

ANNUAL REPORT

DEPARTMENT OF EPIDEMIOLOGY

July 1, 1965 - June 30, 1966

I. ORGANIZATION

A. FULL-TIME FACULTY

Evelyn Anderson, M.P.H., Research Associate

Caroline Becker, M.D., Assistant Professor

John Cassel, M.B.B.Ch., M.P.H., Professor and Head
Epidemiology

C. David Jenkins, Ph.D., Associate Professor of
Epidemiology

Edward Grafton McGavran, M.D., M.P.H., Sc. D.,
Professor of Epidemiology

Ralph Patrick, Ph.D., Associate Professor of
Epidemiology (Anthropology)

William Peck, M.D., Associate Professor

Cecil Slome, M.D., Associate Professor of
Epidemiology

Gordon T. Stewart, M.D., Professor of Epidemiology

Herman A. Tyroler, M.D., Associate Professor of
Epidemiology

Robert N. Wilson, Ph.D., Professor of Epidemiology,
(Sociology)

B. PART-TIME FACULTY

Dr. John T. Hughes, Visiting Associate Professor

Dr. David H. Stoddard, Visiting Associate Professor

Dr. Curtis Hames, Visiting Associate Professor

Dr. Hilliard Estes, Visiting Associate Professor

C. OTHER FULL-TIME PERSONNEL²

Carol Blanton, Secretary

Jerry Boyd, Laboratory Technician

Brian Butcher, Laboratory Technician

Richard Carter, M.D., Research Associate

H. Max Drake, Research Associate

Peggy Lomax, Research Associate

Jo Maready, Research Associate

Lily Oey, Laboratory Technician

Loretta Sawyer, Secretary

Philip Spiers, Ph.D., Research Associate

Pat Swan, Clerk (Jan. - March, 1966)

Lucille Thompson, Secretary

Betty L. Warren, Departmental Secretary

Alice Wellford, Research Associate

D. OTHER PART-TIME PERSONNEL

James Beck, Research Associate

Robert Boone, Research Assistant

Sam Bryan, Computer Programmer, Research Associate

Lindsey Cleveland, Research Associate

Joan Cornoni, Research Associate

Natalie Harbin, Secretary

Groover Hayes, Research Associate

Jim McCorkel, Research Associate

Salwa Mishriky, Coder

Lucille Turner, Laboratory Assistant

Hill Wellford, Coder

Kay White, Typist

II. BUDGETS AND GRANTS

<u>SOURCE</u>	<u>PERSONNEL</u>	<u>FELLOW- SHIPS</u>	<u>NON- SALARY</u>	<u>RESEARCH AND/OR TRAINING</u>	<u>OVER- HEAD</u>	<u>TOTAL</u>
USPHS NIH	52,956	8,500	1,359	Teaching	4,910	67,725
USPHS NIH	3,046	Balance remaining from previous year. Grant extended.		Research		3,046
USPHS NIH	15,026		230	Teaching	1,220	16,476
USPHS NIH	12,721	Balance remaining from previous year. Extended 1 year.				12,721
PEACE CORPS	26,887		6,924	Research	4,285	38,096
PEACE CORPS	16,074		10,312	Research	3,188	29,574
UNIVERSITY FUNDS	45,206		2,825	Teaching		48,031
RHODES FUNDS	23,524		9,312	Research & Teaching		32,836
GENERAL RESEARCH	17,058		6,742	Research		23,800
USPHS NIH	43,519	16,500	18,800	Research		78,819
USPHS BSS	20,290		1,837	Research	4,429	26,556
USPHS NIH	17,408	8,700	1,950	Training	2,148	30,206
USPHS NIH	12,652	8,700	500	Training	1,652	23,504
COMM. HLTH. SERVICES	10,050		300	Research	2,070	12,420
NASA	7,000		5,449	Research	2,344	14,793
USPHS BSS	3,263		458	Research	1,004	4,725
TOTAL	326,680	42,400	66,998		27,250	463,328

<u>SUMMARY</u>	<u>TOTAL FUNDS</u>
University Funds	48,031
Rhodes Funds	32,836
General Research	23,800
Department Grants	358,661

III. PHYSICAL FACILITIES

The Department of Epidemiology is located on the second floor of the North Wing of the New School of Public Health Building. There are eight offices occupied by professors, three by research associates, and one large office used by the doctoral students. In addition, there is a conference room, an IBM machine room with office space for the machine room supervisor and one large office occupied by the three secretaries.

The electronic data processing equipment belonging to the Department includes: IBM 101, 026, 083, 085, and 514.

Two small microbiology laboratories, located on the first floor of the South Wing, have been furnished and are now being used by Department personnel. A third laboratory in the North Wing, second floor, has been remodelled for Department use and is functioning now.

IV. INSTRUCTIONAL ACTIVITIES

During the current year there have been nineteen students majoring in the field of Epidemiology. Five of these students will complete the requirements for the degree of Master of Public Health by August 1966. Two have completed course requirements for the degree of Ph.D. and are working on dissertations. Nine students will spend an additional year working toward their Ph.D. or Dr. P.H. We have three students who will spend an additional year for the M.P.H.

A. Departmental Instructional Program in the School of Public Health

<u>COURSE</u>	<u>NUMBER OF STUDENTS</u>
EPID. 140 - PROBLEMS IN EPIDEMIOLOGY	14
EPID. 141 - PROBLEMS IN EPIDEMIOLOGY	12
EPID. 160 - PRINCIPLES OF EPIDEMIOLOGY	141
EPID. 260 - EPIDEMIOLOGICAL FOUNDATIONS FOR DISEASE CONTROL	9
EPID. 261 - DENTAL EPIDEMIOLOGY	6
EPID. 262 - EPIDEMIOLOGY IN PUBLIC HEALTH FAMILY PRACTICE	19
EPID. 264 - CULTURE AND HEALTH	20
EPID. 265 - HISTORY OF EPIDEMIOLOGY	6
EPID. 266 - EPIDEMIOLOGICAL INVESTIGATION	20
EPID. 360 - RESEARCH IN EPIDEMIOLOGY	6

B. Course Teaching Outside the Department

Courses taught in other departments and schools of the University which have been set up for them:

Dental School - Dr. John T. Fulton helps teach the course in Preventive Dentistry - 112, to 50 students. He also helps teach Preventive Dentistry - 136, to 50 students. He teaches for a total of 8 hours instruction.

Medical School- Dr. John Cassel lectured for 1 hour to 60 students in the Epidemiology course for 2nd year medical students.

- Dr. H. A. Tyroler lectured for 1 hour to 60 students in the Epidemiology course for 2nd year medical students.

- Dr. H. A. Tyroler lectured for 9 hours to 20 students in the course for residents in Community Psychiatry.

- Anthropology - Dr. Ralph Patrick is responsible for teaching General Anthropology to 100 students (3 hrs. credit) 45 hours of instruction.
- Sociology - Dr. Robert Wilson is responsible for teaching Literature and Society in the Department of Sociology. 55 students (3 hrs. credit) 45 hours of instruction.
- Nutrition - Dr. Ralph Patrick teaches Nutrition 240 - Family Dietary Practices and Their Determinants, with Miss Broach. 4 students (2 hrs. credit) approximately 15 hours of instruction.
- School of Nursing - Dr. Ralph Patrick gave lectures for 2 hours to approximately 60 students in the School of Nursing.
- Pathology - Dr. Gordon Stewart teaches undergraduate students, participates in infectious disease consultative service, attends rounds and gives a seminar to residents and interns on Infectious Disease under the terms of his joint appointment.
- Pathology - Dr. Stewart helps teach Immuno Pathology - 161A to 118 students for approximately 22 hours of instruction.
- Administration - Dr. Robert Wilson helps teach HADM 250 to 15 students. 15 hours of instruction.
- Pharmacy - Dr. H. A. Tyroler gave a lecture to the 5th year class on Principles of Public Health. 75 students. 1 hour of instruction.

Teaching at other Universities in courses set up for the students at those Universities:

Duke University - School of Nursing - Dr. Cecil Slome teaches a public health course entitled Public Health Sciences which is devoted to Epidemiology. There are 50 students and he gives 12 hours of instruction.

Duke University - Dept. of Preventive Medicine - Dr. H. A. Tyroler gave 6 two hour lectures to the sophomore medical students on introductory epidemiology. There were 65 - 70 students.

Dr. Gordon Stewart gave 2 two hour lectures to the sophomore medical students on introductory epidemiology. 65 - 70 students.

Instruction given to students from other departments and schools in this University enrolled in regular public health courses in the School of Public Health.

Anthropology - Dr. Ralph Patrick teaches 4 students from Anthropology who are minoring in epidemiology. They are enrolled in Epid. 140 and he gives instruction for approximately 30 hours each.

Sociology - Dr. Robert Wilson teaches 2 sociology students enrolled in Epid. 140 for a total of 25 hours.

Medical School - During the summer Dr. H. A. Tyroler teaches 5 medical students for 30 hours each.

Dental School - There were 2 dental students enrolled in Epid. 160. (3 credit hours) 45 hours instruction.

N.C. State - There were 2 statistical students enrolled in Epid. 160 for 3 credit hours (45 hours instr.)

In addition to the above listed courses, the faculty of the Department of Epidemiology give a number of single lectures in courses taught by other departments in the School of Public Health. A few of these are listed below:

HADM 100 - Dr. Ralph Patrick lectured for 2 hours in the course. There were 125 students enrolled.

HADM 211 - Dr. Gordon Stewart and Dr. Caroline Becker both gave several lectures in this course.

All of the faculty act as advisors to students who are working on Masters theses or doctoral dissertations.

Total number of different students (other than School of Public Health) under instruction.

Dental School	100 students	8 hrs. inst.
Medical School	140 "	11 hrs. "
Anthropology	100 "	45 hrs. "
Sociology	55 "	45 hrs. "
Nursing School	60 "	2 hrs. "
Pathology	118 "	22 hrs. "
Pharmacy School	75 "	1 hr. "
Duke University	50 "	12 hrs. "
Duke University	140 "	16 hrs. "
Anthropology	4 "	30 hrs. "
Sociology	2 "	25 hrs. "
Medical School	5 "	30 hrs. "
N.C. State	2 "	45 hrs. "
Total	851 students	292 hrs. inst.

V. SCHOOL ACTIVITIES IN THE GREATER UNIVERSITY

- Dr. Cassel Member Advisory Committee, Community Medical Care in the Medical School.
- Dr. Cassel Member of Executive Faculty, School of Public Health.
- Dr. Cassel Chairman, Search Committee to find new Chairman of Maternal and Child Health.
- Dr. Cassel Member, Advisory Board Social Science Research Institute.
- Dr. Cassel Member, Advisory Board, Institute for Environmental Health Studies.
- Dr. Cassel Member, MPH Core Curriculum Committee.
- Dr. Cassel Member, Medical Curriculum Study Committee.
- Dr. Cassel Member, School of Public Health Population Committee.
- Dr. Tyroler Member of Founding Committee, School of Public Health Foundation.
- Dr. Patrick Associate Professor in the Department of Anthropology.
- Dr. Patrick Faculty Advisor for Alpha Tau Omega Fraternity.
- Dr. Fulton Member of Search Committee for Dean of School of Dentistry.
- Dr. Jenkins Clinical Associate Professor in the Department of Psychiatry.
- Dr. Stewart UNC Medical School Curriculum Review: Chairman of Preventive Medicine Subcommittee.
- Dr. Stewart Professor in the Department of Pathology.
- Dr. Stewart N.C.M.H. Consultant in Infectious Disease.
- Dr. Stewart W-U.N.C. three broadcasts (radio).
- Dr. Stewart U.N.C. Medical School (External Teaching Program) Lectures at Rutherfordton and Statesville.
- Dr. Wilson Professor in the Department of Sociology.

VI. SERVICES TO STATE AND NATION

- Dr. Cassel Member, International Epidemiological Association.
- Dr. Cassel Member, Epidemiology and Disease Control Study Section, NIH.
- Dr. Cassel Consultant, National Institute of Mental Health.
- Dr. Cassel Consultant, Georgia State Board of Health, Chronic Disease Control Section.
- Dr. Cassel Consultant, University of South Carolina Medical School Cardiovascular Disease Research Project.
- Dr. Cassel Council Member, Epidemiology Section, APHA.
- Dr. Cassel Consultant, National Environmental Health Sciences Center, RTI.
- Dr. Cassel Discussant, Workshop on Socio-environmental Stress and Coronary Heart Disease, Harvard SPH.
- Dr. Tyroler Member, Research Training Grants Committee, Community Health Services, U.S.P.H.S.
- Dr. Tyroler Consultant, National Aeronautics and Space Administration.
- Dr. Tyroler Consultant, Medical Department, New York Times.
- Dr. Tyroler Consultant, Medical Department, Champion Paper Company.
- Dr. Tyroler Consultant, Georgia State Board of Health; Trappist and Benedictine Monk Study.
- Dr. Tyroler Consultant, Charleston Heart Study.
- Dr. Patrick Member, Nurse-Scientist Graduate Training Committee, U.S.P.H.S.
- Dr. Wilson Member, Behavioral Sciences Review Committee, P.H.S.
- Dr. Wilson Member, Advisory Panel on Aftercare, Southern Regional Education Board.
- Dr. Wilson Consultant, North Carolina Fund.
- Dr. Wilson Research Associate, National Commission on Community Health Services.
- Dr. Fulton Elective Counsellor, American Public Health Association.
- Dr. Fulton Editorial Board, American Public Health Association.

- Dr. Fulton Consultant, Division of Dental Health, U.S.P.H.S.
- Dr. Jenkins N.C. Heart Association, Public Relations Advisory Committee.
- Dr. Jenkins N.C. Heart Association, Chairman of Conference on Smoking and Health (May 18, 1966).
- Dr. Jenkins Lecture to Alamance County Health Department, "Steps toward Prevention of Coronary Heart Disease" (April 15, 1966).
- Dr. Jenkins Consultant, National Tuberculosis Association.
- Dr. Becker Consultation and informal seminars on acute respiratory disease amongst recruits, in conjunction with the Naval Research Unit, Camp Lejeune, Jacksonville, N.C.
- Dr. Becker Relationship of positive serologic titer to 10 animal viruses to cardiovascular disease, in conjunction with the Evans County Heart Disease Survey.
- Dr. Becker Lectures on WHO-PAMO to Optimist Club of Durham, Durham Business and Professional Women's club, Durham Chapter of UNA of the USA.
- Dr. Slome Subcommittee of National Center of Vital Statistics.
- Dr. Slome Paper presented at Annual Meeting of N.C.T.B. Association.
- Dr. Stewart American Academy of Allergy. Member of Penicillin Allergy Committee.
- Dr. Stewart 4th International Interscience Conference on Chemotherapy, Session Chairman.
- Dr. Stewart University of Southern California Visiting Professor.
- Dr. Stewart University of Miami Visiting Professor.
- Dr. Stewart Consultant to Research Triangle Institute.
- Dr. Stewart Consultant to various U.N.C. Committees.

VII. RESEARCH PROJECTS

1. N. C. Dental Health Project
2. The Evans County Cardiovascular Disease Study
3. Validation of Conn's Hypothesis

4. Industrial Health Study
 - a. Champion Paper and Fibre
 - b. New York Times
 - c. General Electric
5. Health Consequences of Cultural Change (Papago Indians)
6. Cornoni Cluster Analysis
7. The Use of Semantic Differential as a tool for Determining Perceptions for Disease
8. Community Social Structure and Health Action
9. National Aeronautics and Space Administration
10. Monk Study - Trappist and Benedictine
11. Western Collaborative Group Study - Dave Jenkins
12. New York Times Oil Mist Study
13. Charleston Heart Study
14. Slome Anemia Study
15. Evans County Viral Study
16. Papago Inbreeding
17. Reifler MMPI Study
18. Claxton Family Study
19. N. C. Vital Statistics Study
20. Randolph County, N. C. Blood Pressure Study
21. Fluoride Tablet Study
22. Dental Family Study
23. Papago Death Rate Study
24. Piggly-Wiggly Coronary Study
25. San Francisco Fire Department Coronary Study
26. Peace Corps TB Control Project in Malawi, Africa
27. Comparative Community Study (National Commission)
28. Food Intake Patterns of Denture Candidates
29. Family Sophistication and Dental Health Statistics

30. Natural History of Dental Disease
31. Study of Personality Factors in Lipid Metabolism

VIII. PUBLICATIONS

- Dr. Cassel "Personality traits and coronary heart disease: Utilization of a criss-sectional study design to test whether a selected psychological profile precedes or follows manifest coronary heart disease." (with M.A. Ibrahim, C. D. Jenkins, J. R. McDonough, and C. G. Hames) Journal of Chronic Diseases, Vol. 18, March 1966.
- Dr. Cassel Letter to the Editor: The New England Journal of Medicine, Vol. 274, No. 6, February 10, 1966, pp. 354 (with Dr. H. A. Tyroler).
- Dr. Cassel Letter to the Editor: Psychosomatic Medicine, (in press).
- Dr. Cassel Culture Change and Health: Problems of Measurement and Interpretation. (in press)
- Dr. Cassel Mental Health and the Lower Social Classes, Florida State University Studies, May, 1966. (in press)
- Dr. Cassel Selective Readings on Chronic Diseases in Public Health - Johns Hopkins Press.
- Dr. Tyroler Letter to the Editor: New England Journal of Medicine.
- Dr. Tyroler Readings in Chronic Disease (book in press) co-author.
- Dr. Fulton Natural History of Dental Disease
- Dr. Jenkins "Coronary Heart Disease in the Western Collaborative Group Study: A follow-up Experience of Two Years." Rosenman, R. H., Friedman, M. F., Strauss, R., Wurm, M., Jenkins, C. D. and Messinger, H. B., Jour. Amer. Med. Assoc., 1966 (Jan. 10), 195, 86-92.
- Dr. Jenkins "Group differences in perception: A study of community beliefs and feelings about tuberculosis." Amer. Jour. Sociol. 1966, (Jan.) 71, 417-429.
- Dr. Jenkins The Jenkins Activity Survey for Health Prediction. 1966 Edition (with M. Friedman and R. H. Rosenman.
- Dr. Jenkins "Utilization of cross-sectional study design to test whether a selected psychological profile precedes or follows manifest coronary heart disease." J. Chron. Dis., 1966, 19, 255-271. (with Ibrahim, M., et al.)

- Dr. Jenkins "Components of the coronary-prone behavior pattern: their relation to silent myocardial infarction and blood lipids." (with R. H. Rosenman and M. F. Friedman) J. Chron. Dis. (in press)
- Dr. Jenkins "The Semantic Differential for Health: A Technique for Measuring Beliefs About Disease." Public Health Reports (in press)
- Dr. Jenkins "Some Epidemiologic Aspects of Fatal Motor Vehicle Accidents in North Carolina for 1964." Thesis completed in 1965-1966 under the direction of Dr. Jenkins in partial fulfillment of requirements for the degree Master of Public Health. Charles B. Arnold.
- Dr. Jenkins "The association between some aspects of social mobility and the presence of specific overt behavior pattern." (with Carolyn A. Williams)
- Dr. Stewart "Lipases and Pigments of Staphylococci," Ann. N.Y. Acad. Sciences, 128, 132.
- Dr. Stewart The Penicillin Group of Drugs, published by Elsevier, Amsterdam.

IX. SCIENTIFIC PAPERS PRESENTED

- Dr. Cassel "Physical Illness as a Response to Stress," presented at the Harvard School of Public Health, Seminar on Health and Illness in Cross Cultural Perspective, March, 1966.
- Dr. Cassel "Social and Cultural Incongruity and Cardiovascular Disease." Paper presented at the National Workshop on Socio-environmental Stress and Cardiovascular Disease. Phoenix, Arizona, February 15, 1966.
- Dr. Cassel "Epidemiology Applied to Program Planning and Evaluation." To be presented at the University of Indiana School of Nursing, June, 1966.
- Dr. Tyroler "The Journey from Fram to Factory - North Carolina's Road to Heart Disease," N. C. Heart Association, Durham, N. C., May 20, 1965.
- Dr. Wilson "Changing Human Behavior," Blue Ridge Institute, 1965.
- Dr. Wilson "Illegitimacy as Stress," National Institute of Child Health and Human Development, 1965.
- Dr. Wilson "Contemporary Approaches to Community Organization," Southern Regional Education Board, 1966.

- Dr. Wilson "Institutional Structure and Individual Autonomy,"
Society for Applied Anthropology, 1966.
- Dr. Fulton "Role of Epidemiology in Defining Professional
Responsibilities," paper presented in Pittsburgh,
Pennsylvania.
- Dr. Jenkins "Replicability of Rating the Coronary-Prone Behavior
Pattern by Means of a Standard Interview." (with
R. H. Rosenman and M. Friedman) Paper presented at
American Heart Association Conference on Cardio-
vascular Epidemiology. Chicago, January 30, 1966.
- Dr. Jenkins "Factors involving interpersonal and psychological
Characteristics in Cardiovascular Disease: Appraisal
and Implications for Conceptual Development."
Paper presented at the National Workshop on Socio-
environmental Stress and Cardiovascular Disease.
Phoenix, Arizona, February 15, 1966, (to be published
in Milbank Memorial Fund Quarterly).
- Dr. Stewart "Liquid Crystals in Biology." International Confer-
ence on Liquid Crystals at Kent State University,
Ohio, August 1965.
- Dr. Stewart "Liquid Crystals as Ordered Components of Living
Substance." American Chemical Society, Atlantic City,
N. J., September 1965.
- Dr. Stewart "Longistics of Chemotherapy." 4th International
Interscience Conference on Chemotherapy, Washington,
October, 1965.

X. FULL-TIME FACULTY APPOINTMENTS, PROMOTIONS, RESIGNATIONS,
LEAVES OF ABSENCE

- A. Appointments: Dr. Caroline Becker, Assistant Professor of
Epidemiology. (September 1965).
- Dr. Richard Carter, Research Associate,
Department of Epidemiology. (April 1966).
- Dr. Philip Spiers, Research Associate,
Department of Epidemiology. (April 1966).
- Evelyn Anderson, Research Associate, Depart-
ment of Epidemiology. (September 1965).
- B. Promotions: Dr. Gordon T. Stewart, Professor of
Epidemiology. (September 1965).
- C. Resignations: NONE

XI. NEEDS AND DIRECTION OF DEVELOPMENT OF THE DEPARTMENT

The recent growth of the Department has been a result in part of the development of ideas generated by a very active faculty and increasing body of advanced students and in part a response to the increasing demands of the Department by other units within the School of Public Health, the Medical School, other Universities, state and local Health Departments, the Public Health Service and the World Health Organization.

Meeting even a small proportion of these demands has necessitated increasing the size of the faculty and has led to an aggravation of the problem of space. The space problem has been compounded by the development of a laboratory and infectious disease unit in the Department (two badly needed developments to round out our programs) and by the demands of the Population Program and pending developments in International Health.

The major direction, as far as future faculty are concerned, will be to recruit junior personnel who can assist the existing senior faculty members and who will form a readily mobile cadre capable of assisting developments in various countries in the International Health Program.