

DEPARTMENT OF EPIDEMIOLOGY

ANNUAL REPORT

1974-1975

I. Departmental Organization and Administration

The Chairman, Dr. John C. Cassel, returned in August of 1974 from a year of sabbatical leave. This leave took him to research centers in different parts of the world and six months' study in London.

Upon his return, Dr. Cassel undertook a massive reorganization of the administrative areas of the department, leaving intact the organization and administration of the many training programs. This reorganization involved delegating a great many responsibilities within a committee format to include staff and students, in addition to faculty, in the decision making processes of the department. Some former committees were expanded in scope, along with the inclusion of staff members and students.

The department has found this reorganization successful. It has been instrumental in our ability to deal with ever expanding, complex departmental needs. A brief statement on the functions of the various committees follows.

The Admissions Committee continues to function as an advisory group to the Chairman in the area of student applications for admission to the department.

The Graduate Studies and Curriculum Committee, one of the largest and most important committees, is responsible for determining the extent to which the philosophy of the department is implemented in its teaching program. It is this committee which deals with the balance between structured education and individualized instruction in respect to departmental educational goals. This committee, when necessary, will review and evaluate courses and make recommendations regarding additions or deletions.

The Field Training and Technical Assistance Committee oversees all requests of technical assistance from State and local agencies that come to the department, and identifies appropriate faculty members and students for the different areas of consultation.

The Seminar Committee is responsible for inviting appropriate lecturers to speak on a variety of topics to faculty and students. Staff members are encouraged to attend lectures that may be of interest to them.

The Student Affairs Committee insures proper supervision and review for all students prior to the formation of a doctoral committee for the student. The committee holds the responsibility for scheduling the masters examinations, scheduling the annual retreat at Quail Roost, and importantly serving as ombudsman for the department in an attempt to discuss and resolve problems that may arise.

The Space and Resource Committee is a service committee with responsibilities of space allocation and needs, library and journal resources, and documentation of departmental activities, including the collection of data on publications by faculty members, theses, dissertations, and national activities of department members.

The Personnel and Budget Committee is the only committee which does not include students as it deals strictly with confidential personnel and budgetary matters. This committee deals with all personnel problems and serves as a sounding board for staff members who are dissatisfied. It attempts to discuss and solve problems that may arise. The committee also meets to discuss budgetary matters, and serves as a representative of the Chairman in all budgetary and personnel matters. When necessary, the committee makes recommendations to the Chairman.

## II. Instructional Programs

### A. Courses and Curricula

#### (1) Major changes during the year

The department officially instituted a program of study in Psycho-Social Epidemiology in the Fall of 1974. The program director is Professor Berton H. Kaplan, Ph.D., and the grant provides funding assistance for 5 pre-doctoral and 1 post-doctoral student.

#### (2) New programs being planned and deletions to be made

##### New Courses

EPID 251 - Epidemiologic Methods in Population - Omran  
(Proposed for Fall 1975)

EPID 268 - Advanced Methods in Epidemiology - Tyroler  
(Proposed for Fall 1975)

EPID 276 - Advanced Environmental Epidemiology - Shy  
(Proposed for Spring 1976)

EPID 270 - Applications of Psychological Theory and Research to Health - James (Begun Spring 1975)

##### Course Deletions

EPID 168 - Behavioral Science in Health Programs and Research

#### (3) Honors Programs and other Special Courses or Programs

NONE

#### (4) Participation in Interdepartmental Programs

Off-campus MPH program -

The faculty in the Department of Epidemiology offered EPID 160 in the Asheville off-campus program for the Spring 1975.

Nine (9) faculty members were involved in teaching Principles of Epidemiology to 18 students.

Short Course in Epidemiology -

This one week course entitled, Epidemiologic Foundations of Health Services, was offered during Spring break 1975. The course was co-ordinated by Dr. Michel Ibrahim and 8 faculty members participated in the course instruction. The course was directed to individuals with terminal doctoral degrees in medicine, dentistry, veterinary medicine, behavioral and physical sciences.

### B. Enrollment

During the current year, there have been 44 registered students in the field of Epidemiology. Two students received the MPH in December 1974. In addition, one student expects to receive the MPH in May 1975. Also, two students expect to receive the MPH in August 1975.

B. Enrollment (Cont'd)

- 1. (a) Number of Majors in Department. . . . . 44
  - M.P.H. . . . . 14
  - M.S.P.H. . . . . 4
  - Dr.P.H. . . . . 1
  - Ph.D. . . . . 25
- (b) Minority Classification
  - Caucasian/American. . . . 36
  - Black/Afro-American . . . . 2
  - Foreign. . . . . 6
- (c) Male/Female
  - Male (11 M.P.H., 2 M.S.P.H., 1 Dr.P.H., 9 Ph.D.). . . . . 23
  - Female(2 M.P.H., 2 M.S.P.H., 16 Ph.D.). . . . . 20
- (d) North Carolina Residents . . . . . 19
- (e) Out-of-State Residents (but within the U.S.). . . . . 19
- (f) Foreign. . . . . 6

2. Number of degrees awarded

	<u>M.S.</u>	<u>M.S.P.H.</u>	<u>M.P.H.</u>	<u>Ph.D.</u>	<u>Dr.P.H.</u>
August 1974	1		10	2	
December 1974			3		
May 1975			1		

- 3. Of those enrolled in the Department of Epidemiology in 1974-75, 9 matriculated as M.D.'s, 1 as a D.V.M., 9 were either R.N.'s or Masters of Science in Nursing, 14 had already received their Masters and matriculated in the doctoral program, and 5 matriculated with the bachelor's degree.

## C. Teaching load of faculty

## 1. Fall Semester

<u>COURSE NUMBER</u>	<u>COURSE NAME</u>	<u>CREDIT HOURS</u>	<u>INSTRUCTOR</u>
EPID 140	Problems in Epidemiology	Varies	Cassel Tyroler Omran Cornoni Ibrahim James Kaplan Patrick Wagner Williams
EPID 160	Principles of Epidemiology	3.0	Cassel Patrick James Kaplan Williams Slome Ibrahim Becker Cornoni
EPID 161	Epidemiology of Population Dyanmics and Family Planning	3.0	Omran
EPID 162	Epidemiology in Environmental Health	3.0	Tyroler Andjelkovic
EPID 211	Determinants of Communicable Disease	2.0	Becker
EPID 231	Epidemiologic Research in Personal Health Services	3.0	Hulka
EPID 240	Alcohol Behavior and Health	3.0	Cornoni
EPID 315	Field Training in Epidemiology	Varies	Wagner Becker
EPID 360	Research in Epidemiology	Varies	Cornoni Ibrahim Williams
EPID 393	Masters Thesis	Varies	Cornoni Slome
EPID 394	Doctoral Dissertation	Varies	Cornoni Ibrahim Omran Tyroler

## 1. Fall Semester (cont'd)

<u>COURSE NUMBER</u>	<u>TOTAL # OF STUDENTS</u>	<u>SPH STUDENTS</u>	<u>GRAD</u>	<u>EVN COL</u>	<u>OTHER</u>
EPID 140	65	59	3	1	2 (Duke)
EPID 160	146	133	5	4	3 (Duke) 1 (A&S)
EPID 161	54	54	1		
EPID 162	29	25	1	3	
EPID 211	8	7	1		
EPID 231	13	12	1		
EPID 240	5	4	1		
EPID 315	2	2			
EPID 360	5	5			
EPID 393	2	2			
EPID 394	8	8			

## 2. Spring Semester

<u>COURSE NUMBER</u>	<u>COURSE NAME</u>	<u>CREDIT HOURS</u>	<u>INSTRUCTOR</u>
EPID 141	Problems in Epidemiology	Varies	Cassel Becker Cornoni Ibrahim Tyroler
EPID 160	Principles of Epidemiology (Off-Campus)	3.0	Slome Williams Ibrahim McMichael Tyroler Kaplan Patrick Omran Cassel
EPID 162	Epidemiology in Environmental Health	3.0	McMichael Shy Tyroler
EPID 241	Research Methodology in Alcohol Usage	2.0	Cornoni
EPID 230	Applied Methods in Epidemiology and HSR	2.0	Cornoni
EPID 262	Epidemiology of Program Acceptance	2.0	Patrick
EPID 264	Culture and Health	3.0	Kaplan
EPID 266	Epidemiologic Investigation	3.0	Tyroler
EPID 270	Application of Psychologic Theory and Research	3.0	James
EPID 315	Field Training in Epidemiology	Varies	Ibrahim Wagner Cornoni

## 2. Spring Semester (cont'd)

<u>COURSE NUMBER</u>	<u>COURSE NAME</u>	<u>CREDIT HOURS</u>	<u>INSTRUCTOR</u>
EPID 361	Research in Epidemiology	Varies	Kaplan Tyroler Shy Williams
EPID 368	Evaluative Research Methods	-2.0	Ibrahim
EPID 393	Masters Thesis	Varies	Wagner Ibrahim
EPID 394	Doctoral Dissertation	Varies	Wagner Tyroler

<u>COURSE NUMBER</u>	<u>TOTAL # OF STUDENTS</u>	<u>SPH STUDENTS</u>	<u>GRAD</u>	<u>EVN COL</u>	<u>OTHER</u>
EPID 141	24	22	2		
EPID 160	18				18(Off-Campus)
EPID 162	30	28	2		
EPID 230	8	8			
EPID 241	4	4			
EPID 262	7	7			
EPID 264	13	11	1	1	
EPID 266	15	14		1	
EPID 270	10	10			
EPID 315	2	2			
EPID 361	8	8			
EPID 368	20	19		1	
EPID 393	2	2			
EPID 394	8	8			

## III. Research Programs

## A. Notable Publications of Faculty

Caroline Becker

(With I. Krishan, C. G. Hames, H. A. Tyroler) "Prospective Study of Cord Blood Cholesterol to Predict Level of Cholesterol and Type II Hyperlipoproteinemia in Adolescence." III International Symposium on Atherosclerosis, Vo. 95, 1973.

(With P. C. Dischinger, M. T. Simpson, D. A. Olewine, H. A. Tyroler, and C. G. Hames) "Fibrinolytic Activity in a Black-White Sample of Young Men in Evans County, Georgia." Supplement III to Circulation, Vols. 49 and 50, October, 1974.

John C. Cassel

"Psychosocial Factors in the Genesis of Disease." The Challenge of Community Medicine, edited by R. L. Kane. New York: Springer Publishing Company, 1974, pp. 287-300.

"Community Diagnosis." Community Medicine in Developing Countries, edited by A. Omran. New York: Springer Publishing Company, 1974, pp. 345-362.

"Psychiatric Epidemiology." American Handbook of Psychiatry, Vol. 2, edited by G. Caplan. New York: Basic Books, 1974, pp. 401-410.

(With S. J. Zyzanski and B. S. Hulka) "Scale for the Measurement of 'Satisfaction' with Medical Care: Modifications in Content, Format and Scoring." Medical Care, Vol. 12, no. 7, 1974, pp. 611-620.

(With A. L. Johnson, J. C. Cornoni, H. A. Tyroler, S. Heyden and C. G. Hames) "Influence of Race, Sex and Weight on Blood Pressure Behavior in Young Adults." American Journal of Cardiology, Vol. 35, no. 4, April, 1975, pp. 523-530.

"An Epidemiological Perspective of Psychosocial Factors in Disease Etiology." American Journal of Epidemiology, Vol. 64, no. 11, 1974, pp. 1040-1043.

"Psychosocial Processes and 'Stress': Theoretical Formulation." International Journal of Health Services, Vol. 4, no. 3, 1974, pp. 471-481.

(With B. Hulka, L. Kupper, R. Eford, and J. Burdette) "Medication Use and Misuse: Physician-Patient Discrepancies." Journal of Chronic Diseases, Vol. 28, 1975, pp. 7-21.



Joan C. Cornoni

(With A. L. Johnson, J. C. Cassel, H. A. Tyroler, S. Heyden and C. G. Hames) "Influence of Race, Sex and Weight on Blood Pressure Behavior in Young Adults." American Journal of Cardiology, Vol. 35, no. 4, April, 1975, pp. 523-530.

Barbara S. Hulka

(With S. J. Zyzanski and J. C. Cassel) "Scale for Measurement of 'Satisfaction' with Medical Care: Modifications in Content, Format and Scoring." Medical Care, Vol 12, July, 1974, pp. 611-630.

(With L. L. Kupper, J. C. Cassel, R. L. Efird, and J. C. Burdette) "Medication Use and Misuse: Physician-Patient Discrepancies." Journal of Chronic Diseases, Vol 28, 1975, pp. 7-21.

(With J. A. Burdette, R. A. Babineau, F. Mayo, and J. C. Cassel) "The Evaluation of Primary Medical Care." Supplement to American Family Physician, February, 1974, pp. 1-11.

(With L. L. Kupper, J. C. Cassel, and F. Mayo) "Doctor-Patient Communication and Outcomes Among Diabetic Patients." Journal of Community Health. In press.

(With J. A. Burdette, R. A. Babineau, F. Mayo, and J. C. Cassel) "Primary Medical Care Evaluation: The AAFP-UNC Collaborative Study." Journal of the American Medical Association, Vol. 230, December 23-30, 1974, pp. 1668-1673.

(With L. L. Kupper, J. C. Cassel and R. A. Babineau) "Practice Characteristics and Quality of Primary Medical Care: The Doctor-Patient Relationship." Medical Care. In press.

(With L. L. Kupper, M. Daly, J. C. Cassel and F. Schoen) "Correlates of Satisfaction and Dissatisfaction with Medical Care: A Community Perspective." Medical Care. In press.

(With M. Daly) "The Role of Communication as an Interactive Process Within the Doctor-Patient Relationship." Journal of Communication. In press.

Michel A. Ibrahim

(With J. G. Feldman, H. A. Sultz, M. G. Staiman, L. J. Young and D. Dean) "Management After Myocardial Infarction: A Controlled Trial of the Effect of Group Psychotherapy." International Journal of Psychiatry in Medicine, Vol. 5, no. 3, 1974, pp. 253-268.

(With D. Upson, D. B. Gillings, R. Greenberg and T. Nolan) "The Incidence and Prevention of Rheumatic Fever in North Carolina." Southern Medical Journal. In press.

Berton H. Kaplan

(With D. T. Gianturco, M. S. Breslin, A. Heyman, W. D. Gentry and C. D. Jenkins) "Personality Patterns and Life Stress in Ischemic Cerebrovascular Disease. 1. Psychiatric Findings." Stroke, Vol. 5, July-August, 1974, pp. 453-460.

"Social Factors and Working Through." The Sociology of Psychotherapy, edited by P. M. Roman and H. M. Trice, New York: Jason Aronson Publishing Company, 1974, pp. 58-83.

Anthony J. McMichael

(With B. S. Hetzel) "An Epidemiological Approach to Student Mental Health." International Journal of Epidemiology, Vol. 3, 1974, pp. 125-134.

(With B. S. Hetzel) "Patterns of Help Seeking for Mental Illness among Australian University Students." Social Science and Medicine, Vol. 8, 1974, pp. 197-211.

(With B. S. Hetzel) "The Relationship of Mental Health and Social Stress to Academic Failure and Withdrawal for University." Medical Journal of Australia, February, 1975.

"The Relation between Social Stress, Adolescence, and Mental Health among University Students." Australia-New Zealand Journal of Psychiatry, Vol. 8, no. 4, 1974, pp. 251-260.

(With R. Spirtas and L. L. Kupper) "An Epidemiologic Study of Mortality within a Cohort of Rubber Workers, 1964-1972." Journal of Occupational Medicine, Vol. 16, no. 7, 1974, p. 458.

"An Epidemiological Perspective on the Identification of Workers at Risk." Journal of Occupational Health Nursing, Vol. 23, no. 1, 1975, pp. 7-11.

(With S. G. Haynes and H. A. Tyroler) "Some Observations on the Evaluation of Occupational Mortality Data." Journal of Occupational Medicine, Vol. 17, 1975, pp. 128-131.

(With L. L. Kupper and R. Spirtas) "Solvents and Leukemia among Rubber Workers: An Epidemiologic Study." Journal of Occupational Medicine, Vol. 17, no. 4, 1975, p. 234.

Abdel R. Omran

(Editor). Community Medicine in Developing Countries. New York: Springer Publishing Co., 1974.

"Population Epidemiology: An Emerging Field of Inquiry for Population and Health Students." American Journal of Public Health, Vol. 64, 1974, pp. 674-679.

"The Demographic Jigsaw." Ceres, 1974, pp. 19-21.

"Health and Family Planning." World Health, January, 1974, pp. 6-13.

"The Epidemiologic Transition in North Carolina during the Last Fifty to Ninety Years: I. The Mortality Transition." North Carolina Medical Journal, Vol. 36, no. 1, 1975, pp. 23-28.

"The Epidemiologic Transition in North Carolina during the Last Fifty to Ninety Years: II. Changing Patterns of Disease and Causes of Death." North Carolina Medical Journal, Vol. 36, no. 2, 1975, pp. 83-88.

Carl M. Shy

"Environmental Pollution in Industrializing Countries." Community Medicine in Developing Countries, edited by A. R. Omran, New York: Springer Publishing Company, 1974.

Cecil Slome

(With H. Wetherbee, M. Daly, K. Christensen, M. Møglén and H. Thiede)

"Effectiveness of Certified Nurse-Midwives: A Prospective Evaluation Study." American Journal of Obstetrics and Gynecology. In press.

Herman A. Tyroler

(With F. Cordle) "The Use of Hospital Medical Records for Epidemiologic Research. I. Differences in Mortality by Age-Race-Sex-Place of Residence and Socioeconomic Status in a Defined Community Population." Medical Care, Vol. 12, July, 1974, pp. 596-610.

(With A. J. McMichael and S. G. Haynes) "Observations of the Evaluation of Occupational Mortality Data." Journal of Occupational Medicine, Vol. 17, 1974, pp. 128-131.

(With A. L. Johnson, J. C. Cornoni, J. C. Cassel, S. Heyden, and C. G. Hames) "Influence of Race, Sex, and Weight on Blood Pressure Behavior in Young Adults." American Journal of Cardiology, Vol. 35, April, 1975, pp. 523-530.

Edward H. Wagner

(With R. A. Greenberg, P. B. Imrey, C. A. Williams, S. H. Wolf, and M. A. Ibrahim) "The Development of Criteria for Medical Care Appraisal: Clinical Decision-Making." In press.

Carolyn A. Williams

"Structural Aspects of the Delivery Setting and Nurse Practitioner Performance." Summary of Workshop in Proceedings of the Nurse Practitioner Research Conference, edited by L. Hochheiser, J. Lewis, and H. Bailit. University of Connecticut Health Center, May, 1974.

(With F. C. Williams) "Values and Evaluative Research in Health Care: A Conceptual Analysis." Health Care Dimensions, edited by M. Leininger and G. Buck, Philadelphia: F. A. Davis Company, 1974, pp. 61-77.

"Nurse Practitioner Research: Neglected Issues." Nursing Outlook, Vol. 23, no. 3, March, 1975, pp. 172-177.

(With G. V. Long, C. Whitman, M. S. Johansson, and R. W. Tuthill)  
"Evaluation of a School Health Program Directed to Children with History of High Absence: A Focus for Nursing Intervention." American Journal of Public Health, Vol. 65, no. 4, April, 1975, pp. 388-393.

Susanne H. Wolf

(With E. Wagner, R. Greenberg, P. Imrey, C. Williams, and M. Ibrahim)  
"The Development of Criteria for Medical Care Appraisal: Clinical Decision-Making." In press.

## III. Research Programs

## B. Papers Presented at Meetings

Caroline Becker

"Hypertension Control Programs in North Carolina," presented at the Biennial Meeting of The John Hopkins Medical and Surgical Association, Baltimore, Maryland, February 28-March 1, 1975.

Carol L. Carroll

(with M. A. Ibrahim and E. H. Wagner) "Determinants of the Discharge Diagnostic Classification of Hospitalized Stroke Patients," presented at APHA Annual Meeting, New Orleans, Louisiana, October 21, 1974.

John Cassel

"Migration and Health," presented at the New Zealand Sociological Association Meeting, Wellington, New Zealand, November 16, 1973.

"Measurement of the Effectiveness and Efficiency of Health Care," presented at National Meeting of Robert Wood Johnson Foundation, Clinical Scholars Program, Tucson, Arizona, March 21, 1974.

"Relation of Academic Departments of Social Medicine to Health Agencies and Health Policy," presented at Annual Scientific Meeting, Department of Social Medicine, St. Thomas' Hospital, London, England, May 8, 1974.

"Effectiveness and Efficiency of Primary Health Care - An Approach to Measurement," presented at Special University Lecture, St. Thomas' Hospital Medical School, London, May 6, 1974.

"Risk Factors in Cardiovascular Disease: Limitations of Our Knowledge," presented at Seminar: Middlesex Hospital Medical School, London, June 5, 1974.

"The Thames Consortium. An Example Illustrating Some Principles of Work Study Programs," presented at National University of Wales, Cardiff, July 2, 1974.

"Hypertension in Migrants," presented at Second International Symposium on Hypertension, Chicago, September 18, 1974.

"Housing and Health," presented at American Public Health Association Annual Meeting, New Orleans, October 23, 1974.

"Clinical Approaches to Preventive Medicine," American College of Preventive Medicine Annual Meeting, New Orleans, October 20, 1974.

"Potentialities and Limitations of Epidemiology," presented at South Carolina State Board of Health, Columbia, South Carolina, November 20, 1974.

"Assessment of the Effectiveness and Efficiency and Primary Medical Care," presented at Harvard Health Services Research Center, Boston, February 27, 1975.

"Psychosocial Processes and Health," presented at Man Environment Program, Pennsylvania State University, College Park, Pennsylvania, March 13, 1975.

"Assessment of Effectiveness and Efficiency of Primary Medical Care," presented at Duke University Policy Sciences Seminar, Durham, March 28, 1975.

Joan C. Cornoni

"Training as Viewed from the Eyes of a Teacher and the Learner," presented at the North American Congress on Alcohol and Drug Problems, San Francisco, California, December 12-18, 1974.

Barbara S. Hulka

"Evaluation of Primary Care," presented to a Study Group for the Veterans Administration in Los Angeles, California, August 5, 1974.

"Correlates of Satisfaction and Dissatisfaction with Medical Care: A Community Perspective," presented to the American Psychological Association in New Orleans, Louisiana, August 30, 1974.

"Practice Characteristics and Quality of Primary Medical Care: The Doctor-Patient Relationship" presented at the American Public Health Association Annual Meeting, New Orleans, October 21, 1974.

"Correlates of Satisfaction and Dissatisfaction with Medical Care: A Community Perspective," presented to the American Public Health Association Annual Meeting in New Orleans, Louisiana, October 23, 1974.

"Medication Use and Misuse: Physician-Patient Discrepancies," presented at Seminar, Washington University, St. Louis, Missouri, January 3, 1975.

Discussant for Six Papers at the Conference on Behavior Factors in Cancer Control, Sponsored by the National Cancer Institute, San Antonio, Texas, January 20, 1975.

Michel A. Ibrahim

(with E. H. Wagner and C. L. Carroll) "Determinants of the Discharge Diagnostic Classification of Hospitalized Stroke Patients," presented at the APHA Annual Meeting in New Orleans, October 21, 1974.

(with E. H. Wagner, R. A. Greenberg, P. B. Imrey, C. A. Williams and S. Wolf) "Quality of Performance--Care," presented at the Nurse Practitioner Research Conference in Hartford, Connecticut, May 1, 1975.

Berton H. Kaplan

"Social Support and the Home Health Worker," Southeastern Regional Home Health Workers, Columbia, South Carolina, April 9, 1975.

"Social Support, Competence, and Health," North Carolina Psychological Association, December 1974.

Major Speaker, Social Psychiatry Symposium, Harvard University School of Public Health, May 31, 1975.

Anthony J. McMichael

(with L. L. Kupper and M. J. Symons) "On the Utility of Proportional Mortality Analysis," presented to Society for Epidemiologic Research, Berkeley, California, June, 1974.

(with S. G. Haynes and L. L. Kupper) "Mortality Around Retirement," presented to the Gerontological Society, Portland, Oregon, October, 1974.

(with R. Spirtas, L. L. Kupper and J. F. Gamble) "An Epidemiologic Study of the Distribution of Leukemia and Related Cancers among Rubber Workers," presented at American Public Health Association Annual Meeting, New Orleans, October, 1974.

(with D. Andjelkovic and H. A. Tyroler) "Cancer Mortality among Rubber Workers," presented to the New York Academy of Sciences Conference on Occupational Carcinogenesis, New York, March, 1975.

"Standardized Mortality Ratios and the 'Healthy Worker Effect,'" presented to the American Occupational Medical Association, San Francisco, 1975.

(with R. Spirtas, P. M. Tousey, and J. F. Gamble) "Relationship of Mortality among Rubber Workers to Specific Work Exposures," presented to American Occupational Medical Association, April, 1975.

Abdel A. Omran

"Family Formation and Family Health, A Collaborative Study in 10 Countries," presented at the International Epidemiological Association Meeting in Brighton, England, August, 1974.

"Health Rationale for Family Planning," presented at the Conference of Egyptian-American Scholars: "Egypt from Now to the Year 2000." Cairo, December, 1974.

Ralph C. Patrick

"Some Health Consequences of Rapid Culture Change," presented to Visiting Scholars Seminar, Michigan State University, April, 1974.

(with J. Cassel, H. A. Tyroler, L. Stanley and J. Wild) "The Ponape Study of the Health Effects of Cultural Change," presented to 7th Annual Meeting, Society for Epidemiologic Research, Berkeley, California, June, 1974.

(with H. A. Tyroler) "Some Health Consequences of Modernization in Ponape," presented to the 73rd Annual Meeting, American Anthropological Association, Mexico City, November 1974.

Carl M. Shy

"Human Studies: Effects of Controlled Exposure," and "Epidemiological Studies: Air Pollution," presented at Summer Institute on Biomedical Consideration of Environmental Pollutants, Oak Ridge University, Tennessee, July 9, 1974.

"Environmental Health Impact of Four Corners Power Plant, New Mexico," presented to the New Mexico Public Service Company, September 4, 1974.

"Health Consequences of New Fossil-Fueled Electric Power Generating Plants in Arkansas," presented to the Arkansas Public Service Commission, September 18, 1974.

"Health Effects of Sulphur Oxides," presented at Public Hearings on Sulphur Oxides Standards, Sierra Club, Denver, Colorado, November 20, 1974.

"Lung Cancer and the Urban Environment: A Review," presented at AMA Air Pollution Research Conference, San Francisco, California, December 5-6, 1974.

"Health Rationale for the Existing Mobile Source Emission Standard for Nitrogen Oxides," presented at the Public Hearing on Mobile Source Emission Standard, Washington, D.C., February 10-12, 1975.

"Biomedical Basis for the Photochemical Oxidant Air Quality Standard," presented to the Institute of Chemical Engineers, Houston, Texas, March 18, 1975.

Cecil Slome

"Area Health Education Centers - The North Carolina Program," presented at the American Public Health Association Annual Meeting, October 24, 1974.

Herman A. Tyroler

"Black-White Differences in Serum Lipids and Lipoproteins in Evans County, Georgia," presented at the Conference on CVD Epidemiology, Tampa, March 10-11, 1975.

"Weight and Hypertension: Evans County Studies of Blacks and Whites," presented at the Epidemiology of Hypertension, 2nd International Symposium, Chicago, September 18, 1974.

Edward H. Wagner

(with M. A. Ibrahim and C. L. Carroll) "Determinants of the Discharge Diagnostic Classification of Hospitalized Stroke Patients," presented at the Annual Meeting of the American Public Health Association, New Orleans, October 21, 1974.

(with R. A. Greenberg, P. B. Imrey, C. A. Williams, S. H. Wolf and M. A. Ibrahim) "Quality of Performance/Care," presented at the Nurse Practitioner Research Conference, May 1, 1975.

(with R. A. Greenberg, P. B. Imrey, C. A. Williams, S. H. Wolf and M. A. Ibrahim) "Influence of Physician Characteristics on Choice of Criteria for Medical Care Appraisal," presented at the Sydenham Society in Atlantic City, May 4, 1975.



Carolyn A. Williams

(with J. T. Warren, M. Harris and K. Hudson) "On the Way to an Analysis of the Relationship between Scope of the Family Nurse Practitioner Role, Autonomy in Decision-Making, and Practice Setting Characteristics," presented at PRIMEX Consortium Conference in Washington, D. C., sponsored by the Bureau of Health Services Research and Development, HEW, June, 1974.

"Issues Related to Family Nurse Practitioner Research," presented at the National Conference Building for the Future, sponsored by the Council of Pediatric Nurse Practitioners and the Council of Family Nurse Practitioners and Clinicians of the American Nurses Association, Kansas City, Missouri, September 20-21, 1974.

(with J. T. Warren, J.D. Watkins, C. G. Pickard, M. S. Harris and J. Sachs) "The Family Nurse Practitioner in North Carolina," presented at the Public Health Nursing Rap Session, Annual Meeting of the American Public Health Association, New Orleans, October 22, 1974.

"Practice Research and the Delivery of Personal Health Services: In Quest of a Relationship," presented to the General Assembly of the Texas Public Health Association, Galveston, Texas, February 24, 1975.

"Research in Community Health Nursing - Present and Future Needs," presented to the Nursing Care Section of the Texas Public Health Association, Galveston, Texas, February 24, 1975.

(with J. T. Warren, M. S. Harris and J. Sachs) "The Family Nurse Practitioner Role," presented at the Nurse Practitioner Research Conference University of Connecticut Health Center, Hartford, May 1, 1975.

"Issues in Nurse Practitioner Utilization," presented at an Invitational Conference at the Division of Nursing, Health Resources Administration, Department of Health, Education and Welfare, Washington, D.C., May 13, 1975.

III. Research Programs

C. Major Research Projects

Individual Faculty Research Interests

Dragana Andjelkovic

Occupational Health Studies

Goodyear Mortality Studies

Leukemia in Relation to Work Environment

Bladder Tumor in the Rubber Industries

Chronic Bronchitis Related to Work Areas

Caroline Becker

Evans County Hypertension Study

Evans County Cardio-Vascular Studies

Evaluation of Hypertension Control Programs in North Carolina

Avian Tuberculosis in Swine

Carol L. Carroll

Blood Pressure Differences in Adolescents

Analysis of Health Needs of the Elderly in Edgecome County

Determinants of Discharge Diagnosis of Hospitalized Stroke Patients

John C. Cassel

Organization, Utilization and Assessment of Primary Health Care

Effects of Rapid Culture Change on Health (Ponape Study)

Joan C. Cornoni

Drug Taking for Hypertension in a Rural Community

Religion Related to Risk Factors of Coronary Heart Disease

Laureen S. Froimson

Evaluation of the Family Oriented Interaction of the Nurse Practitioner  
(Family Nurse Practitioner Project)

Barbara S. Hulka

Organization, Utilization and Assessment of Primary Health Care

Michel A. Ibrahim

Screening Program for Hypertension

Family Nurse Practitioner Competence Evaluation Project

Epidemiology and Medical Care of Stroke Patients

Sherman A. James

Race and Social Influence in Problem-Solving Dyads

Ecological Stress and Hypertension Related Mortality in North Carolina, 1960-1970: White-Nonwhite Contrasts

Coronary Heart Disease Mortality in North Carolina, 1960-1970: White-Nonwhite Contrasts

Soul City: A Study of the Health Consequences of Rapid Social and Industrial Change

Berton H. Kaplan

Psychosocial Factors in Mental Health and Disease

Religion Related to Risk Factors in Coronary Heart Disease

Anthony J. McMichael

Occupational Health Studies

Mortality Around Retirement, in the Rubber Industry: Social Security Administration

Bladder Cancer Study: National Bladder Cancer Project

Abdel R. Omran

PET project: Effects of economic development programs and family planning programs on fertility decline

Arab-East Conference: Population problems in the Arab countries in relation to socio-economic development

Impact of population pressure on the health of the family and the welfare of the society.

Abortion Study Group: Carolina Population Center

Abdel R. Omran, Continued

Epidemiologic transition in the United States and New York City

Taiwan Project: Relationships between family formation and family health in Taichung

WHO Collaborative Study between nine countries (Turkey, Lebanon, Iran, India, Philippines, Pakistan, Colombia, Egypt and Syria)

Ralph C. Patrick

Effects of Rapid Culture Change on Health (Ponape Study)

Carl M. Shy

Psychological and Behavioral Studies of Environmental Pollutants

Piedmont Regional Environmental Studies

Cecil Slome

Study of Infant Mortality Rates in Cleveland County

Evaluation of Emergency Medical Service in conjunction with the Office of the Chief Medical Examiner: Evaluation of emergency medical service for Orange and Chatham Counties

Study of high risk drivers: In conjunction with the National Driving Center located at Duke University

H. A. Tyroler

Occupational Health Studies

Occupational carcinogenesis studies of the relationship of the work environment to leukemia and cancer of the stomach, urinary bladder and lung

Relationship of the work environment to morbidity as self-appraised by responses to the Cornell Medical Index

Development of methods for the surveillance of working population morbidity and mortality

Lipids Research Center

Design and analysis of 14 prevalence studies in three countries

Design of a mortality follow-up study to test various elements of the lipid hypothesis

Participation in multicenter coronary primary prevention care center

Design and analysis of family aggregation and genetic studies of lipids and lipoproteins

H. A. Tyroler, Continued

Evans County Cardiovascular Disease Survey

Continuing development of multiple multi-discipline studies of the development of cardiovascular disease in this total community epidemiological laboratory

Edward H. Wagner

Development of methods to assess clinical decision-making

Assessing clinical competence of family nurse practitioners

Studying the use and impact of consultations in hospitals

Carolyn A. Williams

Assessing Competence of Family Nurse Practitioners

The Family Nurse Practitioner in North Carolina: An Analysis of the Relationship between Practice Setting Characteristics, Scope of the Family Nurse Practitioner Role, and Autonomy in Decision-Making (1971-Present)

Susanne H. Wolf

Family Nurse Practitioner Project: Developing Methods for Evaluation of Clinical Decision Making

IV. Public Service Programs

A. Faculty Activities

Caroline Becker

Department: Chairman, Space and Resources Committee

School of Public Health:

Member, Self Study Committee

Chairman, Library Liaison Committee

University: Member, Health Sciences Library Committee

State:

Coordinator, N.C. Regional Medical Program's Hypertension Control Programs

Hypertension Workshop for Local Health Directors, September, 1974

Chairman, Utilization Review Committee, Home Health Agency of Chapel Hill

National:

Consultant-Evans County Hypertension Detection and Follow-up Program

Coordinator, UNC-Evans County Cardio-Vascular Studies

John C. Cassel

University:

Member, Policy Board for Occupational Health Studies

Member, Academic Programs Council, Carolina Population Center

Member, Administrative Board, School of Nursing

Member, Administrative Board, Institute for Research in Social Science

National:

Consultant, Roche Psychiatric Service Institute, 10/74-present

Member, Expert Panel for Interagency Task Force on Reserpine, Food and Drug Administration, 10/74-present

Cassel, continued

Chairman, Policy Advisory Board, Multiple Risk Factor  
Intervention Trial, NHLI, 1972-present

Member, Editorial Board, Preventive Medicine, 1972-present

Board of Overseers, American Journal of Epidemiology, current  
Consultant, The American Health Foundation

Member, Metro Center Review Committee, National Institute of  
Mental Health, 6/74-present

Member, National Board for the Robert Wood Johnson Clinical  
Scholar Program, 6/74-present

Member, Advisory Board, National Conference on Preventive  
Medicine

Consultant, National Prostatic Cancer Project

Consultant, National Center for Health Services Research

Joan C. Cornoni

Department:

Member, Graduate Studies and Curriculum Committee

Chairman, Student Affairs Committee

School of Public Health:

Secretary, School of Public Health Alumni Association

Member, Traineeship and Fellowship Committee

Member, Minority Curriculum Committee

State:

Director, Continuing Education in Alcoholism program

Member, Advisory Committee, Center for Alcohol Studies

Member, North Carolina Public Health Association Governing  
Council

Member, North Carolina Public Health Association Scholarship  
Committee

National:

Consultant, National Institute for Alcohol Abuse and Alcoholism

Consultant, National Center for Health Statistics

Barbara S. Hulka

Department: Chairman, Admissions Committee

School of Public Health:

Member, Human Research Review Committee

University:

Lecturing to the Clinical Scholars and the 1st and 2nd year  
medical students

National:

Consultant, Health Manpower Division of the National Center  
for Health Services Research and Development

Member, Health Services Developmental Grants Study Section  
of the National Center for Health Services Research and  
Development

Consultant to Rand Corporation, University of California  
at Los Angeles "Health Insurance Assessment" Study

Member, Editorial Board of Community Health

Member, Editorial Board of Medical Care

Consultant, National Cancer Institute

Consultant, Institute of Child Health and Development

Michel A. Ibrahim

Department:

Member, Graduate Studies and Curriculum Committee

Chairman, Epidemiology Steering Committee

School of Public Health:

Chairman, Financial and Personnel Resources Committee

Member, Public Health Core Curriculum Committee

Member, Faculty Promotions Committees

Member, Administrative Board

University:

Member, Vice Chancellor's Committee to Determine Health Needs  
of Health Science Students



Ibrahim, continued

State:

Lecturer, Off-Campus M.P.H. Program

Member, Advisory Committee to the Cancer Control Program of  
the Duke Comprehensive Cancer Center

National:

Member, Advisory Committee to the Research Triangle Institute  
National Study of Health and Spinal Cord Injury, under  
contract from the National Institute of Neurological  
Diseases and Stroke

Associate Editor, American Journal of Epidemiology, 1967-present

Editorial Board, American Journal of Public Health, 1972-present

Faculty Member, Epidemiology Course for Teachers of Preventive  
Medicine, University of Minnesota (1974)

Member, Board of Directors of Niagara Frontier Environmental  
Health Research Foundation, Inc., Niagara Falls, New York,  
1970-present

Representative, APHA Epidemiology Section to the APHA Health  
Education Advisory Committee, 1973-present

Consultant, National Cancer Institute

Member, American Epidemiological Society

International:

Member, International Epidemiological Association

Sherman A. James

Short Course:

Contributor, "Epidemiologic Foundations of Health Services  
Research" (March 10-14, 1975), a short course in epidemiology  
designed for minority race scientists and health professionals  
for the purpose of recruiting more minority faculty and  
students to the field of epidemiology.

Department:

Member, Graduate Studies and Curriculum Committee

School of Public Health:

Chairman, Minority Faculty Development and Recruitment Committee

Member, Human Subjects Research Review Committee

James, continued

National:

Member, American Public Health Association

Member, Society for Epidemiologic Research

Member, American Psychological Association

Member, Association of Black Psychologists

Berton H. Kaplan

Department: Member, Admissions Committee

School of Public Health: Chairman, McGavran Award Committee

Anthony J. McMichael

Department: Chairman, Epidemiology Seminar Committee

School of Public Health:

Member, Computer and Data Processing Advisory Committee

University:

Epidemiology Consultant to Department of Medicine Study of  
Chest Fluoroscopy and Cancer Risk (funded by Atomic  
Energy Commission)

International:

Represented Epidemiology Department and Occupational Health  
Studies Group at International Meeting of Medical Advisors  
to the Rubber Industry, England, May, 1975.

Abdel R. Omran

Department:

Director, Population Epidemiology Program

Participation in the Off Campus - MPH Program

Participation in the Curriculum and Res. Committee

School of Public Health:

Chairman, International Students Committee

University:

Associate Director of Carolina Population Center

Chairman, Abortion Study Group

Omran, continued

Chairman, Middle East Study Group

Member, Javariana Project (Colombia)

International:

Consultant for WHO

Coordinator of WHO collaborative studies

Director WHO International Reference Center

Ralph C. Patrick

Department: Social Epidemiology Training Grant

School of Public Health: Member, Population Studies Committee

University: Member, Faculty Council

Carl M. Shy

State: Member, North Carolina Lung Association

National:

Member, American Lung Association, Air Conservation Commission

Member, National Academy of Sciences

Panel on Nitrogen Oxides

Panel on Water Reuse

Committee on Energy and the Environment

Cecil Slome

Department:

Chairman, Technical Assistance and Field Training Committee

Coordinator of Student Field Experience

Coordinator of alcohol training program

School of Public Health:

Coordinator for the School of Public Health AHEC Program  
and liaison for the AHEC Eastern Division for the School  
through February 1, 1975

State:

Off-Campus M.P.H. program held in Asheville, N.C. and instructing  
other various continuing education courses within the state

Slome, continued

Member, consultative staff for the Office of the Chief Medical Examiner. Two major projects include: (1) Study of gunshot fatality within the state of North Carolina, (2) Study of Infant Death Syndrome

State Department of Human Resources, Division of Health Services  
Hypertension Program  
Cancer Survival Study  
Cervical cancer screening follow up study

Black Mountain Rehabilitation Center

National:

Consultant, Bureau of Health Manpower, N.I.H.

Consultant, Division of Nursing, N.I.H.

Herman A. Tyroler

Department:

Program Director, Environmental Epidemiology Research  
Training Grant

Chairman, Graduate Studies and Curriculum Committee

School of Public Health:

Occupational Health Studies Group, Epidemiologic Coordinator  
Member of Policy Board  
Member of Scientific Advisory Committee

Program Director, Cardiovascular Undergraduate Training Grant

University:

Co-director, Preventive Medicine/Epidemiology Residency  
Program, The School of Medicine and the School of Public  
Health

Member, Special Awards Committee

State:

Several projects are underway with the State Department of  
Human Resources, Division of Health Services

National:

National Heart and Lung Institute, Lipoprotein Research Center  
Program  
Member, Prevalence Committee  
Chairman, Epidemiology Committee (Prevalence)  
Member, Advisory Committee  
Member, Safety and Monitoring Board

## V. Faculty Organization

A. Faculty - full time

John C. Cassel, M.B.Ch.B., M.P.H., Professor and Chairman  
 Dragana Andjelkovic, M.D., M.P.H., Dr. P.H., Assistant Professor  
 Caroline Becker, M.D., Assistant Professor  
 Joan C. Cornoni, M.P.H., Ph.D., Assistant Professor  
 John T. Fulton, D.D.S., Professor Emeritus  
 Barbara S. Hulka, M.S., M.D., M.P.H., Associate Professor  
 Michel A. Ibrahim, M.D., M.P.H., Ph.D., Professor  
 Sherman A. James, Ph.D., Assistant Professor  
 Berton H. Kaplan, M.S., Ph.D., Professor  
 Anthony J. McMichael, M.D., Ph.D., Assistant Professor  
 Abdel R. Omran, M.D., D.P.H., M.P.H., Dr. P.H., Professor  
 Ralph C. Patrick, Jr., A.M. Ph.D., Associate Professor  
 Carl M. Shy, M.D., Dr. P.H., Research Professor  
 Cecil Slome, M.B., Ch.B., D.P.H., Professor  
 Herman A. Tyroler, M.D., Professor

Faculty - part time

Mary B. Daly, M.S.P.H., Ph.D., Instructor

Faculty - Adjunct Appointments

Kenneth Bridboard, Adjunct Assistant Professor  
 Stephen H. Gehlbach, Adjunct Assistant Professor (joint appointment)  
 Michael A. Hamilton, Adjunct Assistant Professor  
 Douglas I. Hammer, Adjunct Assistant Professor  
 Carl Hayes, Adjunct Assistant Professor  
 G.J. Love, Adjunct Assistant Professor  
 James A. Merchant, Adjunct Assistant Professor (joint appointment)  
 Vaun A. Newill, Adjunct Associate Professor  
 Richard A. Tjalma, Adjunct Associate Professor

Faculty - joint appointments

Eugene Mayer, M.D., Associate Professor in Family Medicine  
 Assistant Professor - Epidemiology  
 Richard McDonagh, M.D., Assistant Professor in Pathology  
 Samuel Putnam, M.D., Assistant Professor in Medicine  
 James Schwankl, M.D., Assistant Professor in Pediatrics  
 \*Carolyn Williams, Ph.D., Associate Professor in Nursing  
 Assistant Professor - Epidemiology  
 \*Edward Wagner, M.D., Assistant Professor in Medicine

\*Maintain offices in Department of Epidemiology

Other Academic Personnel

Carol L. Carroll, M.P.H., Research Assistant  
Laureen S. Froimson, M.S., Research Assistant  
Robert Holbrook, M.P.H., Research Assistant  
Jo. E. Maready, B.A., Research Associate  
Susanne H. Wolf, M.P.H., Research Associate

B. Changes during the year - Resignations

Frank Cordle, Assistant Professor  
Felix Gruber, Assistant Professor  
Carol J. Hogue, Research Associate

All accepted positions elsewhere.

Dr. John Cassel resigned as Chairman of the Department of Epidemiology at the end of April 1975 for health reasons. He will continue his research and teaching activities.

Dr. Michel A. Ibrahim was appointed Acting Chairman upon Dr. Cassel's resignation.

C. There are no proposed additions to the faculty at this time.

D. Special Achievements of the Faculty

Caroline Becker

Sigma Xi

Barbara S. Hulka

President-elect, Society for Epidemiological Research

Michel A. Ibrahim

Delta Omega, Honorary Public Health Society Theta Chapter

Founders's Award, North Carolina Heart Association

Fellowship Award, World Health Organization

Berton H. Kaplan

American Anthropological Association Visiting Scholar - Emory University, April 30, 1975 - May 2, 1975.

Abdel R. Omran

Appointed Life Professor, Departments of Obstetrics and Gynecology and Department of Community Medicine, Assiut University, Egypt.

Ralph C. Patrick

Visiting Scholar, Michigan State University, April 1974.

H.A. Tyroler

Elected to membership of the American Epidemiological Association

E. Special Assignments of the Faculty

Michel A. Ibrahim

Appointed Acting Chairman, Department of Epidemiology, April 1975, upon resignation of the Chairmanship by John C. Cassel

Edward H. Wagner

Appointed Associate Director for Clinical Studies  
North Carolina Health Services Research Center

## VI. Special Plans, Departmental Distinctions, Developing Trends

### Educational Philosophy

The philosophy guiding the educational program in this department holds that it is no longer feasible or desirable to attempt to teach all the known facts in any given discipline; unfeasible because there are too many facts to be remembered and undesirable because many of them may change tomorrow. If such an assumption is true for any single discipline, it is obviously even more valid in a department which is attempting to integrate many of the diverse sciences of man ( particularly the biological and a number of the behavioral sciences) for the study of the phenomena of health and disease in social groups,

Accordingly, the faculty has accepted the fact that many students will graduate with gaps in their knowledge, and that a fixed or required curriculum no longer makes educational sense. Thus, beyond the few courses required by the School, the department has no fixed requirements. In lieu of such requirements, there is an expectation that as rapidly as is possible, each student in consultation with his advisor will specify a series of issues or concerns that are central to his or her interests. It is then the responsibility of the faculty, together with the student, to delineate the competencies that will be required to resolve these issues. Finally, the faculty have the responsibility of indicating to the student the various options open to obtain such competencies. These can include formal courses within and outside the department, informal seminars, directed reading, participation in an ongoing departmental research project, exploration of data sets available within the department and participation in clinical activities.

The major evidence required that a student has benefited from such an experience is documentation through a research project that the original issue has been resolved (usually this would apply to doctoral candidates) or in the case of masters candidates, the development of viable approaches which if applied could resolve the issue.

### Minority Recruitment

In order to remedy the scarcity of black professionals with special training and expertise in the field of epidemiology, the department offered a short course in this area, entitled, " Epidemiologic Foundations of Health Services Research," given March 10- 14, 1975. The major objective of the course was to inform and intrigue potential groups about the contributions of epidemiology to the advancement of knowledge and the planning and evaluation of health services. The methods, concepts, and principles of epidemiology were presented in order to advance the understanding of the processes which contribute to good and ill health in various population segments.



Emphasis was placed on diseases which are prevalent among blacks such as hypertension, strokes, and sickle-cell disease. Comparisons among various ethnic groups helped identify the various life styles which are associated with ill health. The use of this information in disease prevention was outlined. The major thrust of the course was to show, with actual examples, how epidemiologists address themselves to various health issues, and what kind of solutions can be proposed.

Seventeen professionals, 13 of whom were black, participated in the course. All enrolled were concerned principally with the health problems of the black community. Nominations were requested from various institutions in the Southeastern Region, and the best candidates were selected. Various faculty members of the department planned and conducted the course, which was well received. The reaction of the participants was very positive, which has led to ongoing relationships between the department, the participants and the institutions they represent.

#### Developing Trends and Expanded Programs

The Department of Epidemiology is currently engaged in research with Duke University. The Cancer Control Program between this department and Duke has brought about a close association to study the cancer problem. Duke has recruited two members of our faculty to work on this problem in hope that this association will result in the development of a training grant in cancer research in this department.

In addition to the research and training programs mentioned in last year's Annual Report, the department has expanded the training programs offered to include a program in Social Epidemiology. More specifically, the program entitled Psychosocial Factors in Mental Health and Disease brings together the expertise from the fields of psychology, sociology, anthropology, medicine, and epidemiology to assess disease onset and recovery with emphasis on mental disorders. This program has three specific objectives: to identify high risk groups from psychosocial characteristics, to develop new intervention tactics for the prevention of mental illness, and to evaluate diagnostic and therapeutic approaches to new intervention modes. Within the past year, this program has brought about a great deal of interest on the part of students and faculty alike, and is definitely a significant addition to training and research in the department.

