skills to formulate meaningful hypotheses and design feasible studies which they themselves can execute. The intent is to produce cancer epidemiologists who can assume leadership roles in epidemiologic studies, and provide knowledgeable consultative support to multidisciplinary cancer research with a primary focus in areas other than epidemiology.

A training grant application for a program in "Epidemiology Applied to Health Promotion" has been submitted. The proposed program would involve several new courses, revisions to a number of existing courses, and the addition of a seminar series to train students in epidemiologic aspects of health promotion/disease prevention with special emphasis on life style behaviors. A pilot course was offered this Spring in an effort to set the ground work for this program (See "Special Courses" below).

3. Honors Programs or Special Courses.

Special Course

HEALTH PROMOTION/DISEASE PREVENTION--AN EPIDEMIOLOGIC PERSPECTIVE (3). This pilot seminar course (offered through the "Problems in Epidemiology" course series) was offered on a trial basis as a possible forerunner of a new course in this area. Included consideration of theories of behavior and behavioral change, efficacy of intervention programs, practical and ethical concerns, and substantive reviews of several health promotion/disease prevention efforts. Spring. Schoenbach.

4. Participation in Interdepartmental or Interinstitutional Programs.

The Department of Epidemiology enjoys close collaborative associations with other departments, schools and institutions through research and teaching efforts. Within our School, the Department of Epidemiology is involved extensively with the Occupational Health Studies Group, the Lipids Research Clinics Program, and the Occupational Safety and Health Educational Research Center. Many of our research programs require the participation of an multidisciplinary faculty, some of which are drawn from within the School.

The School of Medicine has been a natural associate on a number of research and teaching pursuits. Of particular note are our involvement in the development of the Geriatrics Program (Dr. Kaplan) and our participation on the Robert Wood Johnson Clinical Scholars Program (Drs. Wagner, Hulka, Ibrahim, and others), and the Joint MD/MPH program.

Other Centers within the Division of Health Affairs, such as the Health Services Research Center, the Carolina Population Center, and the Cancer Research Center, draw upon our faculty to provide epidemiological expertise required in the conduct of their research. In the Health Services Research Center, many of our faculty serve as Research Associates and participate extensive in programs such as the "Evaluation of Rural Primary Health Care Programs," and "The Health Hazard Appraisal Study" (Drs. Wagner, Ibrahim, Schoenbach, and others). The Carolina Population Center has administered a number of programs sponsored by the WHO and AID for which Dr. Omran has played a leadership role. The Cancer Research Center has provided excellent facilities and faculty resources for many cancer programs. Dr. Hulka has been involved with a number of these programs including a Cancer Control Grant, an intrainstitutional activity for cancer control activities in North Carolina. She is currently cooperating with the CRC to develop a Cancer Epidemiology Program Area within the Center.

Our faculty have also been 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 is also common. Such activities are detailed in Section IV.

B. Enrollment.

1. Number of Graduate Students by:

a. <u>Degree</u>	<u>FALL</u>	<u>SPRING</u>
Ph.D.	32	33
M.P.H.	14	14
M.S.P.H.	13	10
b. <u>Race-Minority Status</u>		
Black Male	3	2
Black Female	2	2
White Male	27	28
White Female	17	15
Foreign Male	3	3
Foreign Female	4	4
Other Male*	2	2
Other Female**	1	1

*Asian or Pacific Islander		
**American Indian		
c. <u>In-State Residency</u>	29	28
d. <u>Out-Of-State Residency</u>	23	22
e. <u>Foreign Students</u>	7	7

2. Number of Degrees Awarded:

	<u>Ph.D.</u>	<u>M.P.H.</u>	<u>M.S.P.H.</u>
August 1980	4	1	0
December 1980	2	2	3
May 1981	1	2	0

3. Comments 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 exceptional ability in both academics and research 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 many career opportunities and are in great demand. The areas of Occupational Epidemiology and Cardiovascular Disease Epidemiology appear to be expanding and demanding trained epidemiologists specialized in these areas.

Recent graduates have secured positions or returned to positions in Federal Agencies such as the National Cancer Institute, the National Institute of Alcohol Abuse, and the Environmental Protection Agency. Medical Schools and Hospitals have employed some graduates as well as providing post-doctoral fellowship opportunities. Many graduates secure positions as research and/or teaching faculty in the University setting.

5. Minority Student Enrollment Efforts.

The Admissions Committee of the Department of Epidemiology, 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. We feel that these personal communications from faculty and students have contributed significantly to the progressive increases in both the number and academic credentials of minority members of our student body.

6. List Several of the Most Significant Achievements of Majors.

Naima AbdElghany gave a lecture on "Health Effects of Ionizing Radiation, Epidemiologic Aspects of Low Level Radiation Exposure" at an Occupational Medicine Seminar at Duke University Medical Center, December 2, 1980.

Naomar deAlmeida-Filho won the Brazilian Association of Psychiatry Award for 1980 with the paper "Relationships Between Parent's Mental Health and Emotional Disturbance in Children".

David Freedman made a presentation of his abstract published in Cardiovascular Disease Epidemiology Winter Newsletter, at the Cardiovascular Disease Epidemiology Training Grant Meeting.

Frank Hielema was reappointed to the Governor's Council on Physical Fitness and Health for a four year term. He was also a successful applicant for a National Center for Health Services Research Dissertation Grant Award in the amount of \$25,347.00 for his study, "Hip Fracture Outcome in Skilled Nursing Facilities".

Audrey Smith Rogers was a participant in a symposia on the Conjoint Practice of Internists and Nurse Practitioners, Pre-clinical Session, 62nd Annual Session of the American College of Physicians, Kansas City, Missouri, April 5, 1981.

Douglas Weed presented a paper at the Society for Epidemiological Research Student Workshop on Epidemiologic Methods, Minneapolis, Minnesota, June, 1980.

PUBLICATIONS BY STUDENTS:

deAlmeida-Filho, N.: "Prevalence Study of Child Mental Disorders in an Urban Area of Salvador, Bahia," Brazilian Journal of Psychiatry 12(2), 1980.

deAlmeida-Filho, N. and Cookfair, D.: "Class, Race, and Blood Pressure: A Critical Review of the Socioepidemiologic Literature," Medical Journal of Bahia 38(3), 1980.

deAlmeida-Filho, N.: "Development and Assessment of the QMPI - A Brazilian Children's Behaviour Questionnaire for Completion by Parents," Social Psychiatry 16(2), 1981.

Dawson, D., Blum, H.M., and Bartolucci, A.: Schizophrenia In Focus: A Psychosocial Approach to Treatment and Rehabilitation, Human Sciences Press, Division of Behavioral Publication, New York, In Press.

Dawson, D., Bartolucci, A., and Blum, H.M.: "Language and Schizophrenia: Towards a Synthesis," Comprehensive Psychiatry Journal, January-February, 1980.

Freedman, D.: "Abnormal Methionine Metabolism and Coronary Artery Obstruction," Abstract published in Cardiovascular Disease Epidemiology Winter Newsletter.

Guido, H.T.L., Goldsmith, D.F.: "Occupational Medicine in A Developing Society: A Case Study of Venezuela," Journal of Occupational Medicine 22:30-34, 1980.

Goldsmith, D.F., and Winn, D.M.: "Hazards with Snuff," (letter) Lancet i: 825, 1980.

Goldsmith, D.F., Smith A.H., and McMichael, A.J.: "A Case-Control Study of Prostate Cancer Among a Cohort of Rubber and Tire Workers," Journal of Occupational Medicine 22:533-541, 1980.

Goldsmith, D.F.: "Bias in the Risk Measure Illustrated by a Study of Saccharin Use and Bladder Cancer," (abstract) American Journal of Epidemiology 112:431, 1980.

Davis, C.E., Gordon, D.J., LaRosa, J., Wood, P.D.S., and Halperin, M., "Covolutions of Plasma HDL Cholesterol Levels with Other Plasma Lipid and Lipoprotein Concentrations," Circulation 62 (Supple. IV.): 24-30, 1980.

Hern, W.M., and Corrigan, B., "What About Us? Staff Reactions to D & E," Advances in Planned Parenthood 15:3-8, 1980.

Hern, W.M.: "Outpatient D & E Abortion Through 24 Weeks Gestation," Advances in Planned Parenthood 16, 1981 (In Press, April, 1981)

Hern, W.M.: "Midtrimester Abortion" In: Obstetrics and Gynecology Annual 1981, Ed.: R.M. Wynn, Appleton-Century-Crofts, New York, 1981, (In Press)

Hern, W.M.: "Discussion, Symposium on Methods of Second Trimester Abortion," In: Second Trimester Abortion: A Decade of Experience. Eds.: G. Berger, L. Keith, and W. Brenner, 1981 (In Press)

McCann, M.F., and Cole, L.P.: "Laparoscopy and Minilaparotomy: Two Major Advances in Female Sterilization," Studies in Family Planning 11(4): 119-127, April 1980.

Begum, S.F., Liao, W.C., McCann, M.F., and Ahmad, N.: "A Clinical Trial of NeoSampoon Vaginal Contraceptive Tablets," Contraception 22(6): 573-582, December 1980.

McCann, M.F.: "Breast-Feeding and Family Planning," Population Reports, (in preparation, scheduled for September 1981).

McLain, J.B., Hamilton, D.C. and Vig, P.S.: "Periosteal Tension and Long Bone Growth in Rats," International Association of Dental Research Abstracts, 1981.

Pasternak, L.R.: "Evaluation of State Mandated Scoliosis Screening in North Carolina," presented at Ambulatory Pediatrics Association and Society for Pediatric Research in San Francisco in April 1981.

Sandler, R.S., Drossman, D.A.: "Conservative Approach to the Diagnosis of the Irritable Bowel Syndrome," Internal Medicine for the Specialist 2:39-44, 1981.

Sandler, R.S., Wood, D.R. and Bozyski, E.M.: "Endoscopic Removal of a Granular Cell Tumor of the Esophagus," Gastrointestinal Endoscopy, In Press.

Sandler, R.S., and Lipper, S.: "Multiple Adenomas in Juvenile Polyposis," American Journal of Gastroenterology, In Press.

Sandler, R.S., Sartor, R.B. and Bozyski, E.M.: "Endoscopic Apperance of Cancer Metastatic to the Stomach," Journal of Clinical Gastroenterology, In Press.

Kinard, H.B., Powell, D.W. and Sandler, R.S.: "A Current Approach to Acute Upper Gastrointestinal Bleeding," Journal of Clinical Gastroenterology, In Press.

Nazum, C.T., Sandler, R.S., and Pualk, H.T.: "Thrombocytosis in in Whipple's Disease," Gastroenterology, In Press.

Lipper, S., Sandler, R.S., Kahn, L.B. and Varma, V.: "Multiple Juvenile Polyposis - A Study of the Pathogenesis of Juvenile Polyps and Their Relationship to Colonic Adenomas," Human Pathology, In Press.

Sandler, R.S., Orlando, R.C. and Bozyski, E.M.: "Failure of Clinical Criteria to Distinguish Achalasia Secondary to Cancer from Primary Achalasia," Digestive Diseases and Sciences, In Press.

Sandler, R.S., Varma, V. and Herbst, C.A.: "Late Effects of Colonic Radiation," (abstract) Gastroenterology, In Press.

Wood, D.R., Frakes, J.T., Levinson, S.C., Kinard, H.B., Jackson, A.L., Sandler, R.S. et al.: "A Prospective Study of Upper Gastrointestinal Bleeding," Gastroenterology (abstract), In Press.

Drossman, D.D., Sandler, R.S., McKee, D., Lovitz, A.: "Prevalence of Irregular Bowel Patterns in Healthy Young Adults," (abstract) Gastroenterology, In Press.

Wing, S. and Nanton, K.G.: "A Multiple Cause of Death Analysis of Hypertension-Related Mortality in North Carolina, 1968-1977," American Journal of Public Health, 1981, In Press.

C. Teaching Load of Faculty.

Fall 1980:

<u>Instructor</u>	<u>Course Number</u>	<u>Course Name</u>	<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>
Andjelkovich	EPID 140	Probs in Epid	1	1							6
Becker	EPID 160	Principles of Epid	156	149	1	3				1	3
	[Sec. 1, with others]										
	EPID 211	Determ. of Commun. Disease	4	4							2
Checkoway	EPID 140	Probs in Epid	3	2						1	VAR
	EPID 160	Principles of Epid	156	149	1	3				1	3
	[Sec. 1, with others]										
	EPID 168	Fundamentals of Epid [with others]	29	26		1		1		1	3
	EPID 394	Dissertation	1	1							0
Heiss	EPID 256	Cardio Disease Epid	18	17		1					3
	[with others]										
	EPID 392	Major Paper	2	2							VAR
Hulka	EPID 140	Probs in Epid	1	1							3
	EPID 160		156	149	1	3				1	3
	[Sec. 1, with others]										
	EPID 231	Res. Pers. Health Serv.	9	8		1					3
Ibrahim	EPID 160	Principles of Epid	156	149	1	3				1	3
	[Sec. 1, with others]										
	EPID 168	Fundamentals of Epid	29	26		1		1		1	3
	[Principal Instructor]										
	EPID 394	Dissertation	1	1							0

Fall 1980, continued:

Instructor	Course Number	Course Name	Total							Credit Hours		
			Enrolled	PHO	HU	EC	AS	GRO	MED		Other	
Kaplan	EPID 140	Probs in Epid	2	2							VAR	
	EPID 360	Research in Epid	7	7							3	
	EPID 392	Major Paper	1	1							3	
	EPID 394	Dissertation	4	4							VAR	
Magruder-Habib	EPID 160	Principles of Epid	43	42	1						3	
	[Sec. 2, with others]											
Omran	EPID 140	Probs in Epid	1	1							1	
	EPID 160	Principles of Epid	156	149	1	3				1	3	
	[Principal Instructor]											
	EPID 234	Research Design	5	5								2
	EPID 257	Teaching Exper in Epid	9	9								4
	EPID 392	Major Paper	1	1								2
EPID 394	Dissertation	1	1								9	
Patrick	EPID 140	Probs in Epid	1	1							2	
	EPID 160	Principles of Epid	38	38							3	
[Off-Campus HADM Program]												
Rudnick	EPID 140	Probs in Epid	1	1							3	
	EPID 168	Fundamentals of Epid	29	26		1				1	3	
	[with others]											
EPID 360	Research in Epid.	1	1									
Schoenbach	EPID 168	Fundamentals of Epid	29	26		1					3	
	[Co-Instructor]											

Fall 1980, continued:

<u>Instructor</u>	<u>Course Number</u>	<u>Course Name</u>	<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>
Slome	EPID 140	Probs in Epid	3	2						1	VAR
	EPID 160	Principles of Epid	43		42		1				3
	[Sec. 2, Principal Instructor]										
	EPID 256	Cardio Disease Epid	18	17		1					3
	[with others]										
Tyroler	EPID 160	Principles of Epid	156	149	1	3				1	3
	[Sec. 1, with others]										
	EPID 160	Principles of Epid	43		42		1				3
	[Sec. 2, with others]										
	EPID 168	Fundamentals of Epid	29	26		1		1		1	3
	[with others]										
Wagner	EPID 256	Cardio Disease Epid	18	17		1					3
	[Principal Instructor]										
	EPID 360	Research in Epid	1	1							3
	EPID 394	Dissertation	6	6							VAR
Wagner	EPID 360	Research in Epid	3	3							VAR
	EPID 392	Major Paper	1	1							6
	EPID 394	Dissertation	6	6							VAR
Williams	EPID 394	Dissertation	1	1							6

Spring 1981:

<u>Instructor</u>	<u>Course Number</u>	<u>Course Name</u>	<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>Course Hours</u>
Andjelkovich	EPID 394	Dissertation	1	1							3
Becker	EPID 141	Probs in Epid	3	3							VAR
Checkoway	EPID 162	Envr/Occup Health	85	53	13	3		4		12	3
	EPID 361	Research in Epid	1	1							3
	EPID 392	Major Paper	1	1							3
	EPID 394	Dissertation	2	2							VAR
Fletcher, R.	EPID 361	Research in Epid	1	1							2
	EPID 394	Dissertation	1	1							3
Fletcher, S.	EPID 141	Probs in Epid	4					4			2
Heiss	EPID 266	Epidem, Investigation	4	4							3
	[Principal Instructor] EPID 392	Major Paper	1	1							3
Hulka	EPID 233	Cancer Epid/Pathogenesis	9	7		1				1	3
	[Co-Instructor]										
	EPID 361	Research in Epid	2	2							VAR
	EPID 392	Major Paper	1	1							3
	EPID 394	Dissertation	1	1							3
Ibrahim	EPID 368	Commun. Health Serv.	22	21						1	2
	EPID 394	Dissertation	1	1							0

Spring 1981, continued:

<u>Instructor</u>	<u>Course Number</u>	<u>Course Name</u>	<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>Course Hours</u>
Kaplan	EPID 141	Probs in Epid	2	1		1					VAR
	EPID 264	Culture and Health	20	16		1		3			3
	EPID 361	Research in Epid	5	5							VAR
	EPID 392	Major Paper	1	1							3
	EPID 394	Dissertation	5	5							VAR
Kleinbaum	EPID 268	Advanced Methods in Epid	38	35		1		2			4
	EPID 240	Epid Alcohol Use/Abuse [Crosslisted as HADM 240]	6	5				1			3
Omrans	EPID 251	Epid Methods in Pop.	3	3							3
	EPID 361	Research in Epid	1	1							6
Patrick	EPID 170	Epid Program Accept.	10	9		1					3
Rudnick	EPID 233	Cancer Epid/Pathogenesis [co-Instructor]	9	7		1				1	3
	EPID 394	Dissertation	1	1							0
Schoenbach	EPID 141	Probs in Epid	4	3		1					1
Slome	EPID 266	Epidem. Investigation [with others]	4	4							3
	EPID 361	Research in Epid	2	2							VAR

Spring 1980, continued:

<u>Instructor</u>	<u>Course Number</u>	<u>Course Name</u>	<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>Course Hours</u>
Tyroler	EPID 141	Probs in Epid	1	1							3
	EPID 266	Epidem. Investigation	4	4							3
		[with others]									
	EPID 267	Occupational Epid	8	6	1					1	3
	EPID 361	Research in Epid	2	1						1	VAR
	EPID 394	Dissertation	6	6							VAR
Wagner	EPID 392	Major Paper	1	1							6
	EPID 394	Dissertation	6	6							VAR
Williams	EPID 258	Women's Health: Epid Anal.	11	11							3

III. RESEARCH PROGRAMS

A. Most Important Research Projects During the Year.

CANCER

Endometrial Cancer and Use of Exogenous Estrogen. A Case-referent study was designed to determine whether or not there is an association between the use of estrogen by women during or after menopause and cancer. Cases and referent women were identified from medical records at North Carolina Memorial Hospital. A third set of referent women was obtained from a community sample. Manuscripts are currently being prepared to report the results of the study. In conjunction with Duke University, the relationship between oral contraceptive use and breast cancer is underway.

Initiation of Water Quality and Colon Cancer Case Control. This project will initiate a case-control epidemiological investigation of the relationship between drinking water quality and colon cancer in North Carolina by identifying and recruiting 300 colon cancer cases and an equal number of control persons from hospital records in North Carolina. In order to do this, a number of approaches to such case findings will be evaluated and discussed in a final report.

CARDIOVASCULAR DISEASE EPIDEMIOLOGY

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. 4 abstracts have been submitted to the Society for Epidemiological Research and 4 to the American Public Health Association.

Effects of Contraceptive Steroids on Blood Pressure. In a study of 990 women attending Family Planning Clinics in southeastern 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.

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 result of the 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 still being conducted including studies of the relationship of total lipids, lipoprotein cholesterol and lipoprotein apoproteins to mortality.

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).

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, started in the winter of 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 mild, moderate and severe hypertensives have been designed to measure efficacy of a variety of modalities which promote adherence to therapeutic regimens. A randomized trial in an industrial sub-population is also planned to test the effectiveness of methods of hypertension control in an occupational setting. A second household survey will be conducted in the fifth year of the study to assess the impact for the various efforts of hypertension control on the community. Data from the original Prospect Hill Health Study will be used for control purposes. A second survey will be conducted in Prospect Hill to determine time trends which cannot be attributed to systematic intervention efforts.

The Prospect Hill Health Study. The Prospect Hill Health Study was an examination of hypertension and antihypertensive drug use with attention focused upon side effects and interactions. Data was gathered by survey techniques from a rural central North Carolina community. Analyses focused on hypertension prevalence, beliefs about hypertension and treatment patterns. Analyses have shown that in the Prospect Hill rural community, there is considerable life style modification being carried out by hypertensives. In particular, there are considerable attempts by known hypertensives to restrict their salt intake, to lose weight, and to reduce their diet. This study is now being used for control analyses in conjunction with the Edgecombe County High Blood Pressure Control Study.

Secular Trends in Mortality in North Carolina. Recent major decreases in total and cardiovascular mortality in adults is being experienced by all segments of the North Carolina population, blacks as well as whites. This exciting trend of approximately 2 to 3% reduction per year will be further investigated to distinguish possible causes.

N.C. Firefighters Survey of Cardiovascular and Pulmonary Disease. A respiratory and cardiovascular disease symptom questionnaire is being administered to North Carolina firemen. The objective is to relate prevalence rates to the extent of firefighting exposures. Data is being collected now, therefore no findings are available.

ENVIRONMENTAL AND OCCUPATIONAL

Analysis of Epidemiological Studies of Air Pollution--Health Effects. Sponsored by the U.S. Environmental Protection Agency, initiated in September 1977, this project has been examining the association between the prevalence of chronic disease in adults, incidence of acute respiratory disease in children, and area differences in lung function of children in relation to neighborhood air pollution concentration. Positive associations have been found between the higher indices of exposure to pollution and the prevalence of chronic respiratory disease, the incidence of acute respiratory disease and the development of lung function in children. The studies have indicated the suspended particulate matter and nitrogen dioxide may represent greater health hazards in this country than does sulfur dioxide.

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 seeks to evaluate existing environmental standards, to obtain health data for new standards, and to document health benefits of air pollution control. This program, originally contracted with EPA through the Institute for Environmental Studies, is now administered through this department. Health indicators studied included 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 are being submitted.

Cancer Risks in U.S. 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 U.S. Department of Energy, this study is being conducted in collaboration with the Oak Ridge Associated Universities (Oak Ridge, Tenn) and with other participating faculty from the Departments of Biostatistics and Environmental Sciences and Engineering. The 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.

The Florida Phosphate Industry Mortality Study. This study is designed to examine mortality patterns in relation to chemical and radiation exposures. The data are still being processed.

Research Support Services to Clinical Studies Branch, U.S. E.P.A.
The Environmental Protection Agency has contracted with the Department of Epidemiology to provide continuing service in the recruitment and provision of human subjects for physiologic research.

Cross-sectional Blood Survey at a Styrene-Butadiene Plant. This research was conducted in 1979 and the analysis has just been completed. Workers most heavily exposed to styrene and butadiene monomers (synthesized rubber chemicals) show slight depressions of red blood cell, platelet and leukocyte counts; there is also some evidence of macrocytosis.

Mortality Among Workers in an Industrial Rubber Products Plant, 1951-1977. Mortality patterns among workers in an industrial products plant are being analyzed. The cohort consists of 4,467 production workers who worked for at least one year in the plant under study during the period from January 1951 through December 1974. The follow-up is 94.5% complete with 244 persons considered to be lost to follow-up. Among those whose vital status has been ascertained, there are 3723 persons still living while 500 are known to have died during the 27 years of observation. Overall and cause-specific mortality analyses are presently underway with special emphasis on deaths attributed to blood dyscrasias because of earlier use of certain solvents within the plant under study.

Lung Cancer Among Rubber Workers. In order to evaluate the relationship between lung cancer mortality and specific occupational exposure, a case-control study was initiated at a large rubber and tire manufacturing plant. Four controls per case were selected, two of which were matched on age, race, and sex, while the other two were matched on these variables and on duration of employment as well. The analysis involves examination of detailed employment records to determine whether cases were more likely to have worked in specific areas within the industry which may have contained respiratory system carcinogens in the past. In addition, information on the major non-occupational risk factor, cigarette smoking, of the study subjects has been obtained by a mailed questionnaire. (For deceased study subjects, questionnaires were sent to the surviving kin). The overall response rate of 83.5% was achieved. For almost all of the 40 lung cancer cases included in this study, copies of all cytology findings and autopsy reports (if an autopsy was performed) have been obtained from hospitals where these deaths had occurred. Data are being analyzed at present.

Mortality of a Cohort of Rubber and Tire Workers. Retrospective cohort mortality studies of 24,961 workers, who worked for at least one year in a large rubber and tire plant during the period from January 1951 through December 1968, are being finalized. The period of observation covers a 21 year interval from January 1951 through December 1971. The follow-up of this cohort is 97.2% complete with 702 persons whose vital status at the closing date of the study had not been determined. There are 19,270 persons known to be alive on December 1971, while 4,989 persons have died during the period of observation and all these deaths have been confirmed by the death certificates. Overall and cause-specific mortality analyses are presently underway.

Mortality Surveillance in the Rubber Industry. Annual mortality experience of production workers in 48 plants within four rubber manufacturing companies was analyzed for 1978. All causes and cause specific mortality was analyzed in terms of standardized mortality ratios (SMR's) separately for each sex. Elevated SMR's were observed among males for deaths attributed to cancers of the digestive and respiratory systems. In contrast to our earlier reported findings from retrospective cohort mortality analyses, statistically significant excesses for deaths from lung cancer among males were found in several tire manufacturing plants.

MEDICAL CARE

Development of an Outpatient Functional Status Measure. Multi-disciplinary work begun in the fall of 1977 to develop a multi-dimensional health status index, the Duke-UNC Profile (DUHP), was concluded in the Spring of 1980. The DUHP is a 74 item index with 4 conceptually distinct health dimensions; symptom status, physical functioning, emotional functioning, and social functioning. Developmental work was completed on a random sample of approximately 400 patients who visited the Duke Family Medicine Outpatient Clinic over a 6 week period in the fall of 1978. The sample represented both males and females, blacks and whites, and persons of all ages and socioeconomic backgrounds. The research objective was to develop a functional health status measure of high reliability and validity for this (and presumably similar) populations of ambulatory patients. Manuscripts are currently being submitted reporting the results of these studies.

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.

The Health Hazard Appraisal Study. Health Hazard Appraisal (HHA) is a widely used strategy in health promotion and disease prevention. National mortality data and epidemiologic findings are applied to the individual characteristics of a subject in order to estimate the potential impact of those characteristics (e.g., smoking habits, alcohol intake, exercise patterns) on the individual's life expectancy. The risks and benefits of this approach to motivation are being studied in a randomized clinical trial in conjunction with faculty and staff at the University of Arizona and the UNC Health Services Research Center. In addition, program

faculty have been involved with colleagues at HSRC in a contract from the National Center for Health Services Research (NCHSR) to assess the scientific basis, efficacy, and application of HHA. An annotated bibliography, inventory of programs, reports of site visits to fifteen HHA programs, and draft final report were submitted to NCHSR. Experts in epidemiology, biostatistics, and health education attended a conference in Chapel Hill to review the draft report, which has been submitted in final form in March 1981.

The Organization, Utilization and Assessment of Primary Medical Care.

A collaborative study conducted in Fort Wayne, Indiana with the American Academy of Family Physicians assessed the relative effectiveness of various systems for delivering primary medical care. Two research strategies were used: a household survey which determined the factors which influence entry into the health care system and an indicator case model which measured the impact of medical care on the patients who have entered the system. The entire community of primary care physicians and their patients in Fort Wayne participated in the case model portion of the study which looked at four indicator conditions: pregnancy, infancy, diabetes mellitus and congestive heart failure. Methods of assessment were developed for various cure and care components of medical care including utilization, cost and convenience, physician performance, communication, patient compliance, physician awareness of patient concerns, patient attitudes towards physicians, and functional, symptomatic and disease status outcomes of care.

POPULATION STUDIES

The Arab Populations. Commissioned by the United Nations Fund for Population Activities (UNFPA), this project includes the production of a monograph on population problems and prospects in 20 North African and Middle Eastern countries. Using survey material and data collected from several international sources, the determinants and consequences of fertility trends are being examined. Demographic, social, economic and health profiles already have been formulated, and current health profiles already have been formulated, and current population policies of Arab countries are being documented. Long range objectives of the project are to enhance appreciation of the many dimensions of population issues and to encourage population planning. The project was completed in 1980 and results have been published by the UNFPA under the title: Population in the Arab World: Problems and Prospects.

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, multiparity, pregnancy while breastfeeding another child and illegal abortion. The project will clarify the basis for a health rationale in favor of family planning in both Moslem and Christian countries.

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.

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, socioeconomic development indicators, and family planning.

PSYCHOSOCIAL EPIDEMIOLOGY

Black Men--Their Lives and Their Health: A Social Epidemiological Investigation of Hypertension. A study was conducted 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. Formal data collection was preceded by an eight week participant-observation study of men in the area. The survey itself was begun on November 3, 1980, and was completed on February 5, 1981. Follow-up interviews of approximately 10 men are planned for the spring and summer months of 1981. Data have been keypunched and analysis plans have been outlined. Thus, no findings are available at this time.

Geriatrics Program. This program has been implemented in conjunction with the School of Medicine, and is interested in promoting functional capacity, successful aging, and the primary prevention of major ailments of the elderly, as well as the care of the elderly.

The Health of Women and Blacks. Two program faculty are currently involved in active research and teaching related to the psychosocial environment of women (Dr. Williams) and Blacks (Dr. James) as it influences health and health behavior. Their work emphasizes both the potential determinants of disease etiology among these groups and the factors associated with health-related behaviors.

Ponape Study of Health Consequences of Rapid Cultural Change. This project involved the development of a Gutterman-type scale of individual modernity among Ponapeans. This measure is associated with deleterious health indices, such as elevated blood pressure and blood lipids, and obesity, particularly among males in the most modern zone of Ponape.

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.

OTHER

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 Montoux test in populations in four sites: North Dakota, Michigan, Kentucky, and Texas. Field work is complete and analysis is in progress.

Incidence and Severity of Trauma in North Carolina. The feasibility study for a randomized sample of trauma patients entering one community and one referral hospital during 1978 was completed. A contractual agreement is under preparation for the study of trauma and burns in a random sample of community hospitals and all Level II and I hospitals in North Carolina.

Problems of Epileptics in North Carolina, England, and New Zealand. This project is still being analyzed. The findings raise the problems that epileptics have with the effects from the medications and how they influence their acceptance in society. This includes obtaining employment and the stigmatization by society. It appears this is a constant in all three countries mentioned regardless of the type of health services available in the countries.

The Simulation of Influenza Diffusion. Patterns of influenza transmission through populations of the U.S. are being studied in three past epidemics.

B. Research or Training Funds Received During the Year.
[Title; (Agency) Termination Date]

- Biomedical Scientific Research Support; (NIH, DRR) 11/30/81.
- Cancer Risk Among Atomic Workers; (ORAU) 09/30/81.
- Cardiovascular Epidemiology and Statistics; (NHLBI, NIH) 06/30/81.
- Clinical Environmental Research Support Services; (EPA) 02/12/82.
- Drinking Water Quality and Colon Cancer; (NIH, EHS) 01/31/82.
- Environmental Epidemiology; (NIEHS, NIH) 06/30/82.
- Family Formation and Family Health; (WHO) Ongoing.
- Pilot Evaluation Studies of High Blood Pressure Control; (NHLBI, NIH) 05/31/84.
- Community Health and Air Pollution; (EPA) 08/31/81.
- Occupational Safety and Health Education (Epidemiology Section); (Institute of Occupational Health and Safety) 06/30/81.
- Capitation Funds; (PHS, Bureau of Health Manpower, HRA) 09/30/81.
- Clinical Evaluation of Licensed Multiple Puncture Devices for the Administration of Tuberculin; (University of Kentucky) 06/30/81.
- Follow-up Study of Hypertensives in a Rural Community; (NIH, Division of Research Resources) 11/30/81.
- Cardiovascular and Pulmonary Disease in N.C. Firemen; (NIH, Division of Research Resources) 11/30/81.
- Follow-up Study of the Wake County Fertility, Family Planning and Health Opinion Survey; (NIH, Division of Research Resources) 11/30/81.
- Hip Fracture Outcomes in Skilled Nursing Facilities; (NCHSR-OASH) 08/31/81.
- Cancer Epidemiology Training; (NIH-NCI) 08/31/81.
- A Social Epidemiologic Investigation of Health Care Behaviors among Black Men; (Robert Wood Johnson Foundation) 08/31/81.
- Association of Breast Cancer and Estrogen Replacement Therapy; (Ayerst Laboratories) 06/30/81.

C. Notable Publications by Faculty.

Dragana Andjelkovich

(with P. Wolf, H.A. Tyroler, and A. Smith) "A Case-Control Study of Leukemia in the U.S. Rubber Industry," Journal of Occupational Medicine 23(2): 103-108, 1981.

Caroline Becker

(with G.G. Koch, I.G. Melvin, and H.M. Vandiviere) "Research Design for Clinical Evaluation of Multiple Puncture Devices for the Administration of Tuberculin," (ABSTRACT) American Review of Respiratory Disease, April 1980.

Suzanne Haynes

(with A.J. McMichael and H.A. Tyroler) "Survival After Early and Normal Retirement," Chapter in Second Conference on the Epidemiology of Aging, NIH Publication Number 8-969, pp. 187-203, 1980.

(with M. Feinleib), Editor, Second Conference on the Epidemiology of Aging, NIH Publication Number 80-969, 1980, pp. xvii + 387.

Gerardo Heiss

(with B.M. Rifkind, I. Tamir, R.B. Wallace, and H.A. Tyroler) "Distribution of High-density and Other Lipoproteins in Selected Lipid Research Clinics Prevalence Study Populations: A Brief Survey," Lipids 14: 105-112, 1979.

(with B. Christensen, C.E. Glueck, P. Kwiterovich, I. deGroot, G. Chase, R. Mowery, I. Tamir, and B.M. Rifkind) "Plasma Cholesterol and Triglyceride Distributions in Children and Adolescents," Pediatric Research 14: 194-202, 1980.

(with I. Tamir, C. Glueck, B. Christensen, P. Kwiterovich, and B. Rifkind) "Lipid and Lipoprotein Distributions in White Children Ages 6 to 17 Years. The Lipid Research Clinics Program Prevalence Study," Journal of Chronic Disease 34: 37-39, 1980.

(with O.D. Williams, R. Beaglehole, B. Dennis, T. Bazzarre, and H.A. Tyroler) "Hyperlipidemia and Nutrition: Data Base and Trends," Arteriosclerosis Reviews, R. Hegyeli (Ed.) 7: 145-156, 1980.

(with S. Heyden, A. Heyman, H.A. Tyroler, C.G. Hames, V. Patzschke, and C. Manegold) "Cardiovascular Mortality in Transient Ischemic Attacks," Stroke 11: 252-255, 1980.

(with H.A. Tyroler, G. Schonfeld, G. Cooper, S. Heyden, and C.G. Hames) "Lipoprotein Apoproteins A-I, A-II, and C-II in Black and White Residents of Evans County, GA.," Circulation 62: 249-254, 1980.

(with W.G. Haskell, R.L. Mowery, M. Criqui, M. Brockway, and H.A. Tyroler) "High Density Lipoprotein Cholesterol and Socioeconomic Status: The Lipid Research Clinics Program Prevalence Study," Circulation 62 (Suppl. IV): 108-115, 1980.

(with M.Y. Criqui, R.B. Wallace, M. Mishkel, G. Schonfeld, and G.T.L. Jones) "Cigarette Smoking and Plasma High Density Lipoprotein Cholesterol. The Lipid Research Clinics Program Prevalence Study," Circulation 62 (Suppl. IV): 70-76, 1980.

(with N.J. Johnson, S. Reiland, C.E. Davis, and H.A. Tyroler) "The Epidemiology of Plasma High Density Lipoprotein Cholesterol Levels. The Lipid Research Clinics Program Prevalence Study," Circulation 62 (Suppl. IV): 116-136, 1980.

Barbara Hulka

(with W.C. Fowler, D.G. Kaufman, R.C. Grimson, B.G. Greenberg, C.J.R. Hogue, G.S. Berger, and C.C. Pulliam) "Estrogen and Endometrial Cancer: Cases and Two Control Groups from North Carolina," American Journal of Obstetrics and Gynecology 137: 92-101, 1980.

(with F.J. Romm) "Peer Review in Diabetes and Hypertension: The Relationship Between Care Process and Patient Outcome," Southern Medical Journal 73: 564-570, 1980.

(with F.J. Romm, and L.W. Kelly) "Internists' Perceptions and Performance in Office Practice," Southern Medical Journal 73: 405-410, 1980.

(with F.J. Romm) "Developing Criteria for Quality of Care Assessment: Effect of the Delphi Technique," Health Services Research 14 (4): 309-312, 1979.

"Effect of Exogenous Estrogen on Postmenopausal Women: The Epidemiologic Evidence," Obstet. and Gynecol. Survey (Supplement) 35(6): 390-399, 1980.

(with R.C. Grimson, B.G. Greenberg, D.G. Kaufman, W.C. Fowler, C.J.R. Hogue, G.S. Berger, and C.C. Pulliam) "'Alternative' Controls in a Case-Control Study of Endometrial Cancer and Exogenous Estrogen," American Journal of Epidemiology 112(3): 376-387, 1980.

(with F.J. Romm, G.R. Parkerson, I.T. Russell, N.E. Clapp, and F.S. Johnson) "Peer Review in Ambulatory Care: Use of Explicit Criteria and Implicit Judgements," Supplement to Medical Care 17(3), 1979.

(with D.G. Kaufman, W.C. Fowler, R.C. Grimson, and B.G. Greenberg)
 "Predominance of Early Endometrial Cancers After Long-term Estrogen Use," JAMA 244(21): 2419-2422, 1980.

Book Review of Color Atlas of Cancer Mortality By Administrative and Other Classified Districts in Taiwan Area: 1968-1976, by Kung-Pei Chen, Hsign-Ying Wu, Ching-Chuan Yeh and Yu-Jan Cheng. Annals of Internal Medicine 92(3): 456, 1980.

Ibrahim, Michel A.

"Epidemiology: Application to Health Services," Chapter in: Education for Health Services Administration. McCutchin Publishing Corporation, In Press, 1981.

"An Epidemiologic Perspective in Health Services Research," Chapter in: Social Science Approaches to Health Services Research, In Press, 1981.

"Polymyositis: Opportunities for Epidemiologic Research," Proceedings of the International Conference on Arthritis and Rheumatic Diseases, In Press, 1981.

(with B.H. Kaplan, R.C. Patrick, C. Slome, H.A. Tyroler, and R.N. Wilson)
 "The Legacy of John C. Cassel," American Journal of Epidemiology 112(1): 1-7, 1980.

Sherman A. James

(with G.R. Parkerson, S.H. Gehlbach, E.H. Wagner, N.E. Clapp and L.H. Muhlbaier) "The Duke-UNC Health Profile: An Adult Health Status Instrument for Primary Care," Medical Care, In Press, 1981.

Berton H. Kaplan

(with J.C. Cassel, and S. Gore) "Social Support and Health," Chapter in: Patients, Physicians, and Illness, a Source Book in Behavioral Science and Health. (E.G. Jaco, Ed.) The Free Press, 34d ed., 1979

(with W. Gentry, C.D. Jenkins, and A. Heyman) "Type A Behavior Pattern and Ischemic Cerebrovascular Disease," Heart and Lung 8(6): 1113-1116, 1979.

(with D. Blazer) "Developing Health Care that Serves Families," Chapter in: Families and Older Persons, Duke University Center for the Study of Aging and Human Development, Durham, 1980.

(with M.A. Ibrahim, R.C. Patrick, C. Slome, H.A. Tyroler and R.N. Wilson)
 "The Legacy of John C. Cassel," American Journal of Epidemiology 112(1): 1-7, 1980.

Gory J. Love

(with C.M. Shy) "Recent Evidence on the Human Health Effect of Nitrogen Dioxides," in: Nitrogen Oxides and Their Effects on Health, (S.D. Lee, Ed.), Ann Arbor Science, 1980.

Abdel Omran

"Acceptability Dynamics of Male and Female Sterilization," Chapter in: Voluntary Sterilization: A Decade of Achievement. (M.E. Schima and I. Lubell, Eds.) The Association for Voluntary Sterilization, New York, 1980, pp. 26-36.

"Human Fertility and Population Change," Chapter in: Human Reproduction: Conception and Contraception. (E.S.E. Hatez, Ed.) Harper and Row, Hagerstown, Maryland, 1980.

"Epidemiologic Transition in the United States: The Health Factor in Population Change," Population Bulletin 32(2), Washington, D.C., Population Reference Bureau, Inc., May 1980, 47 pp.

Population in the Arab World: Problems and Prospects. United Nations Fund for Population Activities, New York, 1980, pp. xxii + 215.

"The Epidemiologic Transition Theory," A Concise Account for the International Encyclopedia of Population, New York, McGraw-Hill, In Press, 1980.

"The Epidemiologic Transition in the United States," A Concise Account for the International Encyclopedia of Population, New York, McGraw-Hill, In Press, 1980.

Ralph Patrick, Jr.

(with M.A. Ibrahim, B.H. Kaplan, C. Slome, H.A. Tyroler, and R.N. Wilson) "The Legacy of John C. Cassel," American Journal of Epidemiology 112(1): 1-7, 1980.

Seth A. Rudnick

(with M.S. Kramer, T.A. Hutchinson, J.M. Leventhal, and A.R. Feinstein) "Operational Criteria of Adverse Drug Reactions in Evaluating Suspected Therapeutics," Clinical Oncology and Experimental Therapeutics 27:149-155, 1980.

(with A.R. Feinstein) "A Critical Analysis of the Reporting of Results in Lung Cancer Trials," Journal of the National Cancer Institute 64: 1337-1343, 1980.

(with P. Aronin, S.M. Mahaley, R. Selker, and J. Donahue) "Predicting BCNU Pulmonary Toxicity - A Multivariate Analysis of Risk Factors," New England Journal of Medicine 303: 183-188, 1980.

(with L. Kahn, and S. Nunnery) "Breast Carcinoma Metastatic to Meningioma," Archives of Pathology and Laboratory Medicine 104: 392-393, 1980.

(with D. Gaddy, C. McMillan, and S. Lipper) "Burkitt-Type Lymphoma at the North Carolina Memorial Hospital," North Carolina Journal of Medicine 42(1): 29-34, 1981.

Carl M. Shy

(with R.J. Struba) "Epidemiologic Evidence for Human Cancer Risk Associated with Organics in Drinking Water," Chapter 89 in: Water Chlorination, Environmental Impact and Health Effects, Vol. 3 (R.L. Jolley, W.A. Brungs, and R.B. Cummings, Eds.) Ann Arbor Science Publishers, Ann Arbor, Michigan, 1980, pp. 1029-1042.

Cecil Slome

(with M.A. Ibrahim, B.H. Kaplan, R.C. Patrick, H.A. Tyroler and R.N. Wilson) "The Legacy of John C. Cassel," American Journal of Epidemiology 112(1): 1-7, 1980.

(with E.H. Wagner and J.T. Warner) "Medical Care Use and Hypertension," Medical Care 18: 1241-1250, 1980.

(with E.H. Wagner, R.A. Truesdale, and J.T. Warner) "Compliance, Treatment Practices and Blood Pressure Control: Community Findings," Journal of Chronic Disease, 1981, In Press.

Victor Schoenbach

(with B.H. Kaplan, E.H. Wagner, R.C. Grimson, and J.R. Udry) "Depressive Symptoms in Young Adolescents," American Journal of Epidemiology 112(3): 440, 1980. (Abstract)

H.A. Tyroler

(with A.H. Smith, and R.J. Waxweiler) "Epidemiologic Investigation of Occupational Carcinogenesis Using a Serially Additive Expected Dose Model," American Journal of Epidemiology 112(6): 787-797, 1980.

(with D.C. Deubner, W.E. Wilkinson, M.J. Helms and C.G. Hames) "Logistic Model Estimation of Death Attributable to Risk Factors for Cardiovascular Disease in Evans County, Georgia," American Journal of Epidemiology 112: 135-143, 1980.

(with A. Heyman, W.E. Wilkinson, S. Heyden, M.J. Helms, A.G. Bartel, H.R. Karp, and C.G. Hames) "Risk of Stroke in Asymptomatic Persons with Cervical Arterial Bruits - A Population Study in Evans County, GA.," New England Journal of Medicine 302(15): 838-841, 1980.

(with S.T. Halfon, Y. Friedlander, G. Halperin, S. Harlap, B.H. Dennis, M.H. Moore, R.L. Mowery, and O.D. Williams) "Plasma High-density Lipoprotein Cholesterol, Total Cholesterol, and Triglyceride Levels in 17-Year-Old Jewish Residents of Jerusalem: A Preliminary Report," Circulation 62 (Supplement IV): 93-99, 1980.

"Epidemiology of Plasma High-Density Lipoprotein Cholesterol Levels: The Lipids Research Clinics Program Prevalence Study, Introduction," Circulation 62 (Supplement IV): 1-3, 1980.

(with C.J. Glueck, B. Christensen, and P.O. Kwiterovich) "Plasma High-density Lipoprotein Cholesterol Comparisons in Black and White Populations," Circulation 62 (Supplement IV): 99-107, 1980.

"Hypertension," Chapter in: Public Health and Preventive Medicine (J.M. Last, Ed.,) Appleton-Century-Crofts, New York, 11th Edition, 1980, pp. 1202-1227.

(with Lipid Metabolism Branch, National Heart, Lung and Blood Institute, LRC) "The Lipid Research Clinics Population Studies Data Book: Volume 1: The Prevalence Study," NIH Pub. No. 80-1527, 1980, pp. 136.

(with the Committee for Planning Study for an Ongoing Study of Costs of Environmental-Related Health Effects) "Costs of Environmental-Related Health Effects: A Plan for Continuing Study," Institute of Medicine National Academy Press, Washington, D.C., January, 1981, pp. 1-167.

(with G. Heiss, G. Schonefeld, G. Cooper, S. Heyden, and C.G. Hames) "Apolipoprotein A-I, A-II, and C-II in Black and White Residents of Evans County, GA.," Circulation 62: 249-254, 1980.

(with P. Wolf, D. Andjelkovich, and A. Smith) "A Case-Control Study of Leukemia in the U.S. Rubber Industry," Journal of Occupational Medicine 23(2): 103-108, 1981.

(with A.J. McMichael and S. Haynes) "Survival After Early and Normal Retirement," Chapter in: Second Conference on the Epidemiology of Aging, NIH Pub. No. 8-969, pp. 187-203, 1980.

(with G. Heiss, B.M. Rifkind, I. Tamir, and R.B. Wallace) "Distribution of High-density and Other Lipoproteins in Selected Lipid Research Clinics Prevalence Study Populations: A Brief Survey," Lipids 14: 105-112, 1979.

(with G. Heiss, O.D. Williams, R. Beaglehole, B. Dennis and T. Bazzarre) "Hyperlipidemia and Nutrition: Data Base and Trends," Arteriosclerosis Reviews, (R. Hegyeli, Ed.) 7: 145-156, 1980.

(with G. Heiss, S. Heyden, A. Heyman, C.G. Hames, V. Patzschke, and C. Manegold) "Cardiovascular Mortality in Transient Ischemic Attacks," Stroke 11: 252-255, 1980.

(with G. Heiss, W.G. Haskell, R.L. Mowery, M. Criqui, and M. Brockway) "High-density Lipoprotein Cholesterol and Socioeconomic Status: The Lipid Research Clinics Program Prevalence Study," Circulation 62 (Supplement IV): 108-115, 1980.

(with G. Heiss, N.J. Johnson, S. Reiland, and C.E. Davis) "The Epidemiology of Plasma High Density Lipoprotein Cholesterol Levels. The Lipid Research Clinics Program Prevalence Study," Circulation 62 (Supplement IV): 116-136, 1980.

(with M.A. Ibrahim, B.H. Kaplan, R.C. Patrick, C. Slome, and R.N. Wilson) "The Legacy of John C. Cassel," American Journal of Epidemiology 112(1): 1-7, 1980.

Edward H. Wagner

(with J.T. Warner, C. Slome) "Medical Care Use and Hypertension," Medical Care 18: 1241-1250, 1980.

(with R.A. Truesdale, C. Slome, and J.T. Warner) "Compliance, Treatment Practices and Blood Pressure Control: Community Findings," Journal of Chronic Disease, 1981, In Press.

(with G.R. Parkerson, S.H. Gehlbach, S.A. James, N.E. Clapp, and L.H. Muhlbaier) "The Duke-UNC Health Profile: An Adult Health Status Instrument for Primary Care," Medical Care, 1981, In Press.

Carolyn A. Williams

"The Nature and Development of Conceptual Frameworks," Chapter 5 in: Issues in Nursing Research, (F.S. Downs and J.W. Fleming, Eds.), New York: Appleton-Century-Crofts, 1979, pp. 89-106.

D. Papers Presented by the Faculty.

Caroline Becker

(with McLeroy, K, Parker, C., Mulvihill, F., and Toole, J.F.)
"Age and Severity at Onset of First Stroke Episode in Two Time Periods in Rural North Carolina," presented at American Public Health Association, Detroit, Michigan, October 19-23, 1980.

Suzanne G. Haynes

"Women, Work and Coronary Heart Disease," presented at the NIH Research Conference: Women: A Developmental Perspective, November 20-21, 1980, Bethesda, Maryland.

"Type A Behavior and Coronary Heart Disease in the Framingham Study," presented to the Laboratory of Physiological Hygiene, September 8-9, 1980, Minneapolis, Minnesota.

Gerardo Heiss

(with H.A. Tyroler) "The Epidemiology of the High Density Apolipoproteins," presented at the XII World Congress of Angiology, Athens, Greece, September 1980.

Barbara S. Hulka

"Breast Cancer and Exogenous Estrogens: The Epidemiologic Evidence," presented at the Society for Study of Breast Disease Annual Meeting, April 19, 1980.

"General Issues in Quality Assessment," presented at Conference on Health Planning and Policy Analysis, George Washington University, Washington, D.C., May 9, 1980.

(with Phillips, J.M., Hulka, J.F., and Corson, S.L.)
"The 1979 American Association of Gynecologic Laparoscopists Membership Survey," presented at the American Association of Gynecologic Laparoscopists meeting, November 1980, New Orleans, Louisiana.

"Risk Factors for Cervical Cancer," presented at the Consensus Meeting of the National Cancer Institute on the Role of Cervical Cytology in Screening: The Pap Smear, Bethesda, Maryland, July 23-25, 1980.

Michel A. Ibrahim

"Epidemiology of Polymyositis," presented at the National Conference on Arthritis and Rheumatic Diseases, Washington, D.C., September 24-26, 1980.

(with G.H. Payne) "Epidemiologic Analysis in the Evaluation of High Blood Pressure Control Programs," presented at the American Public Health meeting, Detroit, Michigan, October 20-23, 1980.

(with L.M. Cutchin) "Incorporation of High Blood Pressure Control Programs in a Medical Practice: The Edgecombe County High Blood Pressure Project," presented at the National Conference on High Blood Pressure Control, New York, New York, May 3-5, 1981.

Sherman A. James

(with E.C. Jensen, W.T. Boyce, and S.A. Hartnett) "The Development and Validation of an Inventory to Measure Family Routines," presented at the Annual Convention of the American Psychological Association, September 1-5, 1980, Montreal, Canada.

(with B.A. Rouse) "Feelings of Inadequacy and Alcohol Consumption," presented at the Annual Convention of the American Psychological Association, September 1-5, 1980, Montreal, Canada.

Abdel R. Omran

"Population Dynamics and Fertility Parameters: A Review for Physicians," presented at the International Symposium on I.U.D. Technology, July 3-4, 1980, Bordeaux, France.

(with R.P. Bernard) "Monitoring of Risk Groups for Improved Maternity Care," presented at the Proceedings of the IX World Congress of Gynecology and Obstetrics, Tokyo, October 25-31, 1980.

(with K.F. Omran) "Adolescent Fertility: An International Experience with Teenage Pregnancy," presented at the Conference of The Problems of Muslim Youth in the Muslim World, International Islamic Center for Population Studies and Research, Al-Azhar University, Cairo, Egypt, March 30-April 3, 1981.

"Contra-indications to Pregnancy - Age, Parity, Disease, Nutrition, Economic Hardship, Mental Health," presented at the Symposium on Contraceptive Use in Developing Nations, February 2-4, Cairo, Egypt.

"Acceptability Dynamics of Male and Female Sterilization: A Decade of Achievement," presented at Proceedings of IV International Conf. on Voluntary Sterilization, May 7-10, 1980, Seoul, S. Korea.

Seth A. Rudnick

(with Capizzi, R.L., Griffin, F., Cheng, Y.C., Bailey, K.)
 "High Dose Ara-C with Asparaginase (A'ase) in the Treatment of
 Refractory Leukemia," AACR Abstract 21: 148, 1980.

(with Neijstrom, E.S., Capizzi, R.L., Rausch, P.G., Varia, M.,
 et al.) "High Dose Methotrexate (HDMTX) with Leukovorin
 Rescue (LR) for CNS Prophylaxis in Patients with Small Cell
 Lung Cancer (SCLC)" ASCO Abstract 21: 456, 1980.

(with Keefe, D.A., Capizzi, R.L., and Newsome, J.) "Inter-
 action Between Dose and Duration of Exposure as Determinants
 of Methotrexate (MTX) Cytotoxicity for L5178Y Murine Leukemic
 Cells," Accepted, AACR Abstract, 1981.

(with Tremont, S., Staab, E., Raymong, R., and Capizzi, R.L.)
 "Evaluation and Therapy of Adenocarcinoma of Unknown Primary"
 Accepted, ACUP-AACR Abstract, 1981.

(with Neijstrom, E., Delaney, D. and Capizzi, R.L.) Metho-
 trexate (MTX) vs. Methotrexate-Asparaginase (MTX A'ase) in
 Non-Small Cell Lung Cancer (NSCLC)" Accepted, ASCO Abstract,
 1981.

(with Sandler, R.S., Varma, V., Herbst, C.A., Montana, G.S.,
 and Fowler, W.C.) "Late Colonic Effects of Pelvic Irradiation"
 Accepted, AGA Abstract, 1981.

Victor Schoenbach

"Depressive Symptoms in Young Adolescents," presented at the
 Society for Epidemiologic Research, Minneapolis, Minnesota,
 June 1980.

"Description, Analysis and Assessment of Health Hazard
 Appraisal Programs," (with Berry, W., Wagner, E., Graham, R.,)
 presented at the Society of Prospective Medicine, Tucson,
 Arizona, October, 1980.

Tyroler, H.A.

(G. Heiss, W. Haskell, R. Mowery, M. Criqui, P. Wohl, J. Hooper,
 H.A. Tyroler) "High Density Lipoprotein Cholesterol (HDL-C)
 Levels Associated with Socioeconomic Status: The LRC Program,"
 presented at the Society for Epidemiologic Research, June 1980.

(with Barret-Connor) "Epidemiology of HDL-C Mortality
 Follow-Up Study: The LRC Program," presented at the Society for
 Epidemiologic Research, June 1980.

(S. Wing, R. Aubert, C. Hames, J. Hansen, C. Slome and H.A. Tyroler)
 "Isolated Systolic Hypertension in Evans County," presented at
 Society for Epidemiologic Research, June 1980.

"Plasma High Density Lipoprotein Cholesterol in 40-59 Year Old Male Residents of Moscow and Leningrad," presented at the 1st Joint US-USSR Lipoprotein Symposium in Leningrad, USSR, May 1981.

"Correlates of High Blood Pressure in the US Lipids Research Clinics Populations," presented at the 3rd Joint US-USSR Symposium on Hypertension, Washington, D.C., May 1981.

Edward H. Wagner

"Audit in the United States: Successes and Failures," presented at the Welsh National School of Medicine, Cardiff, Wales, November 12, 1980.

Carolyn A. Williams

"Community Health Nursing: An Historical Perspective," presented to the faculty, graduate students, and guests of the Program in Public Health Nursing, School of Public Health, University of Minnesota, Minneapolis, Minnesota, February 2, 1981.

"Primary Care and the Cost Dilemma: A Case for Nurse Practitioners," presented at the Bush Institute, Frank Porter Graham Child Development Center Seminar Series, April 1981.

E. Special Equipment Purchased During the Year.

The Department has expanded its computer capabilities into the Word-Processing area by purchasing one Diablo 1650 printer/terminal.

IV. PUBLIC SERVICE

A. List of activities by faculty member participating and/or name of program.

Caroline Becker

School of Public Health Activities:

- Member, Administrative Board of the School of Public Health, September 1978-August 1983.
- Member, Committee to Evaluate the BSPH Program, December 1978-1980.
- Member, Program Committee, School of Public Health Alumni Association, 1976-
- Member, Division of Community Health Service Advisory Committee, 1979-
- Member, SPH Institutional Review Board on Research Involving Human Subjects, 1979-1982.
- Member, Service Task Force, Self-Study Committee, 1979-1980.
- Member, Search Committee for Chairman of Department of Parasitology and Laboratory Practice, 1980.

Greater University Activities:

- Elected Secretary-Treasurer, Elisha Mitchell Scientific Society, April 1979-
- Member, Board of UNC-CH Faculty Club, 1979-1982.
- Membership Chairman, Association for Women Faculty, 1980-1981.

Activities at the State Level:

- Consultant, American Heart Association - North Carolina Affiliate, in various research projects and standing committees.
- President, Board of Home Health Agency of Chapel Hill, Inc., 1979-1982.

Activities at the National Level:

- Member, the Johns Hopkins University National Alumni Schools Committee, 1979-
- Coordinator, Joint Center for Disease Control/Association of Schools of Public Health Epidemic Field Investigations, 1980-

Harvey Checkoway

Short Courses:

- Occupational Safety and Health Educational Resource Center, Short Course on Epidemiology at Summer Institute, Wilmington, North Carolina, July, 1980.

School of Public Health Activities:

- Served on Self-Study Committee.

Greater University Activities:

Department of Family Medicine Educational Development
Program Participant.

Activities at the National Level:

NIOSH Educational Research Center Steering Board
Member.

Suzanne Haynes

Department Activities:

Qualifying Examination Committee Member.

Activities at the National Level:

Member, Biometry and Epidemiology Contract Review
Committee, National Cancer Institute.
Fellow and Executive Committee Member, Council of
Epidemiology of the American Heart Association.
Editor, Journal of Gerontology, Social Science Section.
Fellow, Academy of Behavioral Medicine.

Gerardo Heiss

Greater University Activities:

Presenter, Department of Medicine Grand Rounds (Decline
in Cardiovascular Mortality in the United States).

Activities at the National Level:

Member, Lipid Research Clinics Program (LRC), Epidemiology
Committee.
Member, Lipid Research Clinics Epidemiology Analysis
Executive Committee.
Member, Lipid Research Clinics Cardiovascular Analysis
Liaison Group.

Activities at the International Level:

Member, Lipid Research Clinics Jerusalem Steering
Committee.

Barbara S. Hulka

Department Activities:

EPID 258 - Gave lecture on Health Effects of Estrogens.
Member of Admissions Committee
Chairman, Qualifying Examination Committee.
Presentation of Epidemiology Departmental Seminar on
"Consensus Meeting for Estrogens and Menopausal Women,
January 16, 1980.

School of Public Health Activities:

Member of Committee on Appointments and Promotions.
Made presentation for Department of Nutrition's Continuing
Education Program.

Greater University Activities:

- Participated in Clinical Epidemiology Course for 2nd year medical students at UNC.
- School of Pharmacy - Member, Pharmacy Administration Board. Lectured at School of Pharmacy for 100th Anniversary, February 12, 1981.
- Presentation on "Methods of Evaluating Ambulatory Care" at the Health Services Research Center, March 24, 1980.

Activities at the State Level:

- Gave American Cancer Society presentation on screening for cancer for medical students throughout the State.
- Spoke at Veterans Administration Hospital in Fayetteville on "Evaluating Quality of Medical Care", November 5, 1980.

Activities at the National Level:

- Member of the Board of Scientific Counselors for Division of Resources Center and Community Activities - National Cancer Institute.
- National President of Delta Omega.
- Member of Epidemiology and Disease Control Study Section for the National Institutes of Health.
- Participant in Diabetes Workshop for National Institutes of Health, June, 1980, Washington, D.C.
- Member of Study Group for the NICHD Five-Year Research Plan: Contraceptive Evaluation Branch.
- Consensus Meeting - National Cancer Institute on Role of Cervical Cytology in Screening; Gave paper on Risk Factors for Cervical Cancer.
- Presentation and Debate with Dr. Alvin Feinstein at the Sydenham Society, Washington, D.C., May 9, 1980, "Do Estrogens Cause Endometrial Cancer vs. Detection Bias".

Activities at the International Level:

- Trip to China - gave three presentations to Chinese doctors in Peking, Shanghai and Nanking on Estrogen and Endometrial Cancer in association with the American Association of Gynecological Laparoscopists.

Michel A. Ibrahim

Greater University Activities:

- Member, Administrative Board, UNC School of Medicine
- Member, Occupational Health Studies Group Policy Board.

Activities at the State Level:

- Member, Board of Directors, North Carolina Heart Association.

Activities at the National Level:

Consultant, National Cancer Institute.
Consultant, National Institute for Aging.
Editorial Consultant, Journal of Chronic Disease.
Chairman, Editorial Board, American Journal of Public Health.
Member, American College of Epidemiology Board of
Directors.
Member, Editorial Advisory Board on the Family Medicine
Review.

Activities at the International Level:

Member, U.S.-Egypt Joint Working Group on Health
Cooperation, DHEW Development of Health Services Sub-
committee
Consultant, WHO, Ben Gurion University, Beersheva, Israel.
Member of the International Epidemiological Association.
Exchange Program Representative and Consultant, University
of Rostock, East Germany.

Sherman A. James

Activities at the National Level:

NIMH Epidemiologic Services Research and Review
Committee.

Berton H. Kaplan

Short Courses:

Participation in short course at IBM on job stress.

Greater University Activities:

Chairman, Aging Program's Seminar Series Project.

Activities at the National Level:

Member, Institute of Medicine, National Academy of
Sciences panel on the 60 Year Mandatory Retirement
Age Study, commissioned by the United States Congress.

Abdel Omran

Department Activities:

Admissions Committee Member.
Member, Qualifying Examination Committee.
Population Epidemiology Program.

School of Public Health Activities

Chairman, Biomedical Sciences Research Support Funds
Committee.
Member, International Health Committee.
Chairman, Committee for Reappointment of Chairman of the
Department of Health Administration.

Greater University Activities:

Fellow, Carolina Population Center.
Member, Training Program Committee, Carolina Population Center.

Activities at the International Level:

Director, WHO Collaborative Center for Epidemiologic Studies in Human Reproduction.
Consultant, World Bank, UNFPA, IFRP
Member, Scientific Committee, IFRP
Member, Scientific Council, International Association for Maternal and Neonatal Health.
World Health Organization, Geneva: Conducted workshop on Research Design in Human Reproduction, March, 1981.

Seth A. Rudnick

Department Activities:

Qualifying Examination Committee.

Greater University Activities:

Long Range Planning Committee for Cancer Center.
Chairman, Tumor Registry Committee.

Activities at State Level:

Board of Directors American Cancer Society - North Carolina.
Professional Educational Committee - American Cancer Society, North Carolina.

Activities at the National Level:

Ad Hoc site visitor National Cancer Institute for Cancer Center Program.

Victor Schoenbach

Short Courses:

Two Seminars as part of Clinical Scholars Training Program.
One-day seminar for IBM physicians, November 20, 1980.

Department Activities:

Qualifying Examination Committee.
Developed an improved computer program for epidemiologic stratified analysis (STRAT2). The program has been used by departmental students and faculty.

Greater University Activities:

Presentation to the staff of the Health Education Unit of the Student Health Services.
Proposal review for Health Services Research Center Health Promotion/Disease Prevention program.

Carl M. Shy

(on leave)

Cecil Slome

Short Courses:

Department of Family Medicine course on Principles of Public Health Practice.

Greater University Activities:

Department of Family Medicine - participated in teaching course in Research Methods for Family Medicine Fellowship Program.

Activities at the State Level:

Member of Professional Advisory Board of Epilepsy Association of North Carolina.

H.A. Tyroler

Short Courses:

American Occupational Medical Association-National Heart, Lung, and Blood Institute short course in Occupational Epidemiology.

Department Activities:

Admissions Committee Member.

School of Public Health Activities:

Chairman McGavran Awards Committee.

Member of the Occupational Safety and Health Educational Resource Center Planning and Executive Committee.

Activities at the State Level:

North Carolina Heart Association, Member High Blood Pressure Committee.

Activities at the National Level:

National Academy of Science, Member of the Institute of Medicine, Member of 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.

American Heart Association, Member Research Committee.

Vice-Chairman, Council on Epidemiology.

Activities at the International Level:

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

Department Activities:

Chairman, Admissions Committee.

Activities at the State Level:

Member, North Carolina Medical Society.

Activities at the National Level:

Member, American Medical Association.

Member, Public Health Association.

Member, American Board of Internal Medicine

Member, Association of Teachers of Preventive Medicine

Subcommittee on Rural Health Education of the National

High Blood Pressure Education Program.

Consultant, Vanderbilt University Rural Primary Care Quality of Care Project 1979-

Consultant, National Center for Health Services Research, 1980-

Consultant and site visitor - W.K. Kellogg Foundation: Health Promotion/Disease Prevention, 1979-

Activities at the International Level:

Member, International Epidemiological Association.

Carolyn A. Williams

Department Activities:

Member, Admissions Committee.

Coordinated seminar series, Spring 1980 and Fall 1980.

School of Public Health Activities:

Member, Institutional Review Board.

Member, Search Committee for Faculty Member - Department of Public Health Nursing.

Member, Fellowship and Traineeship Committee.

Participant and lecturer in Public Health Nursing Off-Campus Program.

Activities at the National Level:

Chairperson Commission on Nursing Research, American Nurses Association

Chairperson, Research Advisory Committee, American Nurses Foundation.

Member (Summer 1980), Institute of Medicine, Academy of Sciences Committee to Design a Study of Nursing and Nursing Education.

Member (Spring 1980), Review Panel for Research Grants, Special Solicitation to Faculty in Nursing Doctoral Programs, Division of Nursing, Bureau of Health Manpower, Health Resources Administration, H.H.S.

Seminar presentation on Community Health Nursing at the School of Public Health, University of Minnesota.

Seminar presentation on Epidemiologically Oriented Primary Care Research, to Primary Care Center, Vanderbilt University, Nashville, Tennessee.

B. Anticipated Goals or Increases in Public Service Programs in the Future.

A primary function of the faculty of this department is public service from the local to the international level. We expect to continue and expand our current services in response to the public's need for consultations and technical assistance in the health care field. We have increased our emphasis on service activities and consultations in the areas of rural health and occupational epidemiology among North Carolina residents, and we will continue in those efforts. National and International activities will continue as we maintain and promote our national reputation as a leader in the field of epidemiology. Our faculty have had the honor of being named to such National appointments as the President's Council for Mental Health, and the Presidential Commission for the Study of Ethical Problems in Medicine, Biomedical and Behavior Research. We expect to continue offering the quality public service which has resulted in the recognition of our faculty on the National level.

V. FACULTY

A. List of Faculty

1. Full-Time (*Joint, Primary Appointment in Epidemiology).

Dragana A. Andjelkovich, M.D., M.P.H., Research Associate Professor
 Caroline Becker, M.D., Associate Professor
 Harvey Checkoway, Ph.D., Research Assistant Professor
 John T. Fulton, D.D.S., Professor Emeritus
 Suzanne G. Haynes, Ph.D., Research Assistant Professor
 Gerardo Heiss, M.D., Ph.D., Research Associate Professor
 Barbara S. Hulka, M.D., M.P.H., Professor
 Michel A. Ibrahim, M.D., Ph.D., Professor and Chairman
 Sherman A. James, Ph.D., Associate Professor
 Berton H. Kaplan, Ph.D., Professor
 Abdel R. Omran, M.D., D.P.H., M.P.H., Professor
 Ralph C. Patrick, Ph.D., Associate Professor
 Victor J. Schoenbach, Ph.D., Research Assistant Professor
 *Carl M. Shy, M.D., Dr.P.H., Professor of Epidemiology and Environmental Sciences and Engineering
 Cecil Slome, M.B.Ch.B., D.P.H., Professor
 Herman A. Tyroler, M.D., Alumni Distinguished Professor
 *Carolyn Williams, Ph.D., Assistant Professor of Epidemiology and Associate Professor of Nursing.

2. Part-Time.

Gory J. Love, D.Sc., M.P.H., Research Associate Professor

3. Visiting.

None.

4. Joint.

David G. Kleinbaum, Ph.D., Associate Professor of Biostatistics
 Edward H. Wagner, M.D., M.P.H., Associate Professor of Medicine
 Seth A. Rudnick, M.D., Assistant Professor of Medicine

5. Adjunct and Clinical Appointments (*Joint UNC Appointments).

Steven B. Blum, Ph.D., Adjunct Assistant Professor
 Stephen N. Brown, M.D., M.P.H., Adjunct Associate Professor
 Joan Cornoni-Huntley, Ph.D., Adjunct Associate Professor
 Lawrence M. Cutchin, M.D., Clinical Associate Professor
 *Gordon DeFriese, Ph.D., Clinical Associate Professor
 (Social and Administrative Medicine, HSRC).
 *Robert J. Fletcher, M.D., Clinical Associate Professor
 (Medicine)
 *Suzanne W. Fletcher, M.D., Clinical Associate Professor
 (Medicine)

H. Hugh Fudenberg, M.D., Adjunct Professor
 Stephen H. Gehlbach, M.D., M.P.H., Adjunct Assistant
 Professor
 Curtis G. Hames, M.D., Clinical Professor
 Carl G. Hayes, Ph.D., Adjunct Associate Professor
 Siegfried H. Heyden, M.D., Ph.D., Adjunct Professor
 Michael D. Hogan, Ph.D., Adjunct Assistant Professor
 Clarence C. Lushbaugh, M.D., Adjunct Professor
 J. Newton MacCormack, M.D., M.P.H., Adjunct Associate
 Professor
 Kathryn Magruder-Habib, Ph.D., Adjunct Assistant Professor
 *Eugene S. Mayer, M.D., M.P.H., Adjunct Associate
 Professor (AHEC)
 *Melinda S. Meade, Ph.D., Adjunct Associate Professor
 (Geography)
 Michael J. Moser, M.D., M.P.H., Adjunct Assistant
 Professor
 George R. Parkerson, M.D., M.P.H., Adjunct Assistant
 Professor
 *Samuel M. Putnam, M.D., Adjunct Assistant Professor
 (Medicine)
 Walter J. Rogan, M.D., M.P.H., Adjunct Assistant
 Professor
 Fredric J. Romm, M.D., M.P.H., Adjunct Assistant
 Professor
 Allan H. Smith, M.D., Adjunct Assistant Professor
 Robert J. Struba, Ph.D., Adjunct Assistant Professor
 *Michael R. Swift, M.D., Clinical Professor (Medicine)
 Allen J. Wilcox, M.D., Ph.D., Adjunct Assistant
 Professor
 Gregg S. Wilkinson, Ph.D., Adjunct Associate Professor

B. Changes During the Year.

1. Additions.

Suzanne G. Haynes, Ph.D., Research Assistant Professor
 Clarence C. Lushbaugh, M.D., Adjunct Professor
 Michael J. Moser, M.D., Ph.D., Adjunct Assistant Professor
 Victor J. Schoenbach, Ph.D., Research Assistant Professor
 Allan H. Smith, M.D., Adjunct Assistant Professor
 Robert J. Struba, Ph.D., Adjunct Assistant Professor

2. Promotions.

Gerardo Heiss, M.D., Ph.D., Research Associate Professor
 Melinda S. Meade, Ph.D., Adjunct Associate Professor

3. Miscellaneous Changes.

Carl M. Shy, M.D., from Professor of Epidemiology and Director, Institute of Environmental Studies, to Professor of Epidemiology and Environmental Sciences and Engineering (effective July 1, 1980).

Seth A. Rudnick, M.D., from Clinical Assistant Professor to Assistant Professor of Medicine and Epidemiology. (Effective July 1, 1980).

4. Leaves.

Sherman A. James, Ph.D., Associate Professor. Pogue Leave effective September 1, 1980 through February 28, 1981.

Carl M. Shy, M.D., Professor of Epidemiology and Environmental Sciences and Engineering. Off-Campus Assignment to Clinical Epidemiology Evaluation Unit at the University of Sydney, effective August 1, 1980 through May 31, 1981.

5. Losses.

James W. Begun, Ph.D., Adjunct Assistant Professor, Resigned August 31, 1980.

C. Proposed Additions to Faculty.

1. Number: 1
2. Rank: Clinical Assistant Professor (Joint with Medicine)
3. Specialization: Cardiovascular Disease and Health Services Research.

D. Special Achievements by Faculty.

- Suzanne G. Haynes: Sigma Delta Epsilon, Womens' Honorary Society, and Outstanding Young Women in America (1980).
- Michel A. Ibrahim: Special Consultation for WHO to Israel.
- Sherman A. James: Pogue Faculty Research Leave Award, 9/80-2/81.
- Abdel Omran: WHO Medal of Recognition for meritorious contribution to the work and direction of the WHO, March 1980, Geneva.
- H.A. Tyroler: Elected Vice-Chairman of the Council on Epidemiology, AHA; and chosen for Who's Who in America (1980).
- Carolyn Williams: Appointed by President Carter to serve as a member of the Presidential Commission for the Study of Ethical Problems in Medicine, Biomedical and Behavioral Research.
- Caroline Becker: Achievement Recognition Award, AHA, N.C. Affiliate, 1981; and elected Secretary-Treasurer, Delta Omega Society, Theta Chapter, 1981.

E. Special Assignments of Faculty.

Carl M. Shy, M.D.: Off-Campus Assignment to Clinical Epidemiology Evaluation Unit at the University of Sydney, for the period August 1, 1980 through May 31, 1981.

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

The Department continues to enjoy its National and International reputation as one of the leading institutions in the field of Epidemiology. We can only admit a small fraction of the large number of applicants to our graduate program. A high percentage of those offered admission accept our offer. Our department is the only Department of Epidemiology in the country which has an organized program in Health Services Research and Clinical Epidemiology. We have expanded the area of investigation in Cancer Epidemiology by studying health effects of exposure of low-level ionized radiation, and received a training grant that supports four postdoctoral and three predoctoral students. In collaboration with State and local governments, the Department is embarking on a systematic program for the control of hypertension in rural areas. The Department is developing and Quantitative Group made up of biostatisticians and epidemiologists who will strengthen the department's offerings in epidemiologic research methods. In response to the needs of the State, we are beginning to break into the area of infectious disease epidemiology through the development of working relationships with health departments and the Center for Disease Control. Two recent areas are being developed. The first is concerned with Aging. Several faculty members are charged with piloting courses on Aging, especially those of particular relevance to clinical practice and formulating research questions that require collection of new data or utilization of the extensive population-based data possessed by the department. The second area undergoing development is the health promotion and disease prevention issue. A training grant has been submitted to the Bureau of Health Manpower and a number of research projects are being explored.